

Computational Study of the Mechanism and Selectivity of the Ru(II) Catalyzed Hydroamidation Reaction of Terminal Alkynes

Bholanath Maity,[†] Lukas J. Gooßen,^{*,‡} and Debasis Koley^{*,†}

[‡]Fachbereich Chemie – Organische Chemie,
Technische Universität Kaiserslautern,
Erwin-Schrödinger-Straße Geb.54, D-67663 Kaiserslautern, Germany.
Fax: (+49) 631-205-3921, E-mail: goossen@chemie.uni-kl.de

[†]Department of Chemical Sciences,
Indian Institute of Science Education and Research (IISER) Kolkata,
Mohanpur 741246, India.
E-mail: koley@iiserkol.ac.in

SUPPORTING INFORMATION

Contents

| | |
|---|--------|
| 1. Complete reference of Gaussian 03 and Gaussian 09. | S3 |
| 2. Computed single point energy profile with dispersion corrected functionals (BP86-D, B97D and M06-2X) (Figure S1→Figure S2). | S3–4 |
| 3. Energy profile and optimized structures of intermediates and transition states involved in catalytic cycle for the catalyst system 1 (Figure S3→Figure S15). | S5–11 |
| 4. Chemical structures for alkyne coordinated compound (5) and its two different vinyl isomers (6 and 6_I) (Figure S16). | S11 |
| 5. Energy profile with dispersion effect for the catalyst system 1 (Figure S17). | S12 |
| 6. Energy profile and optimized structures of intermediates and transition states involved in catalytic cycle for the catalyst system 1_c (Figure S18→Figure S30). | S12–18 |
| 7. Energy profile with dispersion effect for the catalyst system 1 (Figure S31). | S19 |
| 8. KS-MO of some important intermediates (Figure S32). | S19–20 |
| 9. Chemical structures of several modified vinylidene complexes from 7a_c and their respective enamido products (Scheme S1). | S20 |

| | |
|--|---------|
| 10. Absolute energies (hartree) of all intermediates and transition states involve in catalyst system 1 and 1_c (Table S1→Table S2). | S20–24 |
| 11. Energy changes (in kcal/mol) for all steps involved in catalyst system 1 and 1_c (Table S3→Table S6). | S24–27 |
| 12. NPA charges of selected atoms for all intermediates and transition states involved in the reaction pathways for catalyst 1 and 1_c (Table S5→Table S6). | S28–31 |
| 13. Plot of NPA charge on ruthenium center of intermediates and transition states involved in different pathways for catalyst 1 and 1_c (Figure S33). | S31 |
| 14. Reaction path involving dcypm decoordination, hexyne coordination and insertion step from ruthenium(II) intermediate 3_c . The energies (ΔG_L^S) above the arrows are in kcal/mol (Figure S34). | S31 |
| 15 Nucleophilic transfer steps from 16e ⁻ vinylidene intermediates 7a_c-D and 10b_c-D . The energies (ΔG_L^S) above the arrows are in kcal/mol (Figure S35). | S32 |
| 16. Reaction path involving C _a -P bond formation and nucleophilic transfer steps from vinylidene intermediates 7a_c and 10b_c . The energies (ΔG_L^S) above the arrows are in kcal/mol (Figure S36). | S32 |
| 17. Cartesian coordinates (Å) of the optimized structures of all intermediates and transition states involved in catalytic system 1 (Table S7). | S32–75 |
| 18. Cartesian coordinates (Å) of the optimized structures of all intermediates and transition states involved in catalytic system 1_c (Table S7). | S76–134 |

Complete Reference of Gaussian03 and Gaussian 09

Gaussian 03, Revision **E.01**, M. J. Frisch, G. W. Trucks, H. B. Schlegel, G. E. Scuseria, M. A. Robb, J. R. Cheeseman, Jr., J. A. Montgomery, T. Vreven, K. N. Kudin, J. C. Burant, J. M. Millam, S. S. Iyengar, J. Tomasi, V. Barone, B. Mennucci, M. Cossi, G. Scalmani, N. Rega, G. A. Petersson, H. Nakatsuji, M. Hada, M. Ehara, K. Toyota, R. Fukuda, J. Hasegawa, M. Ishida, T. Nakajima, Y. Honda, O. Kitao, H. Nakai, M. Klene, X. Li, J. E. Knox, H. P. Hratchian, J. B. Cross, V. Bakken, C. Adamo, J. Jaramillo, R. Gomperts, R. E. Stratmann, O. Yazyev, A. J. Austin, R. Cammi, C. Pomelli, J. W. Ochterski, P. Y. Ayala, K. Morokuma, G. A. Voth, P. Salvador, J. J. Dannenberg, V. G. Zakrzewski, S. Dapprich, A. D. Daniels, M. C. Strain, O. Farkas, D. K. Malick, A. D. Rabuck, K. Raghavachari, J. B. Foresman, J. V. Ortiz, Q. Cui, A. G. Baboul, S. Clifford, J. Cioslowski, B. B. Stefanov, G. Liu, A. Liashenko, P. Piskorz, I. Komaromi, R. L. Martin, D. J. Fox, T. Keith, M. A. Al-Laham, C. Y. Peng, A. Nanayakkara, M. Challacombe, P. M. W. Gill, B. Johnson, W. Chen, M. W. Wong, C. Gonzalez, and J. A. Pople, Gaussian, Inc., Wallingford CT, 2004.

Gaussian09, Revision **C.01**, M. J. Frisch, G. W. Trucks, H. B. Schlegel, G. E. Scuseria, M. A. Robb, J. R. Cheeseman, G. Scalmani, V. Barone, B. Mennucci, G. A. Petersson, G. H. Nakatsuji, M. Caricato, X. Li, H. P. Hratchian, A. F. Izmaylov, J. Bloino, G. Zheng, J. L. Sonnenberg, M. Hada, M. Ehara, K. Toyota, R. Fukuda, J. Hasegawa, M. Ishida, T. Nakajima, Y. Honda, O. Kitao, H. Nakai, T. Vreven, Jr. J. A. Montgomery, J. E. Peralta, F. Ogliaro, M. Bearpark, J. J. Heyd, E. Brothers, K. N. Kudin, V. N. Staroverov, R. Kobayashi, J. Normand, K. Raghavachari, A. Rendell, J. C. Burant, S. S. Iyengar, J. Tomasi, M. Cossi, N. Rega, J. M. Millam, M. Klene, J. E. Knox, J. B. Cross, V. Bakken, C. Adamo, J. Jaramillo, R. Gomperts, R. E. Stratmann, O. Yazyev, A. J. Austin, R. Cammi, C. Pomelli, J. W. Ochterski, R. L. Martin, K. Morokuma, V. G. Zakrzewski, G. A. Voth, P. Salvador, J. J. Dannenberg, S. Dapprich, A. D. Daniels, Ö. Farkas, J. B. Foresman, J. V. Ortiz, J. Cioslowski and D. J. Fox, Gaussian, Inc., Wallingford CT, 2010.

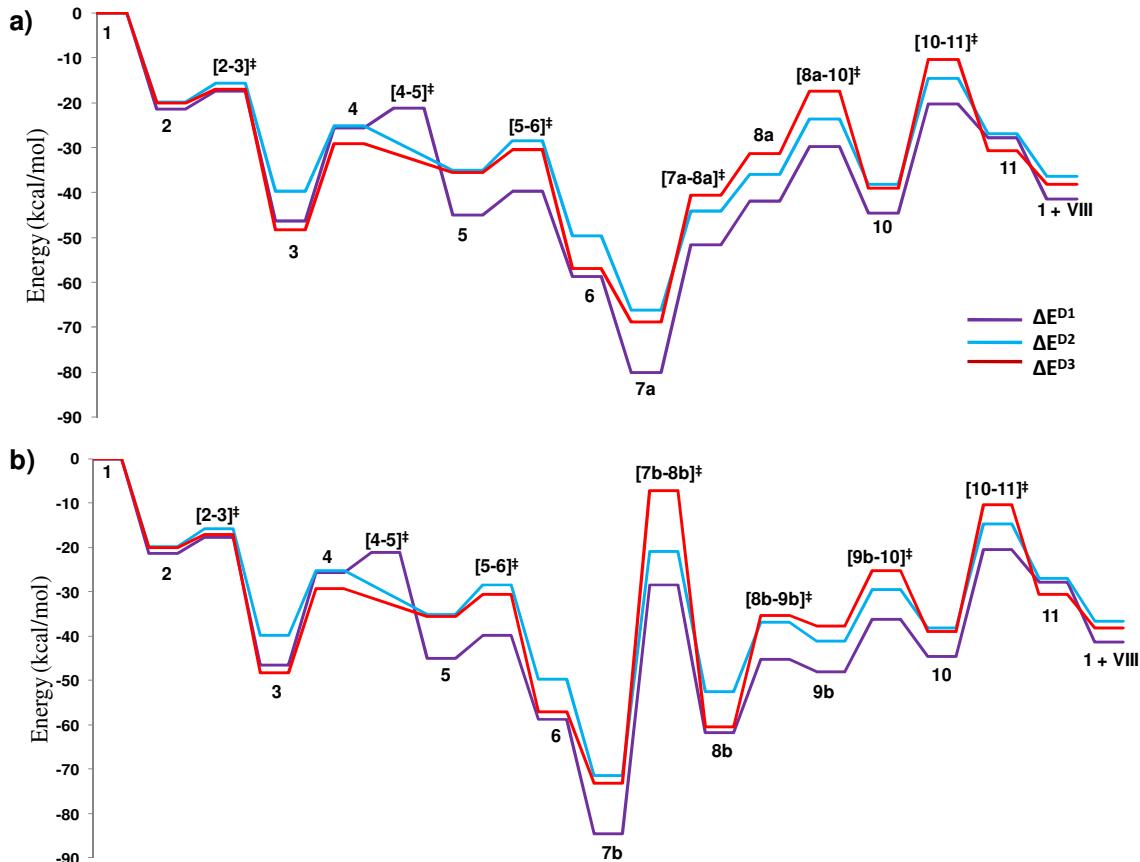


Figure S1. Computed single point energy profile for a) “path a” and b) “path b” in catalyst system **1** with functional BP86-D (ΔE^{D1} , purple), B97D (ΔE^{D2} , light blue) and M06-2X (ΔE^{D3} , red) at higher basis sets

LANL2TZ(f)(Ru)/TZVP(H, C, N, O and P) on the optimized geometry at BP86/LANL2DZ(Ru)/6-31G*(H, C, N, O and P) level of theory.

Note: To elucidate the dispersion effect we have performed single point calculations at higher basis set using the functionals BP86-D, B97D and M06-2X on the optimized geometries at BP86/LANL2DZ(Ru)/6-31G*(H, C, N, O and P) level. The computed energy profile incorporating the dispersion corrected energies (BP86-D) shows good agreement with the energy trend calculated with BP86 functional. Unfortunately only during the **4→5** step, both B97D and M06-2X methods could not validate the existence of $[4\text{-}5]^\ddagger$ transition state. Additionally, our efforts in optimizing the same transition states using B97D and M06-2X functionals failed even after repeated attempts.

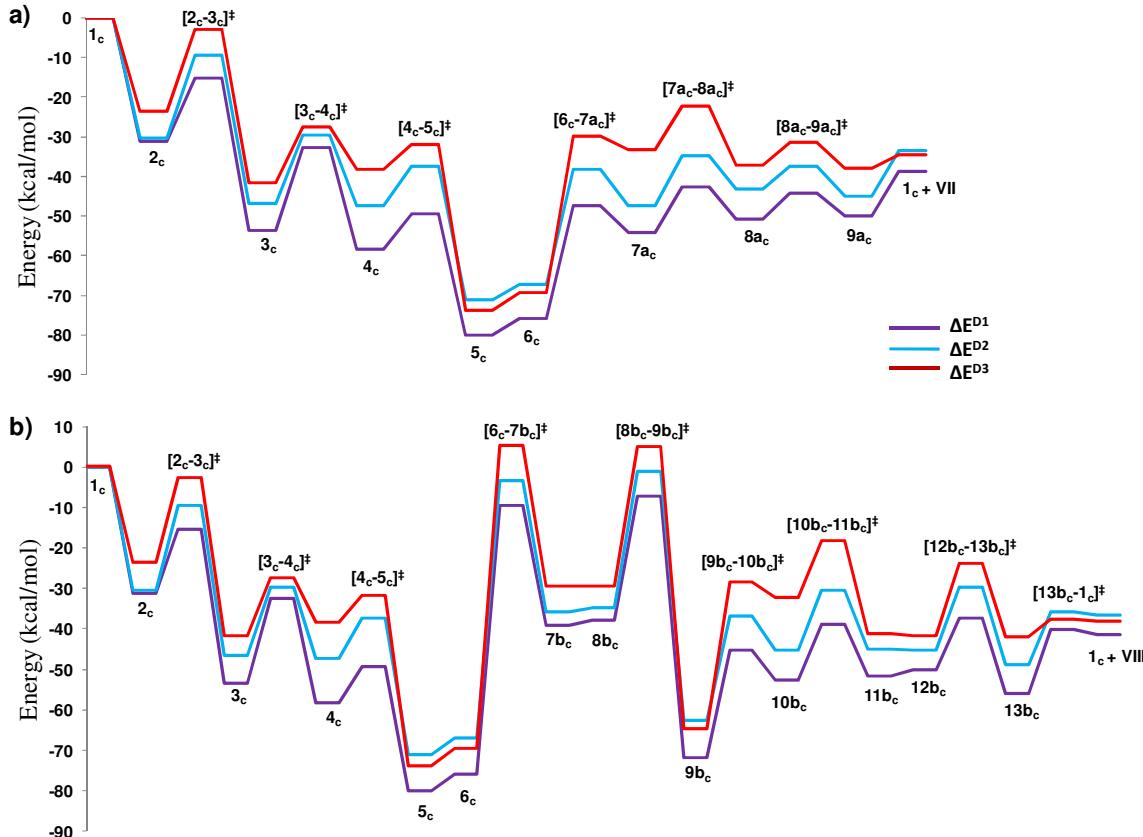


Figure S2. Computed single point energy profile for a) “path a_c ” and b) “path b_c ” in catalyst system 1_c with functional BP86-D (ΔE^{D1} , purple), B97D (ΔE^{D2} , light blue) and M06-2X (ΔE^{D3} , red) at higher basis sets LANL2TZ(f)(Ru)/TZVP(H, C, N, O and P) on geometries optimized at ONIOM{BP86/LANL2DZ(Ru)/6-31G*(H, C, N, O and P):HF/STO-3G} level of theory.

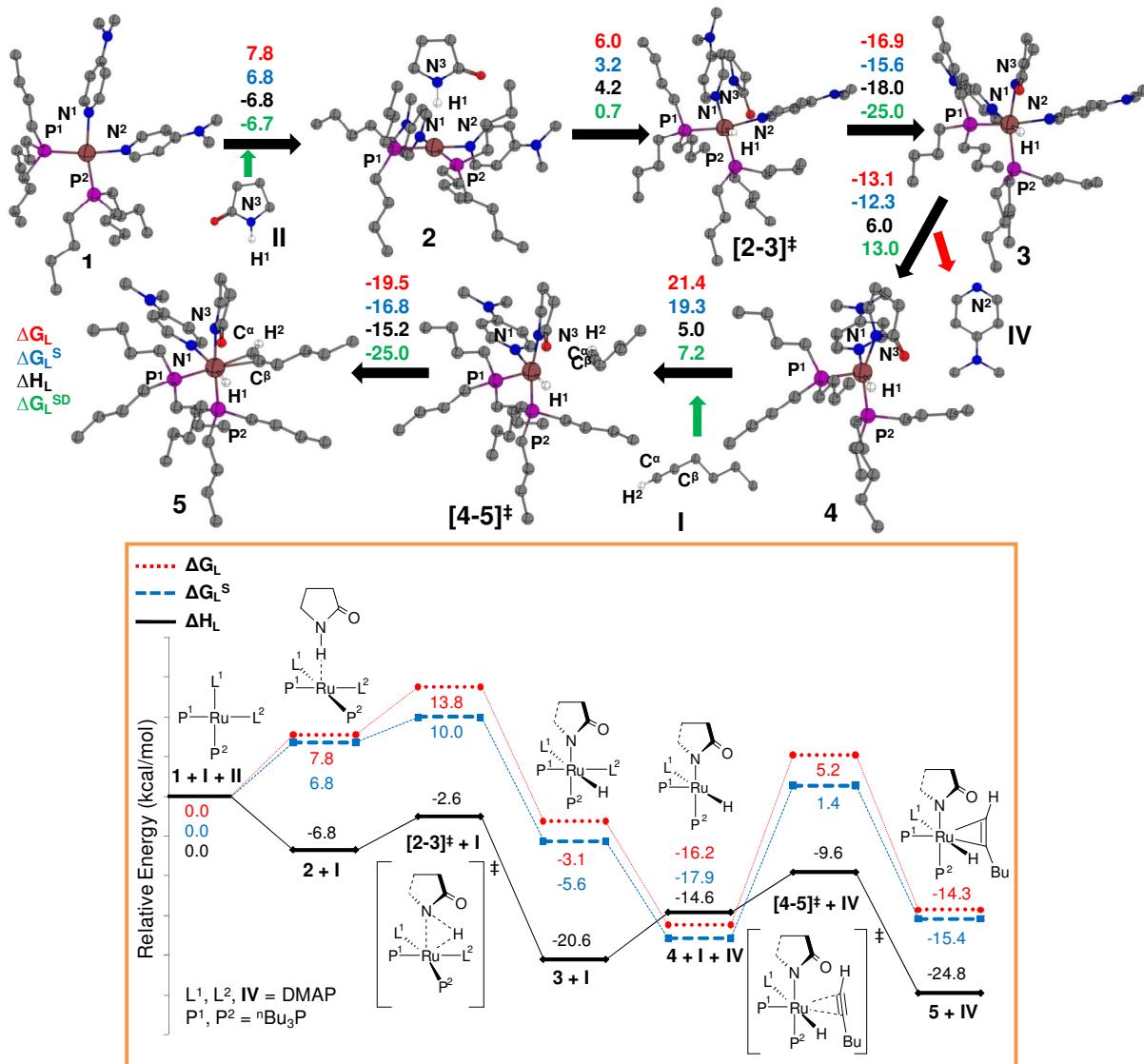
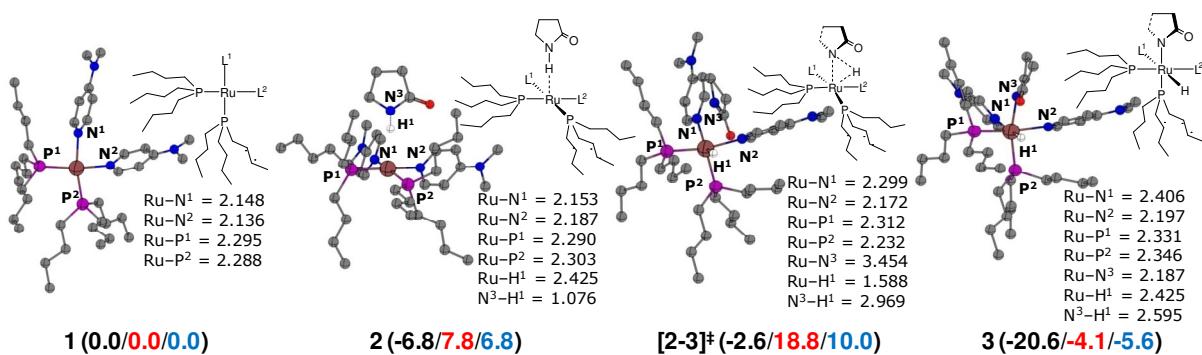


Figure S3. Optimized structures and energy profile (inset) for the oxidative addition (**1**→**3**) and hexyne coordination (**4**→**5**) steps. For energy nomenclature, refer to Computational Details. For other conventions refer to Figure 1.



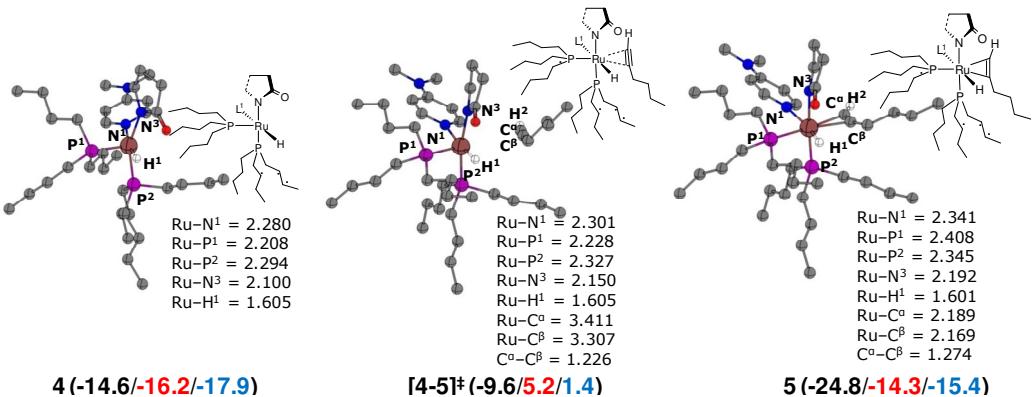


Figure S4. Optimized Structures of intermediates and transition states involved in oxidative addition and hexyne coordination steps for catalyst system **1**. Key bond lengths are in angstroms (\AA), bond angles and dihedral angles are in degrees ($^{\circ}$). All hydrogen atoms (except H¹ and H²) are omitted for clarity. Energies ($\Delta H_L / \Delta G_L / \Delta G_L^S$) in kcal/mol are given in parentheses. For color code refer Figure 1 in main text.

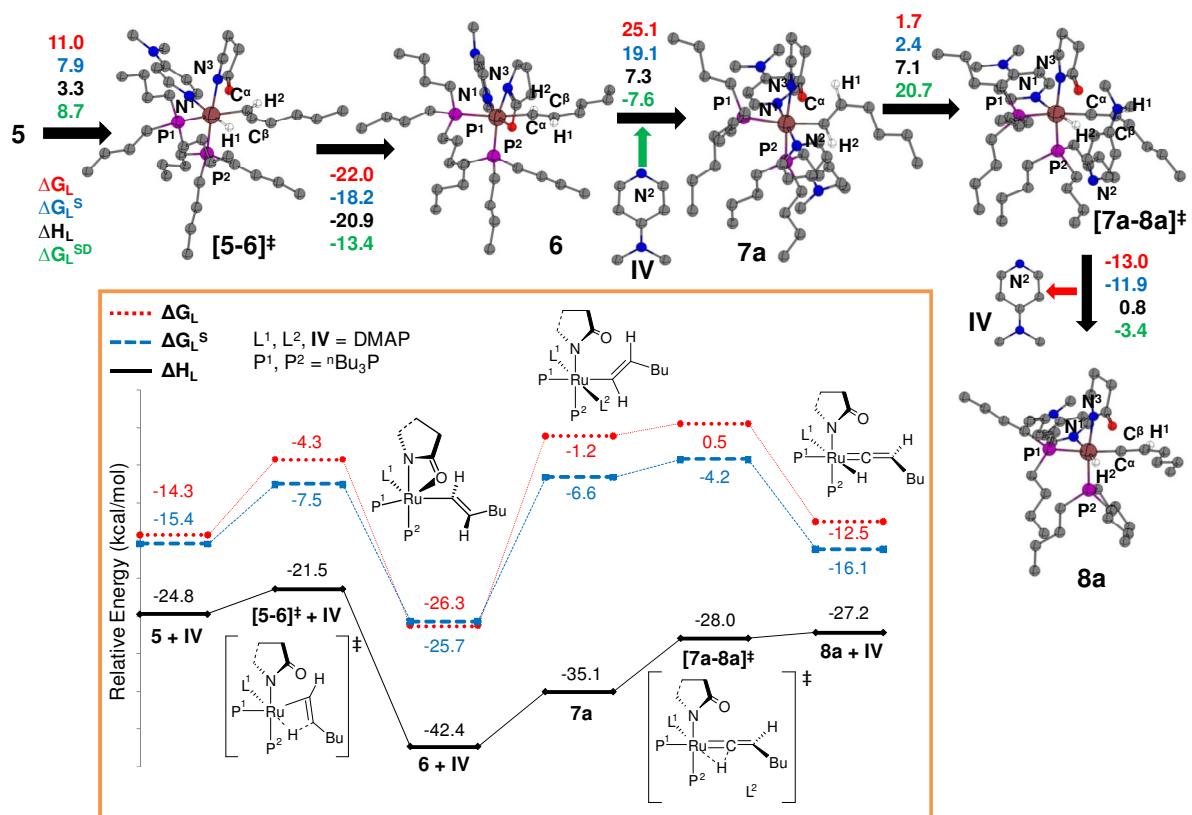


Figure S5. Optimized structures and energy profile (inset) for the hexyne insertion and vinyl-vinylidene rearrangement steps in “path a”. For other conventions refer to Figure 1 and Figure S3.

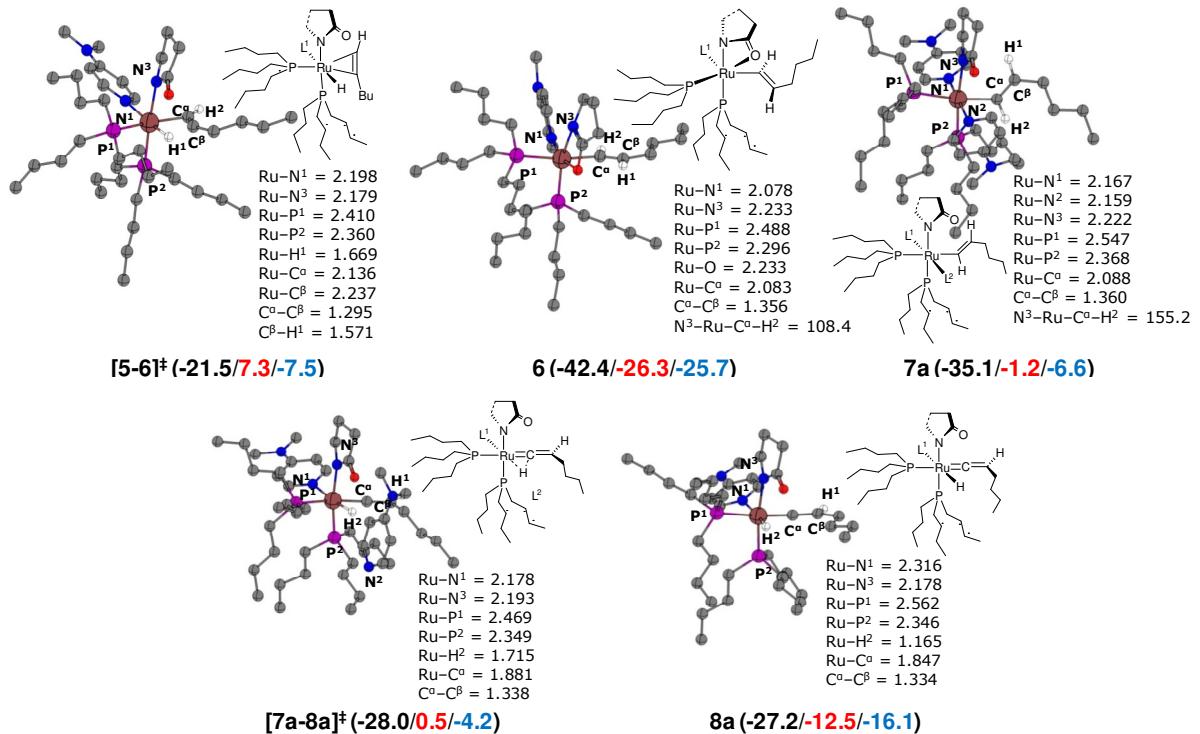


Figure S6. Optimized Structures of intermediates and transition states involved in hexyne insertion and vinyl-vinylidene rearrangement steps in “path a” for catalyst system 1. For energy and other conventions refer Figure 1 and Figure S3.

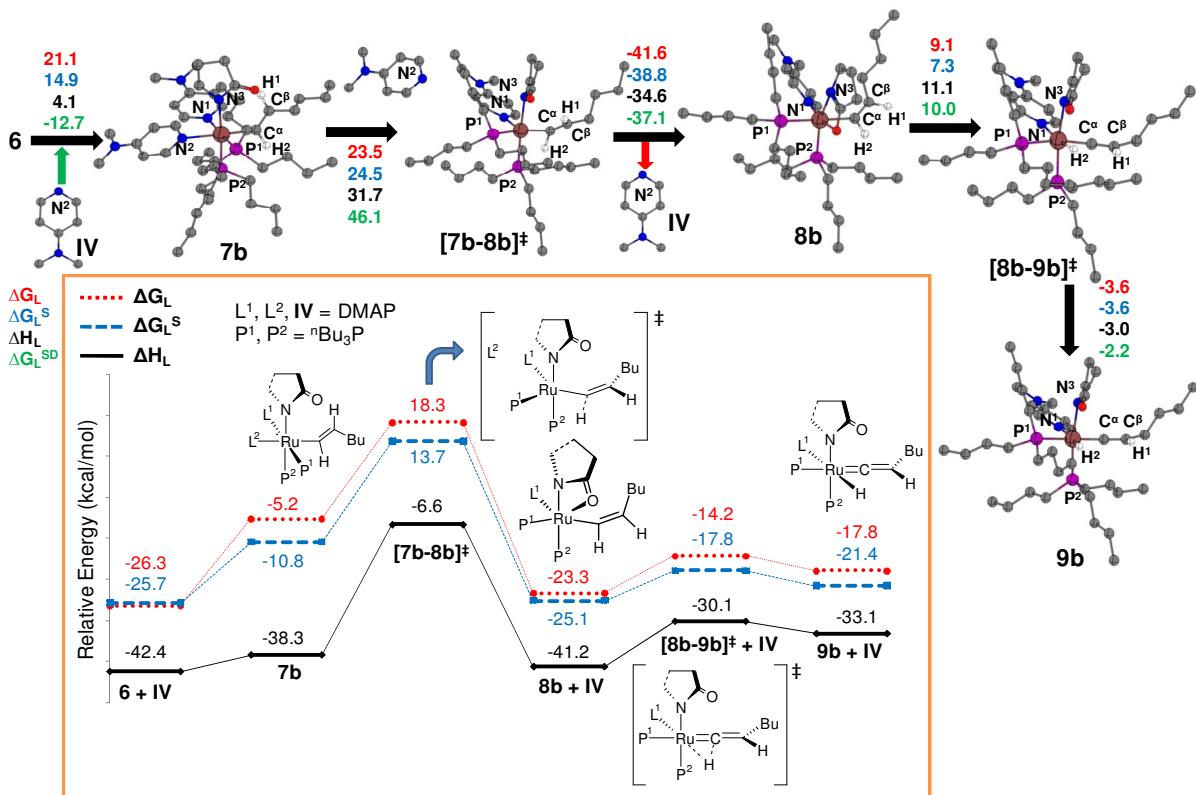


Figure S7. Optimized structures and energy profile (inset) for the hexyne insertion and vinyl-vinylidene rearrangement steps in “path b”. For other conventions refer to Figure 1 and Figure S3.

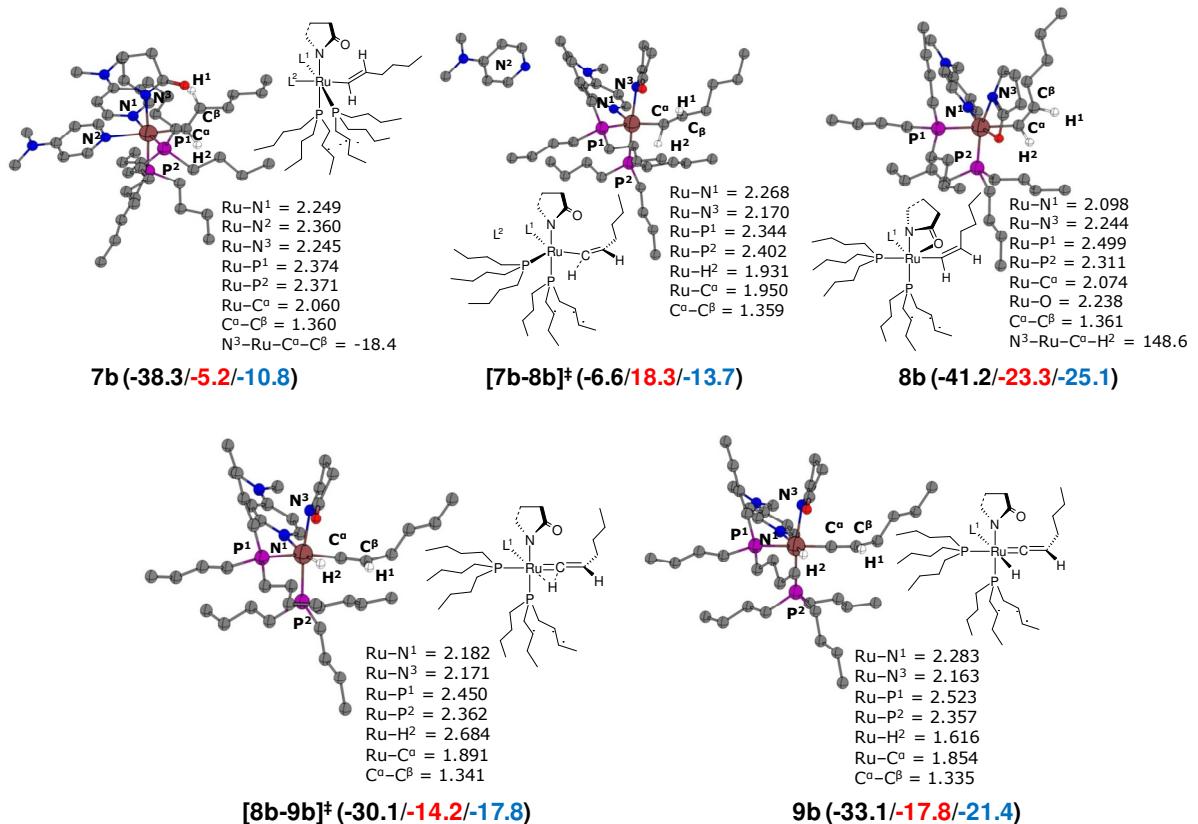


Figure S8. Optimized Structures of intermediates and transition states involved in hexyne insertion and vinyl-vinylidene rearrangement steps in “path b” for catalyst system **1**. For energy and other conventions refer Figure 1 and Figure S3.

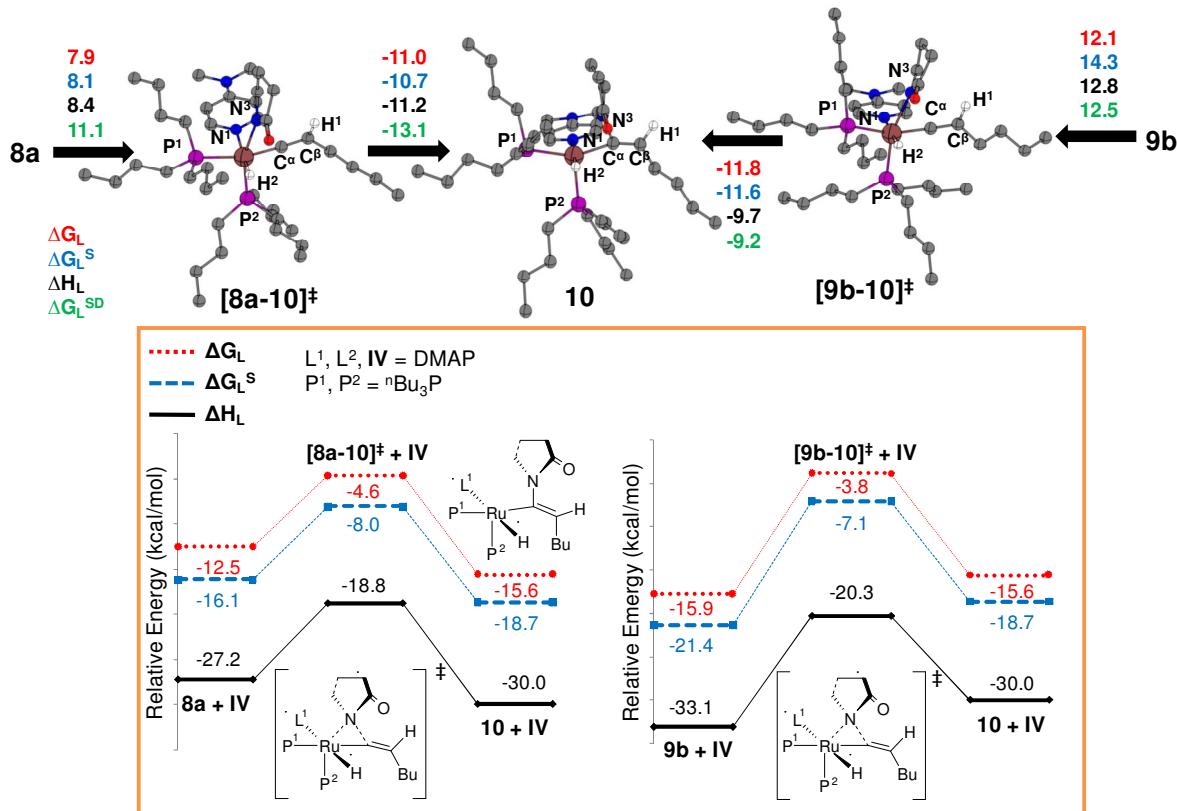


Figure S9. Optimized structures and energy profile (inset) for the nucleophilic transfer steps in “path a” and “path b”. For other conventions refer to Figure 1 and Figure S3.

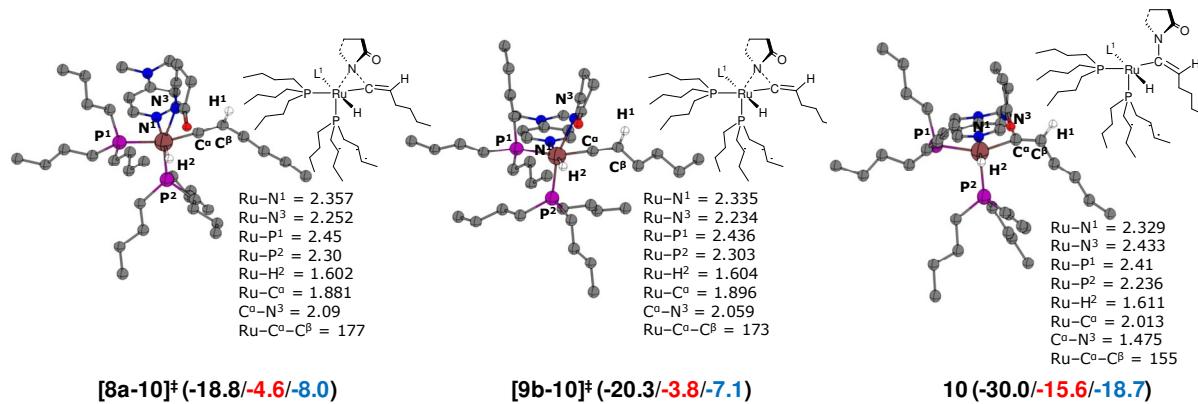


Figure S10. Optimized Structures of intermediates and transition states involved in nucleophilic attack step in both “path a” and “path b” for catalyst system **1**. For energy and other conventions refer Figure 1 in main text and Figure S3.

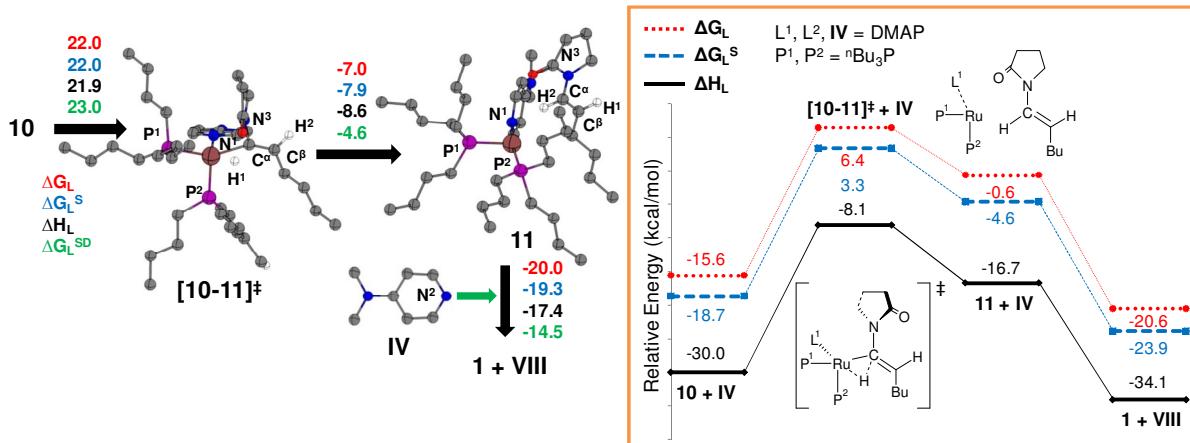


Figure S11. Optimized structures and energy profile (inset) for the reductive elimination steps. For other conventions refer to Figure 1 and Figure S3.

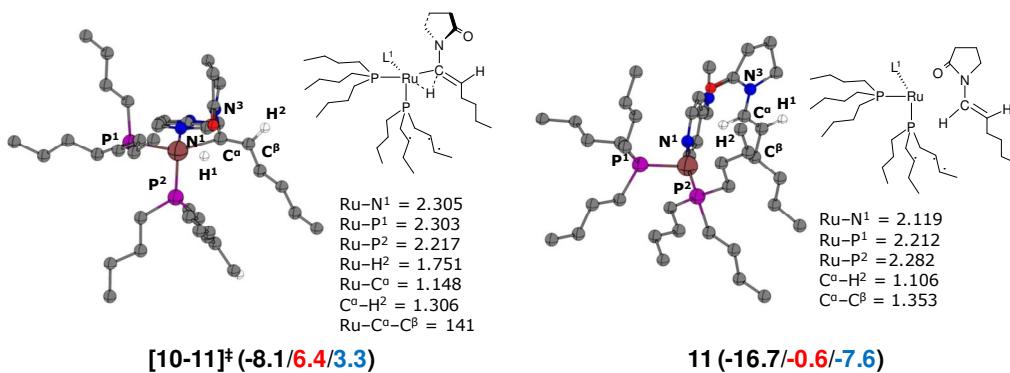


Figure S12. Optimized Structures of intermediates and transition states involved in reductive elimination step for catalyst system **1**. For energy and other conventions refer Figure 1 in main text and Figure S3.

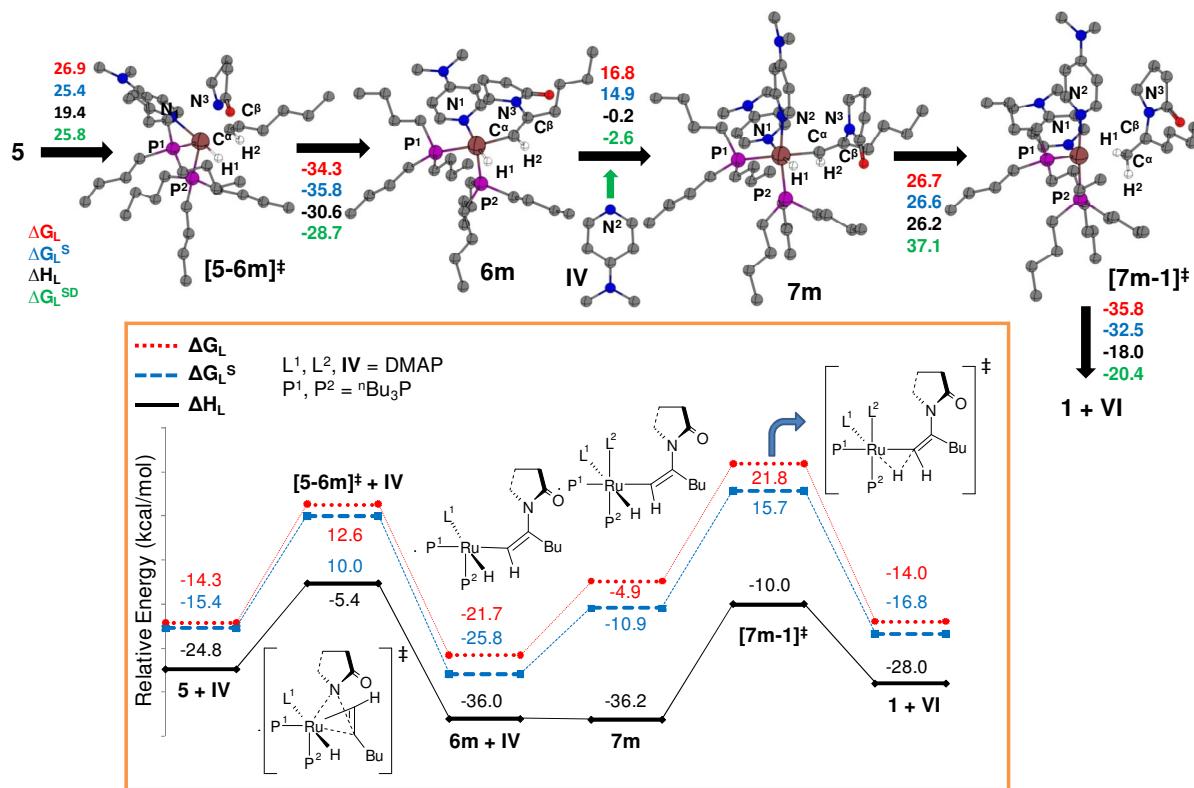


Figure S13. Optimized structures and energy profile (inset) for the Markovnikov product formation pathway. For other conventions refer to Figure 1 and Figure S3.

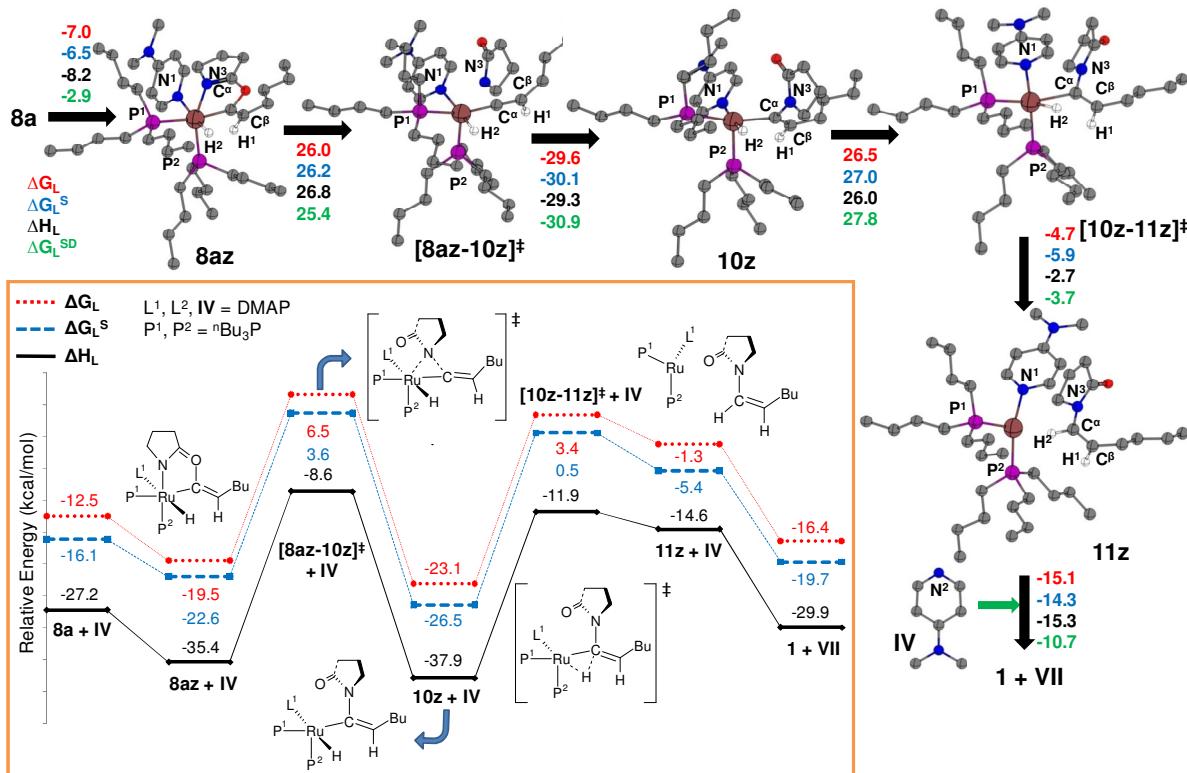


Figure S14. Optimized structures and energy profile (inset) for the Z-enamide product formation pathway. For other conventions refer to Figure 1 and Figure S3.

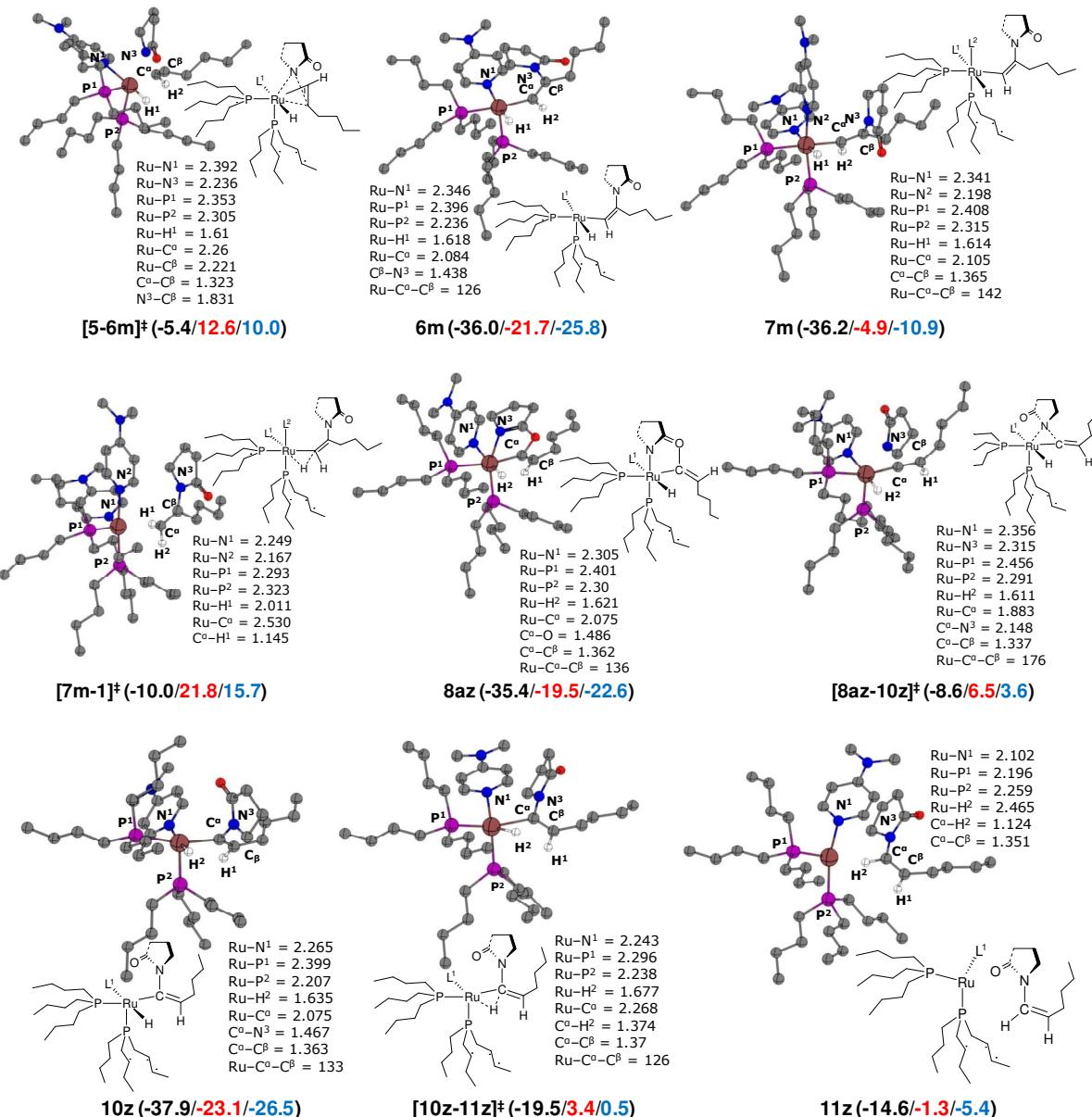


Figure S15. Optimized Structures of intermediates and transition states involved in Markovnikov product and Z-selective product formation. For energy and other conventions refer Figure 1 in main text and Figure S3.

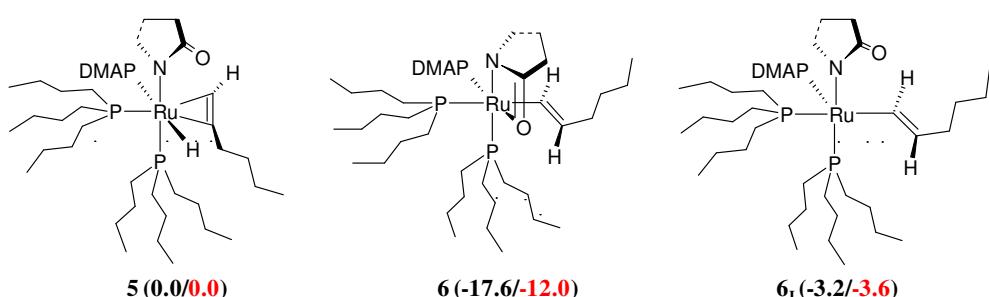


Figure S16. Chemical structures for alkyne coordinated compound (**5**) and its two different vinyl isomers (**6** and **6₁**). Energy values ($\Delta H_L/\Delta G_L$) in kcal/mol at BP86/LANL2DZ(Ru)/6-31G*(H, C, N, O and P)

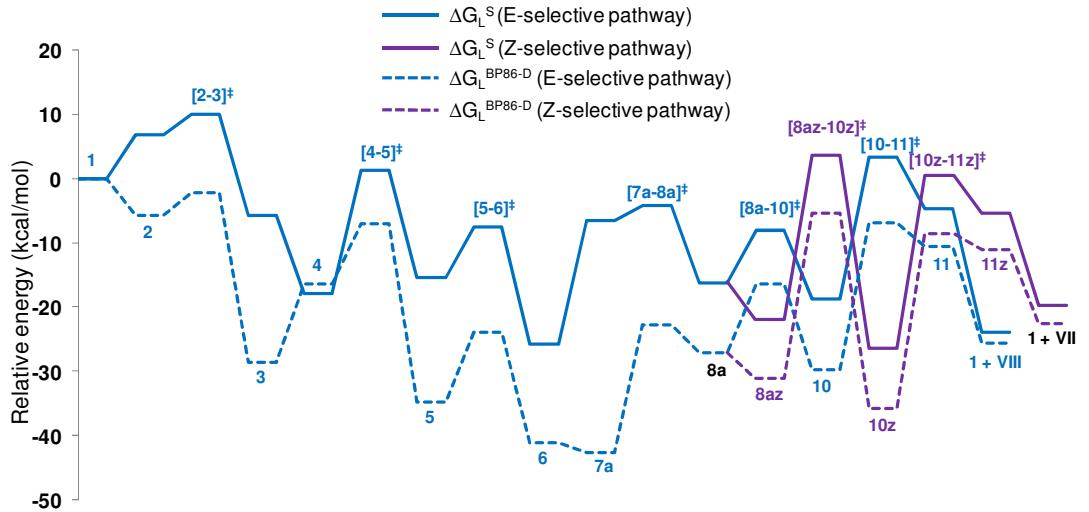


Figure S17. Comparison of the dispersion corrected energy profile (BP86-D/LANL2TZ(f)(Ru)/TZVP(H, C, N, O and P)//BP86/LANL2DZ(Ru)/6-31G*(H, C, N, O and P); dotted line) with the one reported in the text (BP86/LANL2TZ(f)(Ru)/TZVP(H, C, N, O and P)//BP86/LANL2DZ(Ru)/6-31G*(H, C, N, O and P); dark line) for favorable pathways of *E*- and *Z*- enamide formation in catalyst system **1**. For energy terms refer to the computational details.

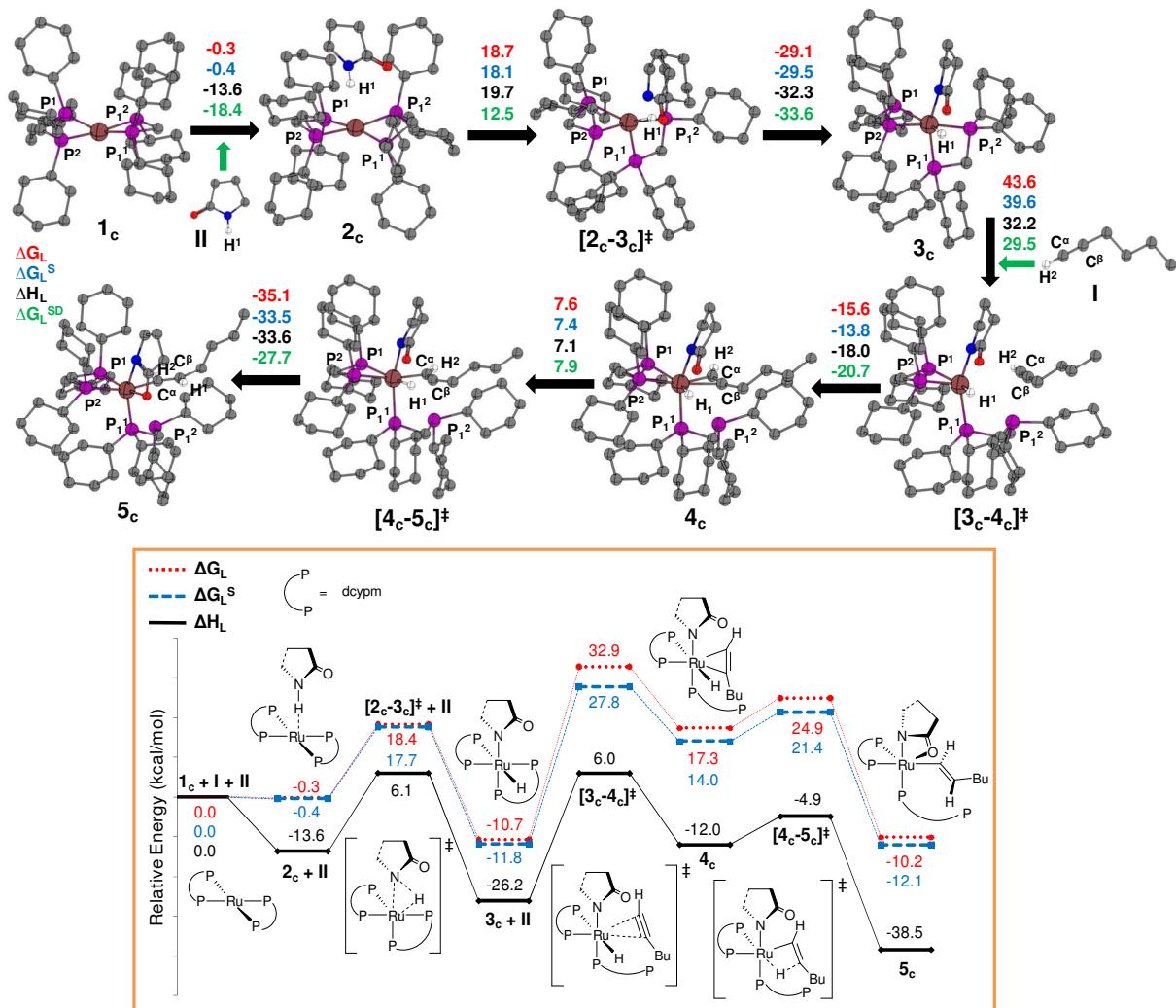


Figure S18. Optimized structures and energy profile (inset) for the oxidative addition and hexyne insertion steps for catalytic system **1_c**. For other conventions refer to Figure 1 and Figure S3.

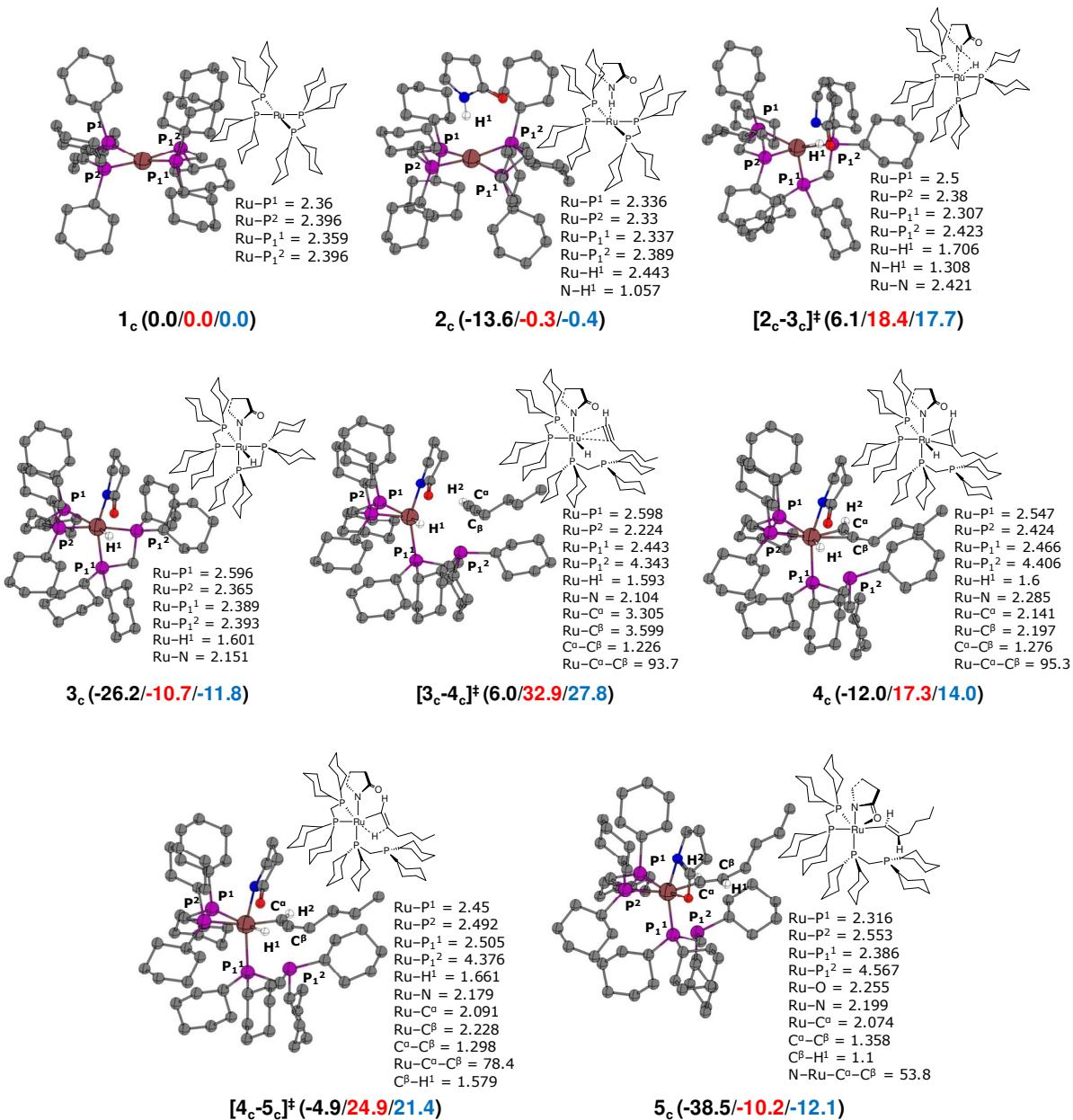


Figure S19. Optimized Structures of intermediates and transition states involved in oxidative addition, hexyne coordination and insertion steps for catalyst system **1_c**. For energy and other conventions refer Figure 1 in main text and Figure S3.

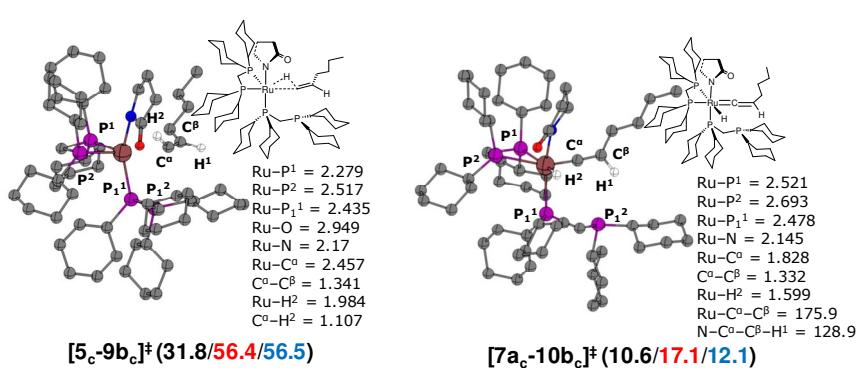
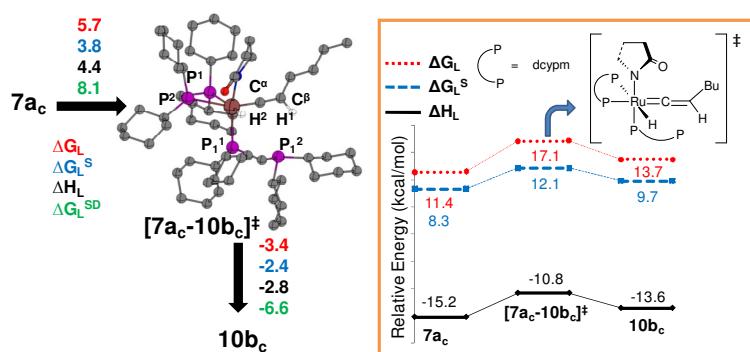
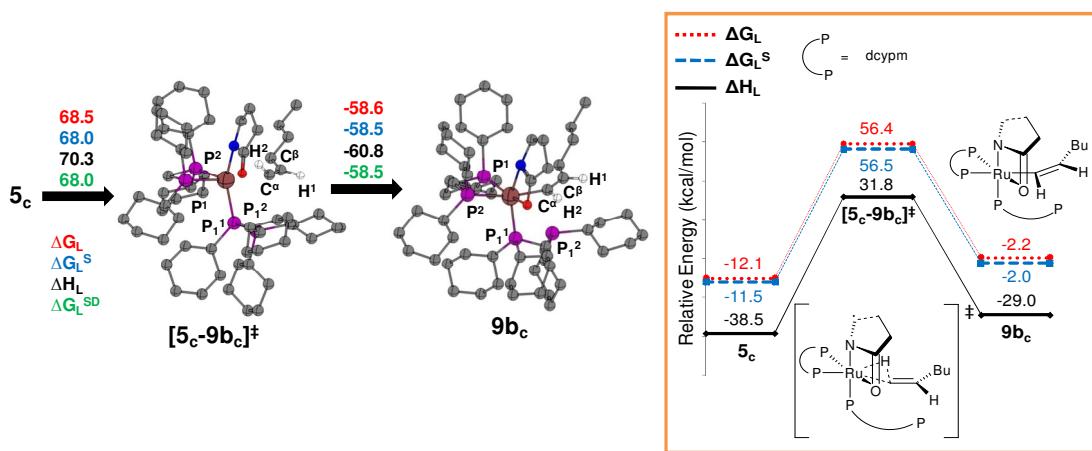


Figure S22. Optimized Structures of transition states involved in isomerization of vinyl (left) and vinylidene (right) by simple bond rotation. For energy and other conventions refer Figure 1 in main text and Figure S3.

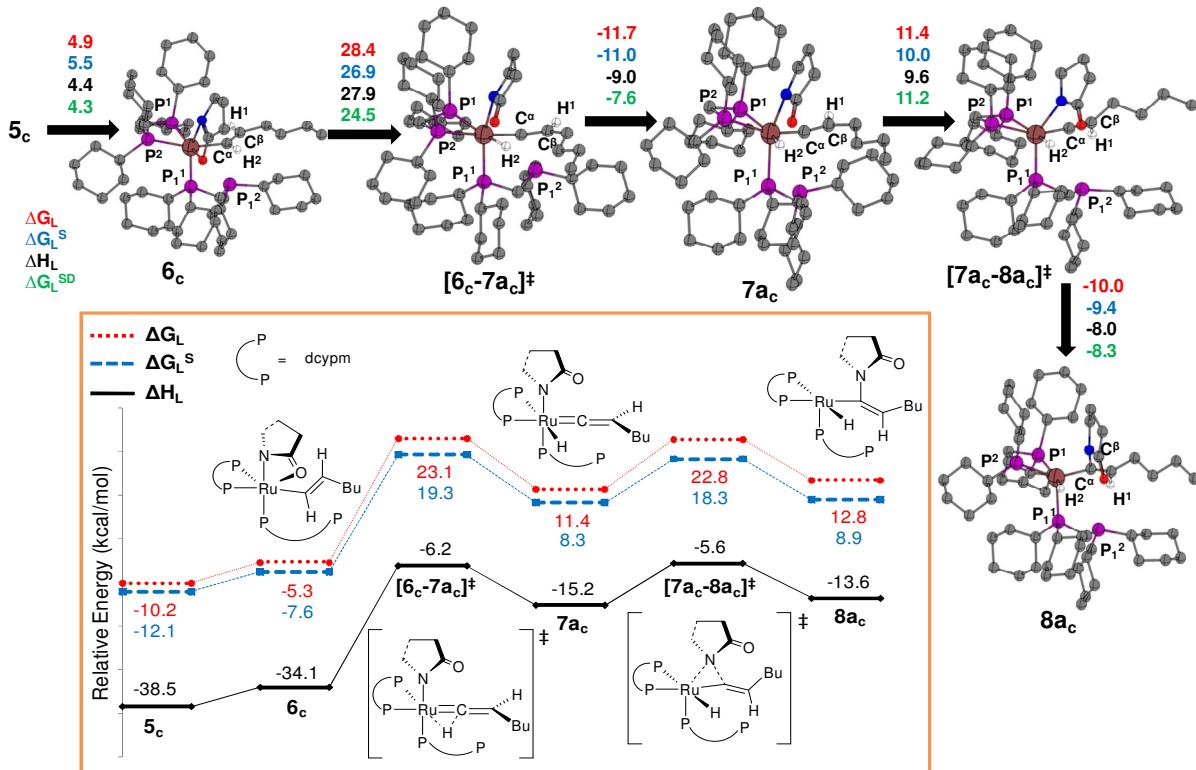


Figure S23. Optimized structures and energy profile (inset) for the vinyl-vinylidene rearrangement and nucleophilic transfer steps in “path a_c”. For other conventions refer to Figure 1 and Figure S3.

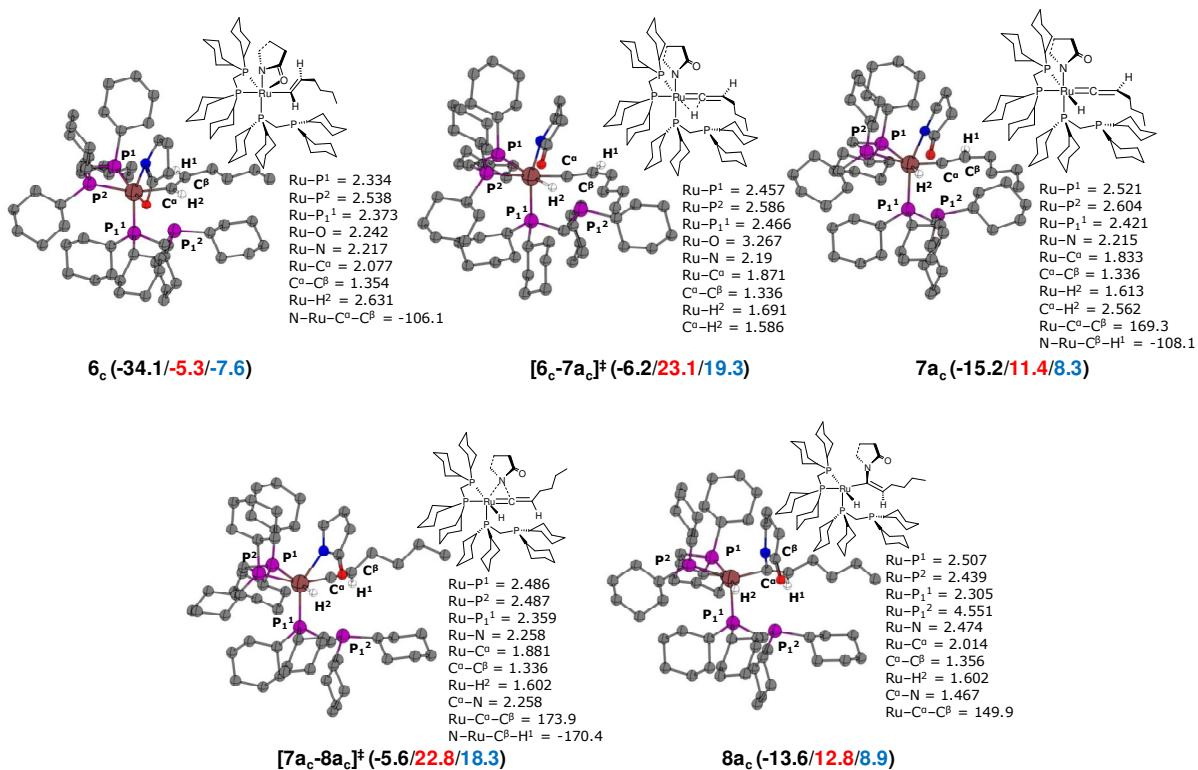


Figure S24. Optimized Structures of intermediates and transition states involved in vinyl-vinylidene rearrangement and nucleophilic attack steps for catalytic system 1_c in ‘path a_c’. For energy and other conventions refer Figure 1 in main text and Figure S3.

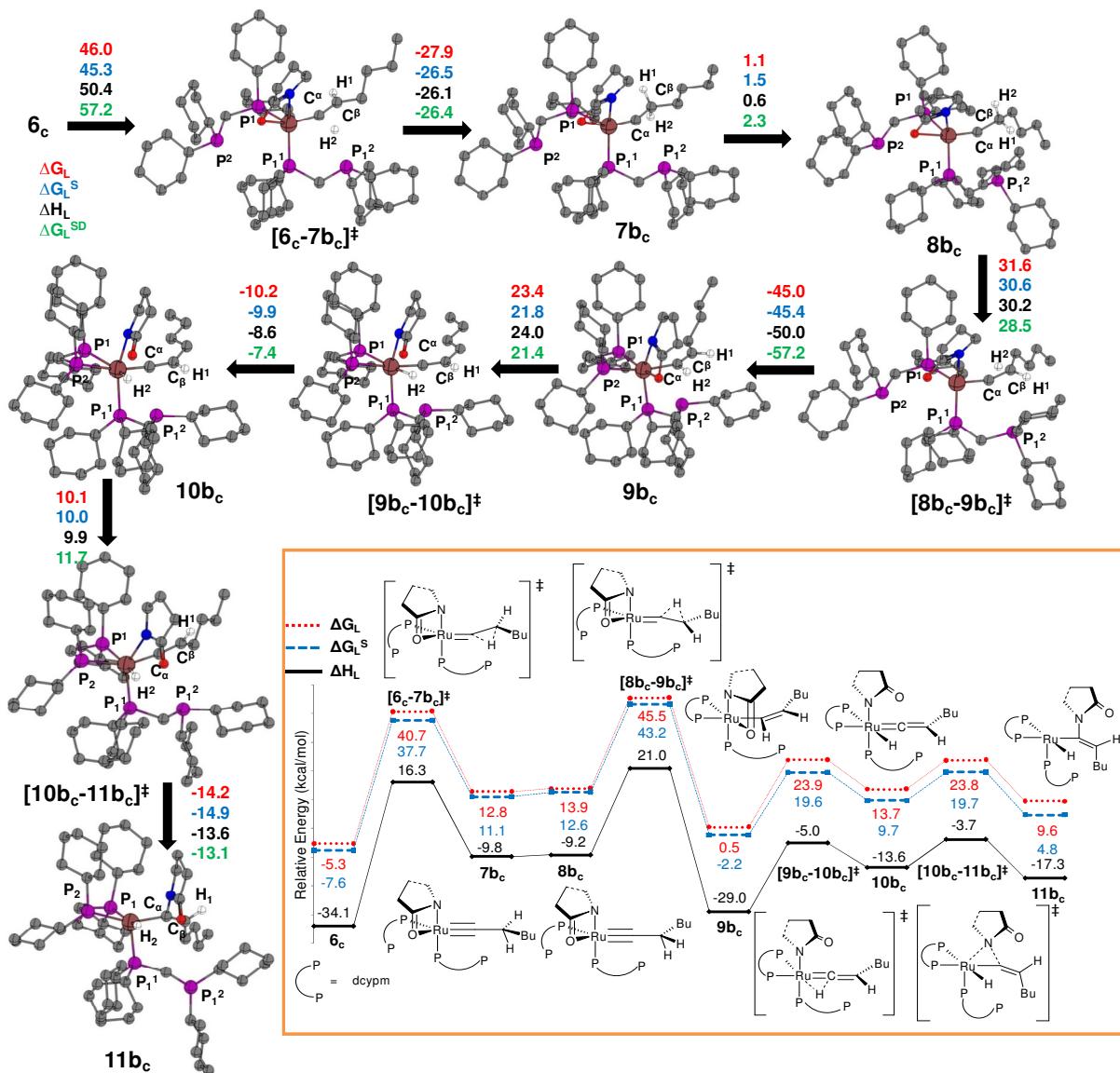
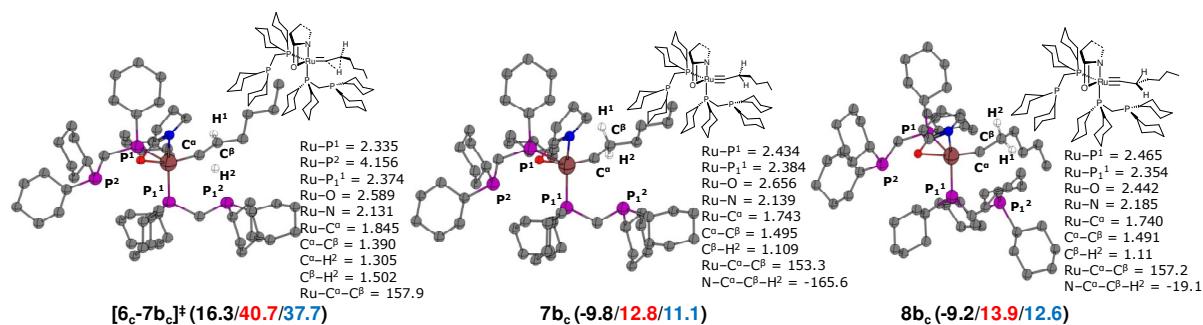


Figure S25. Optimized structures and energy profile (inset) for the vinyl isomerization, vinyl-vinylidene rearrangement and nucleophilic transfer steps in “path b_c”. For other conventions refer to Figure 1 and Figure S3.



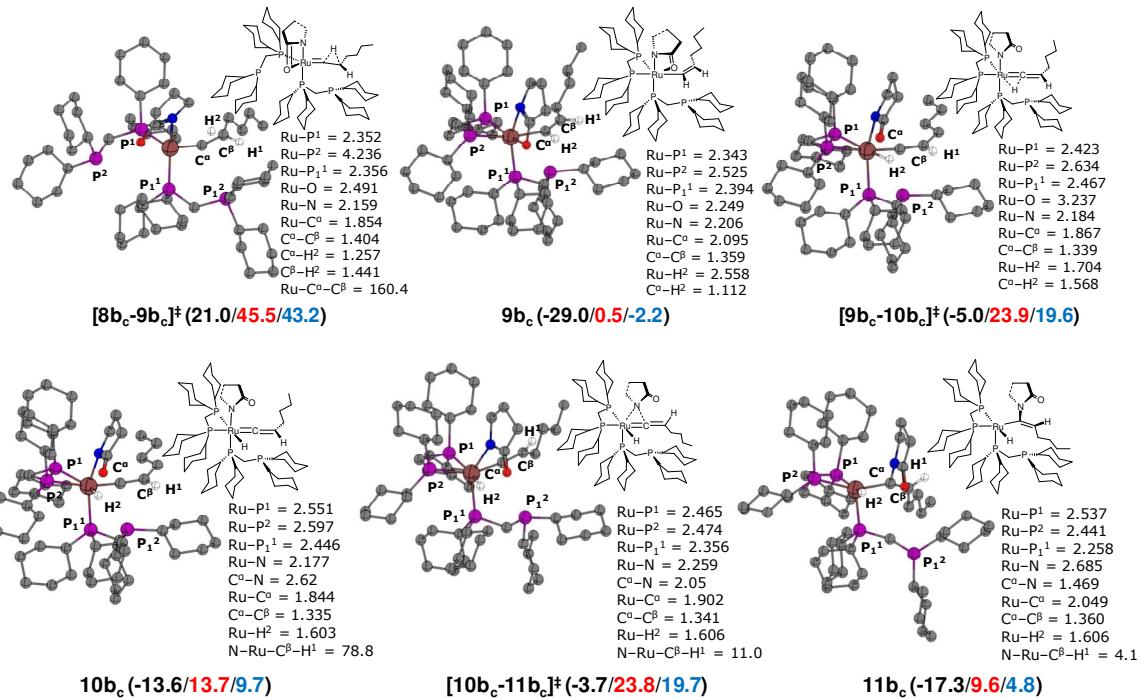


Figure S26. Optimized Structures of intermediates and transition states involved in vinyl-vinylidene rearrangement and nucleophilic attack steps for catalytic system **1c** in “path b_c”. For energy and other conventions refer Figure 1 in main text and Figure S3.

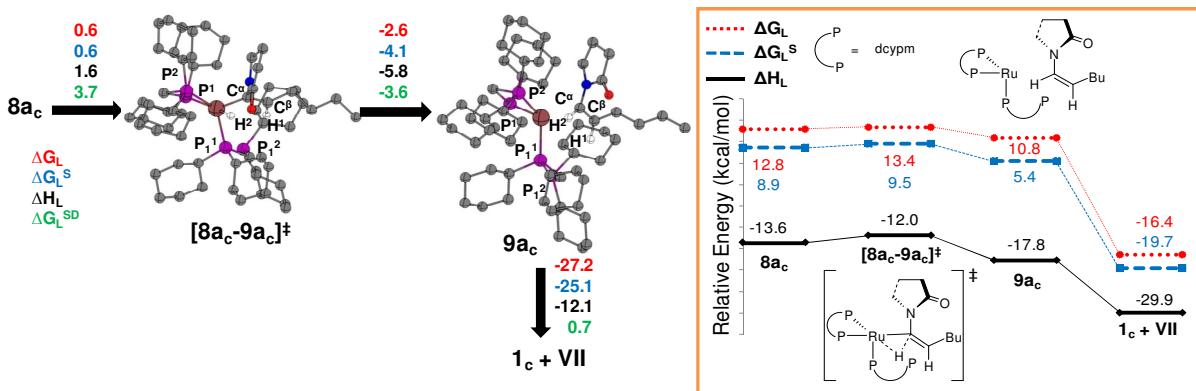


Figure S27. Optimized structures and energy profile (inset) for the reductive elimination step in “path a_c”. For other conventions refer to Figure 1 and Figure S3.

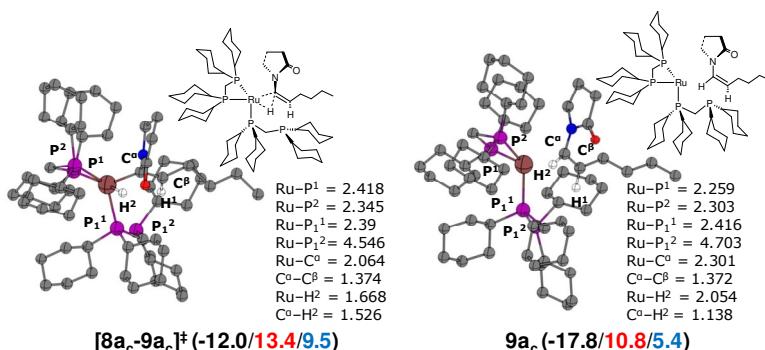
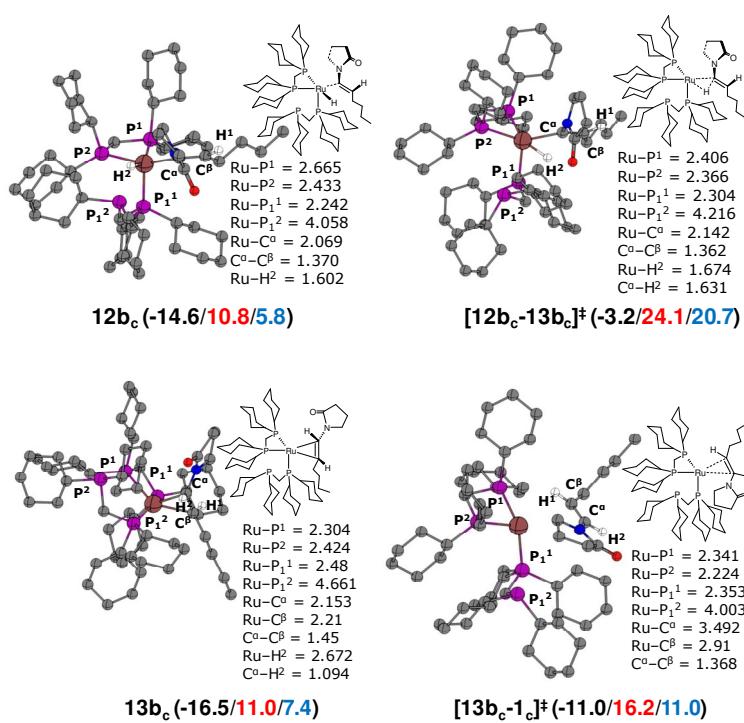
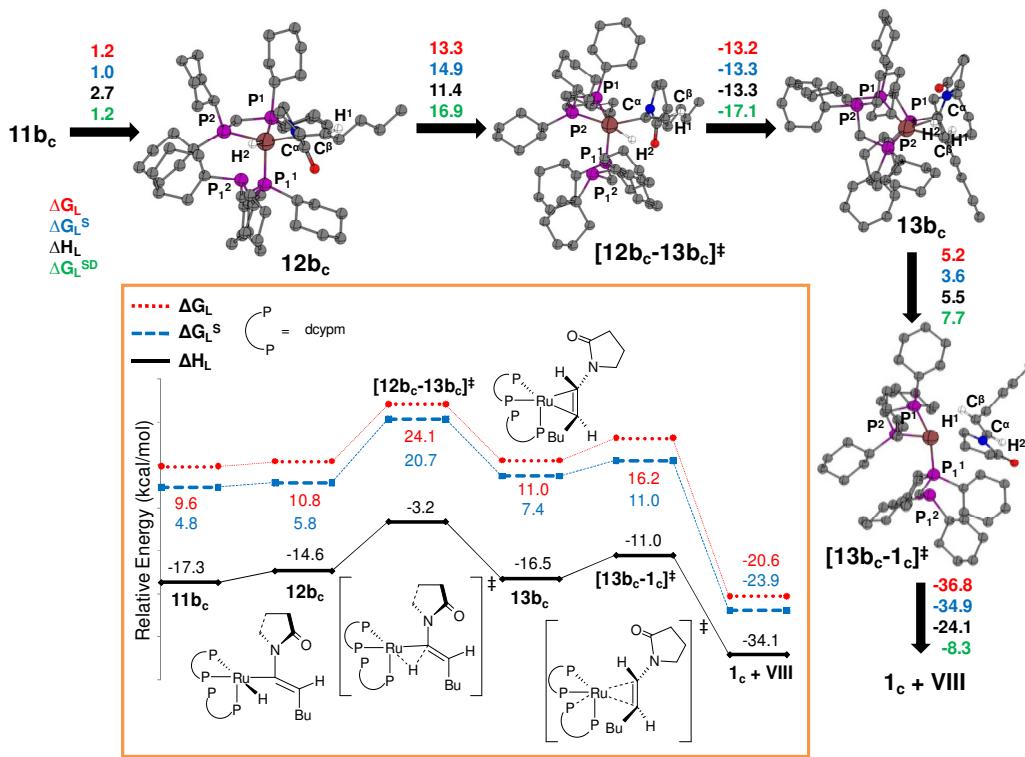


Figure S28. Optimized Structures of intermediates and transition states involved in reductive elimination step for catalyst system **1c** in “path a_c”. For energy and other conventions refer Figure 1 in main text and Figure S3.



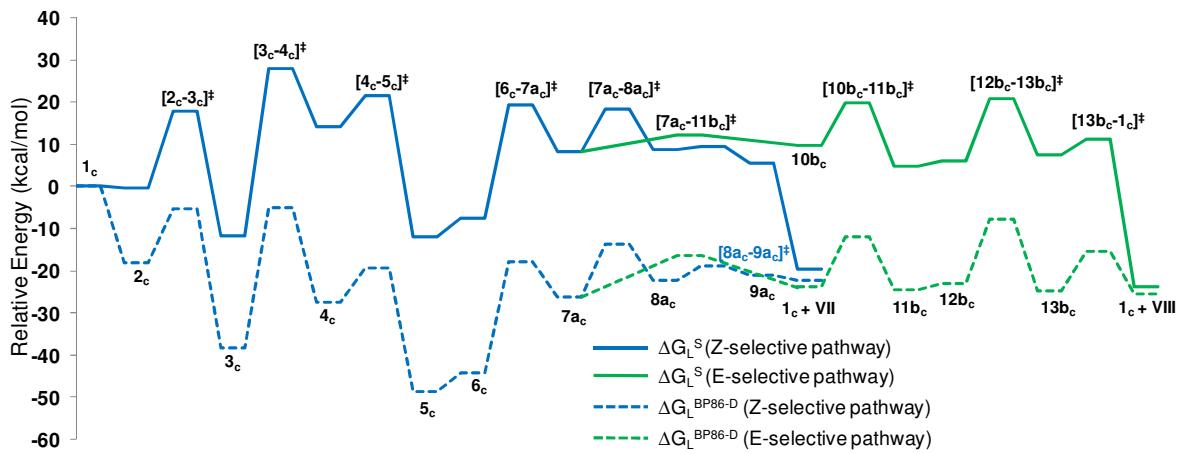
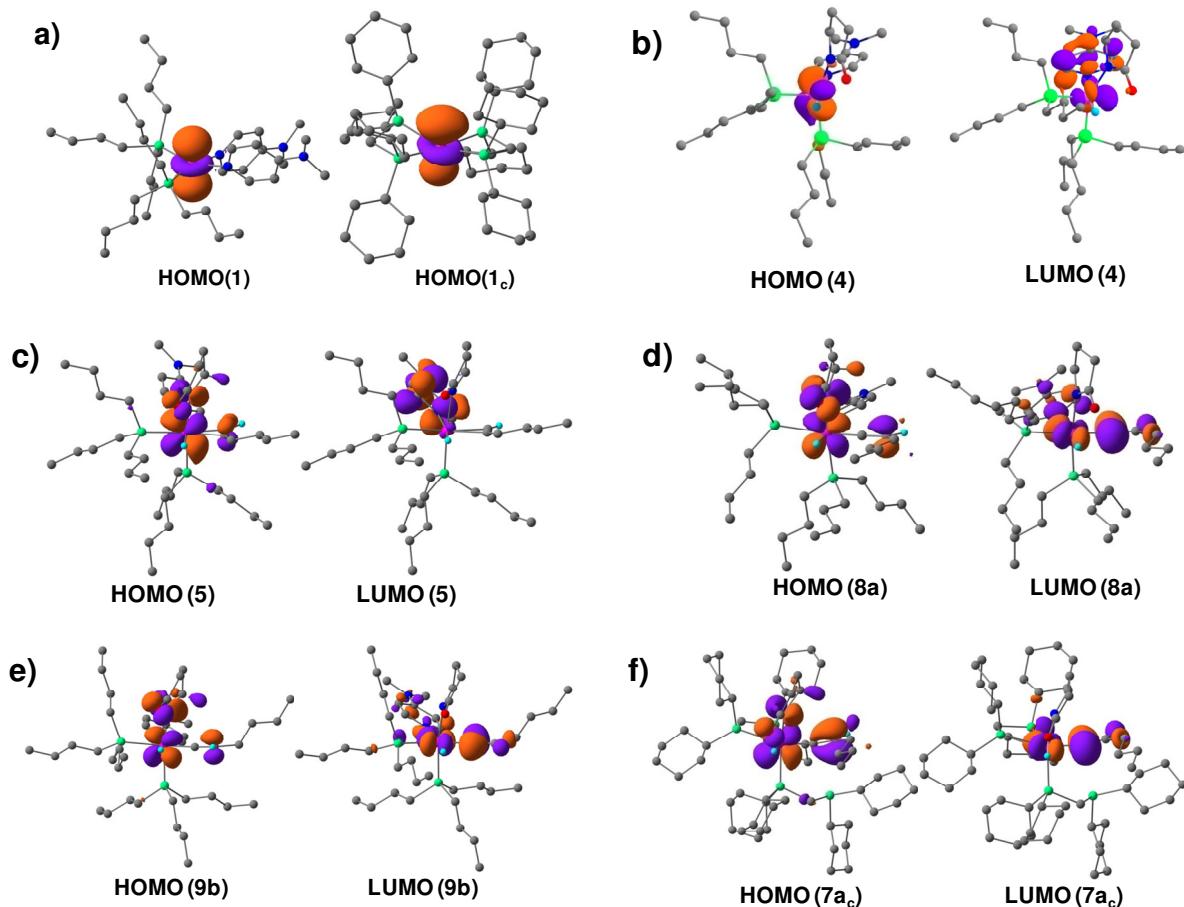


Figure S31. Comparison of the dispersion corrected energy profile (BP86-D/LANL2TZ(f)(Ru)/TZVP(H, C, N, O and P)//ONIOM{BP86/LANL2DZ(Ru)/6-31G*(H, C, N, O and P):HF/STO-3G}; dotted line) with the one reported in the text (BP86/LANL2TZ(f)(Ru)/TZVP(H, C, N, O and P):HF/STO-3G); dark line) for favorable pathways of *E*- and *Z*- enamide formation in catalyst system **1_c**. For energy terms refer to the computational details.



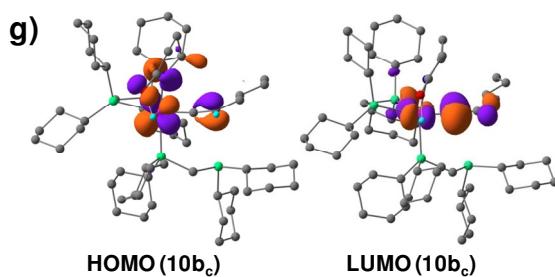


Figure S32. KS-MO (isosurface=0.048 au) of some important intermediates included in parentheses.

Scheme S1. Chemical structures of several modified vinylidene complexes from $7a_c$ and their respective enamide products.

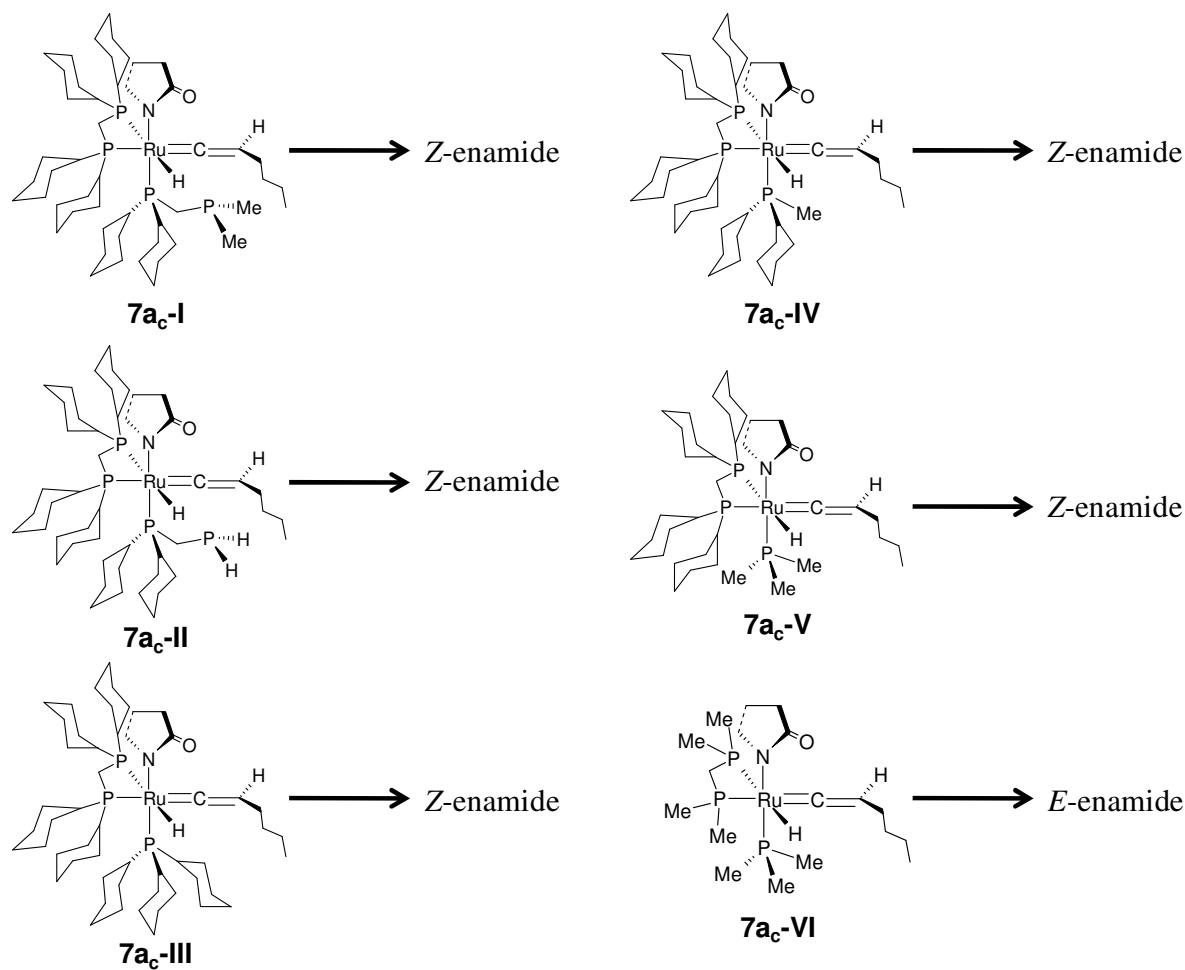


Table S1. Absolute energies (hartree) of all intermediates and transition states involve in catalyst system **1**. E_e = Electronic energy, E_0 = Total energy plus zero-point energy, H_{298} = enthalpy at 298 K, G_{298} = Gibbs free energy and E_{Sol} = Electronic energy at SMD solvation model. First four energy terms (E_e , E_0 , H_{298} , G_{298}) are from BP86/LANL2DZ(Ru)/6-31G*(H, C, N, O and P) level and last one (E_{Sol}) at BP86/LANL2TZ(f)(Ru)/TZVP(H, C, N, O and P)//BP86/LANL2DZ(Ru)/6-31G*(H, C, N, O and P) level.

| No. | E_e | E_0 | H_{298} | G_{298} | E_{Sol} |
|-----|-------|-------|-----------|-----------|------------------|
|-----|-------|-------|-----------|-----------|------------------|

| | | | | | |
|----------------------------|--------------|--------------|--------------|--------------|--------------|
| 1 | -2488.313264 | -2487.271189 | -2487.207193 | -2487.38213 | -2488.98055 |
| 2 | -2774.96175 | -2773.809459 | -2773.738828 | -2773.926977 | -2775.732077 |
| [2-3][‡] | -2774.950564 | -2773.801376 | -2773.731339 | -2773.917908 | -2775.725511 |
| 3 | -2774.979057 | -2773.827759 | -2773.757754 | -2773.943084 | -2775.75393 |
| 4 | -2392.714841 | -2391.723489 | -2391.6636 | -2391.826144 | -2393.362564 |
| [4-5][‡] | -2627.291357 | -2626.159772 | -2626.091394 | -2626.270688 | -2628.020645 |
| 5 | -2627.313511 | -2626.182499 | -2626.113696 | -2626.295292 | -2628.0438 |
| [5-6][‡] | -2627.306289 | -2626.175755 | -2626.107612 | -2626.287522 | -2628.036366 |
| 6 | -2627.352095 | -2626.216344 | -2626.148467 | -2626.327615 | -2628.072693 |
| 7a | -3009.592628 | -3008.297337 | -3008.21916 | -3008.42065 | -3010.447767 |
| [7a-8a][‡] | -3009.573560 | -3008.284994 | -3008.205753 | -3008.414181 | -3010.433151 |
| 8a | -2627.319819 | -2626.188928 | -2626.120085 | -2626.30408 | -2628.049852 |
| [8a-10][‡] | -2627.307976 | -2626.177472 | -2626.109045 | -2626.293039 | -2628.034909 |
| 7b | -3009.599754 | -3008.302396 | -3008.224804 | -3008.423646 | -3010.454084 |
| [7b-8b][‡] | -3009.540835 | -3008.251555 | -3008.171855 | -3008.385136 | -3010.401829 |
| 8b | -2627.350255 | -2626.213922 | -2626.146399 | -2626.323158 | -2628.070026 |
| [8b-9b][‡] | -2627.320819 | -2626.190983 | -2626.122679 | -2626.304294 | -2628.05175 |
| 9b | -2627.329538 | -2626.197026 | -2626.128826 | -2626.308919 | -2628.058792 |
| [9b-10][‡] | -2627.311048 | -2626.18019 | -2626.112105 | -2626.293171 | -2628.035810 |
| 10 | -2627.332578 | -2626.198404 | -2626.130731 | -2626.30959 | -2628.054002 |
| [10-11][‡] | -2627.294064 | -2626.163857 | -2626.09546 | -2626.279028 | -2628.016801 |
| 11 | -2627.315082 | -2626.17855 | -2626.110417 | -2626.292765 | -2628.034666 |
| [5-6m][‡] | -2627.285381 | -2626.154859 | -2626.087129 | -2626.266143 | -2628.009726 |

| | | | | | |
|------------------------------|--------------|--------------|--------------|--------------|--------------|
| 6m | -2627.339176 | -2626.205018 | -2626.137422 | -2626.318186 | -2628.065264 |
| 7m | -3009.595182 | -3008.301101 | -3008.223038 | -3008.427283 | -3010.450022 |
| [7m-1][‡] | -3009.552721 | -3008.259968 | -3008.181840 | -3008.386229 | -3010.407418 |
| 8az | -2627.341588 | -2626.206708 | -2626.139151 | -2626.319405 | -2628.061276 |
| [8az-10z][‡] | -2627.292277 | -2626.161682 | -2626.093304 | -2626.275981 | -2628.033412 |
| 10z | -2627.346742 | -2626.212283 | -2626.144581 | -2626.323921 | -2628.067249 |
| [10z-11z][‡] | -2627.299419 | -2626.168427 | -2626.100228 | -2626.282902 | -2628.022619 |
| 11z | -2627.310154 | -2626.174212 | -2626.105609 | -2626.290055 | -2628.03288 |
| I | -234.5775755 | -234.439683 | -234.430826 | -234.471449 | -234.669748 |
| II | -286.6289429 | -286.520721 | -286.514213 | -286.549702 | -286.745095 |
| III | -814.8988526 | -814.537956 | -814.51755 | -814.588402 | -815.096793 |
| IV | -382.249473 | -382.091809 | -382.081941 | -382.126034 | -382.387185 |
| V | -1663.093456 | -1662.437293 | -1662.406391 | -1662.499608 | -1663.479558 |
| VI | -521.2666051 | -521.015390 | -521.001173 | -521.056177 | -521.459973 |
| VII | -521.2704073 | -521.018521 | -521.004288 | -521.060047 | -521.464625 |
| VIII | -521.2762643 | -521.024904 | -521.010508 | -521.066288 | -521.471002 |

Table S2. Absolute energies (hartree) of all intermediates and transition states involve in catalyst system **1_c**. E_e = Electronic energy, E₀ = Total energy plus zero-point energy, H₂₉₈ = enthalpy at 298 K, G₂₉₈ = Gibbs free energy at 298 K and E_{Sol} = Electronic energy at SMD salvation model. First four energy terms (E_e, E₀, H₂₉₈, G₂₉₈) are from ONIOM{BP86/LANL2DZ(Ru)/6-31G*(H, C, N, O and P):HF/STO-3G}and last one (E_{Sol}) from BP86/LANL2TZ(f)(Ru)/TZVP(H, C, N, O and P)//ONIOM{BP86/LANL2DZ(Ru)/6-31G*(H, C, N, O and P):HF/STO-3G} level.

| No. | E _e | E ₀ | H ₂₉₈ | G ₂₉₈ | E _{Sol} |
|--|----------------|----------------|------------------|------------------|------------------|
| 1_c | -3385.601179 | -3383.994895 | -3383.945114 | -3384.086746 | -3420.95466 |
| 2_c | -3672.252939 | -3670.539655 | -3670.475673 | -3670.641565 | -3707.714035 |
| [2_c-3_c][‡] | -3672.19905 | -3670.490082 | -3670.426606 | -3670.591313 | -3707.680759 |

| | | | | | |
|--|--------------|--------------|--------------|--------------|----------------|
| 3_c | -3672.24912 | -3670.53607 | -3670.473281 | -3670.634027 | -3707.734159 |
| [3_c-4_c][‡] | -3906.780791 | -3904.928416 | -3904.856536 | -3905.039789 | -3942.354687 |
| 4_c | -3906.812673 | -3904.958689 | -3904.887213 | -3905.067655 | -3942.38057 |
| [4_c-5_c][‡] | -3906.796055 | -3904.943774 | -3904.87264 | -3905.052226 | -3942.367223 |
| 5_c | -3906.866123 | -3905.008798 | -3904.93748 | -3905.118407 | -3942.423551 |
| 6_c | -3906.858277 | -3905.000789 | -3904.929522 | -3905.110259 | -3942.416889 |
| [6_c-7a_c][‡] | -3906.798691 | -3904.946205 | -3904.875081 | -3905.055528 | -3942.370077 |
| 7a_c | -3906.819227 | -3904.965628 | -3904.893865 | -3905.07743 | -3942.386537 |
| [7a_c-8a_c]_‡ | -3906.806344 | -3904.953625 | -3904.882376 | -3905.063959 | -3942.370976 |
| 8a_c | -3906.828683 | -3904.973336 | -3904.901902 | -3905.085046 | -3942.387124 |
| [8a_c-9a_c][‡] | -3906.822979 | -3904.970649 | -3904.899003 | -3905.083818 | -3942.391014 |
| 9a_c | -3906.82902 | -3904.971394 | -3904.899529 | -3905.084147 | -3942.381842 |
| [5_c-9b_c][‡] | -3906.756113 | -3904.90261 | -3904.831011 | -3905.014 | -3942.310166 |
| [6_c-7b_c][‡] | -3906.770944 | -3904.9217 | -3904.849578 | -3905.036048 | -3942.3336751 |
| 7b_c | -3906.821847 | -3904.966439 | -3904.893896 | -3905.082693 | -3942.37997545 |
| 8b_c | -3906.823375 | -3904.967667 | -3904.895197 | -3905.083426 | -3942.37823762 |
| [8b_c-9b_c][‡] | -3906.766462 | -3904.915077 | -3904.842976 | -3905.029419 | -3942.3267696 |
| 9b_c | -3906.848541 | -3904.990592 | -3904.919535 | -3905.099571 | -3942.409294 |
| [9b_c-10b_c][‡] | -3906.79549 | -3904.943146 | -3904.871979 | -3905.05288 | -3942.369098 |
| 10b_c | -3906.815081 | -3904.961195 | -3904.889599 | -3905.072392 | -3942.385015 |
| [7a_c-10b_c][‡] | -3906.808365 | -3904.955481 | -3904.884206 | -3905.066466 | -3942.38048522 |
| [10b_c-11b_c][‡] | -3905.803241 | -3904.950684 | -3904.879391 | -3905.0614 | -3942.366983 |
| 11b_c | -3906.835208 | -3904.981073 | -3904.909381 | -3905.0927 | -3942.392764 |

| | | | | | |
|--|--------------|--------------|--------------|--------------|--------------|
| 12b_c | -3906.813375 | -3904.959442 | -3904.887667 | -3905.072286 | -3942.38952 |
| [12b_c-13b_c][‡] | -3906.810709 | -3904.958504 | -3904.886963 | -3905.070043 | -3942.365679 |
| 13b_c | -3906.840866 | -3904.981986 | -3904.910596 | -3905.093394 | -3942.392962 |
| [13b_c-1_c][‡] | -3906.834296 | -3904.977382 | -3904.905967 | -3905.08929 | -3942.384989 |

Table S3. Energy changes (in kcal/mol) for all steps involved in catalyst system **1**. For different energy terms refer Computational Details.

| Step | ΔE_e | ΔH_{298} | ΔG_{298} | ΔE_L | ΔE_L^S | ΔE_L^{BP86-D} | ΔE_L^{B97D} | ΔE_L^{M06-2X} |
|----------------------------------|--------------|------------------|------------------|--------------|----------------|-----------------------|---------------------|-----------------------|
| 1+I→2 | -12.3 | -10.9 | 3.0 | -7.9 | -4.0 | -21.4 | -19.8 | -20.0 |
| 2→[2-3][‡] | 7.0 | 4.7 | 5.7 | 6.3 | 4.1 | 3.8 | 4.2 | 2.9 |
| [2-3][‡]→3 | -17.9 | -16.6 | -15.8 | -19.5 | -17.8 | -28.9 | -24.0 | -31.1 |
| 3→4+IV | 9.3 | 7.7 | -5.7 | 8.2 | 2.6 | 20.9 | 14.6 | 19.0 |
| 4+II→[4-5][‡] | 0.7 | 1.9 | 16.9 | 4.0 | 7.3 | 4.4 | — | — |
| [4-5][‡]→5 | -13.9 | -14.0 | -15.4 | -15.8 | -14.5 | -24.0 | -10.0 ^a | -6.3 ^a |
| 5→[5-6][‡] | 5.2 | 3.8 | 4.9 | 4.5 | 4.7 | 5.4 | 6.7 | 5.1 |
| [5-6][‡]→6 | -29.4 | -25.6 | -23.3 | -23.7 | -20.3 | -18.9 | -21.2 | -26.5 |
| 6+IV→7a | 5.6 | 7.1 | 18.8 | 5.2 | 5.1 | -21.5 | -16.5 | -11.8 |
| 7a→[7a-8a][‡] | 12.0 | 8.4 | 4.1 | 10.3 | 9.2 | 28.6 | 22.1 | 28.3 |
| [7a-8a][‡]→8a+IV | 2.7 | 2.3 | -10.0 | 1.0 | -2.4 | 9.6 | 8.1 | 9.1 |
| 8a→[8a-10][‡] | 7.4 | 6.9 | 6.9 | 9.4 | 9.4 | 12.3 | 12.4 | 14.0 |
| [8a-10][‡]→10 | -15.4 | -13.6 | -10.4 | -12.4 | -12.0 | -14.9 | -14.5 | -21.6 |
| 6+IV→7b | 1.1 | 3.5 | 16.9 | 1.7 | 1.1 | -25.9 | -21.7 | -16.2 |
| 7b→[7b-8b][‡] | 37.0 | 32.2 | 24.2 | 34.5 | 32.8 | 56.2 | 50.4 | 66.0 |
| [7b-8b][‡]→8b+IV | -37.0 | -35.4 | -40.2 | -35.2 | -34.8 | -33.4 | -31.5 | -53.4 |
| 8b→[8b-9b][‡] | 18.5 | 14.9 | 11.8 | 13.9 | 11.5 | 16.6 | 15.6 | 25.2 |
| [8b-9b][‡]→9b | -5.5 | -3.9 | -2.9 | -4.2 | -4.4 | -2.7 | -4.3 | -2.2 |
| 9b→[9b-10][‡] | 11.6 | 10.5 | 9.9 | 13.7 | 14.4 | 11.9 | 11.7 | 12.5 |
| [9b-10][‡]→10 | -13.5 | -11.7 | -10.3 | -10.9 | -11.4 | -8.5 | -8.7 | -13.8 |
| 10→[10-11][‡] | 24.2 | 22.1 | 19.2 | 23.3 | 23.3 | 24.3 | 23.4 | 28.7 |
| [10-11][‡]→11 | -13.2 | -9.4 | -8.6 | -10.8 | -11.2 | -7.5 | -12.2 | -20.4 |
| 11+IV→1+III | -15.7 | -15.9 | -18.6 | -18.4 | -18.6 | -13.6 | -9.7 | -7.5 |

| | | | | | | | | |
|----------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| 5→[5-6m][‡] | 17.7 | 16.7 | 18.3 | 20.4 | 21.4 | 20.7 | 22.3 | 22.5 |
| [5-6m][‡]→6m | -33.8 | -31.6 | -32.7 | -32.1 | -34.9 | -25.0 | -27.3 | -30.8 |
| 6m+IV→7m | -4.1 | -2.3 | 10.6 | -2.3 | 1.5 | -19.9 | -17.5 | -14.2 |
| 7m→[7m-1][‡] | 26.6 | 25.9 | 25.8 | 26.6 | 26.7 | 27.7 | 25.8 | 32.1 |
| [7m-1][‡]→1+VII | -17.0 | -18.6 | -32.7 | -18.1 | -20.8 | -0.4 | -0.9 | -8.8 |
| 8a→8az | -13.7 | -12.0 | -9.6 | -8.7 | -7.2 | -5.7 | -1.2 | -9.2 |
| 8az→[8az-10z][‡] | 30.9 | 28.8 | 27.2 | 28.2 | 27.5 | 28.0 | 13.5 | 22.1 |
| [8az-10z][‡]→10z | -34.2 | -32.2 | -30.1 | -30.7 | -31.3 | -31.5 | -21.6 | -29.0 |
| 10z→[10z-11z][‡] | 29.7 | 27.8 | 25.7 | 27.4 | 28.0 | 28.2 | 29.4 | 32.3 |
| [10z-11z][‡]→11z | -6.7 | -3.4 | -4.5 | -4.5 | -6.4 | -4.0 | -3.4 | -6.9 |
| 11z+IV→1+VI | -15.1 | -15.0 | -16.4 | -16.7 | -15.8 | -19.4 | -14.2 | -12.6 |

^a for the step **4 + II → 5**.

Table S4. Energy changes at higher basis (in kcal/mol) for all steps involved in catalyst system **1**. For different energy terms refer Computational Details.

| Step | ΔH_L | ΔG_L | ΔG_L^S | ΔG_L^{SD} | Step | ΔH_L | ΔG_L | ΔG_L^S | ΔG_L^{SD} |
|----------------------------------|--------------|--------------|----------------|-------------------|----------------------------------|--------------|--------------|----------------|-------------------|
| 1+I→2 | -6.8 | 7.8 | 6.8 | -6.7 | [8b-9b][‡]→9b | -3.0 | -3.6 | -3.6 | -2.2 |
| 2→[2-3][‡] | 4.2 | 6.0 | 3.2 | 0.7 | 9b→[9b-10][‡] | 12.8 | 12.1 | 14.3 | 12.5 |
| [2-3][‡]→3 | -18.0 | -16.9 | -15.6 | -25.0 | [9b-10][‡]→10 | -9.7 | -11.8 | -11.6 | -9.2 |
| 3→4+IV | 6.0 | -13.1 | -12.3 | 13.0 | 10→[10-11][‡] | 21.9 | 22.0 | 22.0 | 23.0 |
| 4+II→[4-5][‡] | 5.0 | 21.4 | 19.3 | 7.2 | [10-11][‡]→11 | -8.6 | -7.0 | -7.9 | -4.6 |
| [4-5][‡]→5 | -15.2 | -19.5 | -16.8 | -25.0 | 11+IV→1+III | -17.4 | -20.0 | -19.3 | -14.5 |
| 5→[5-6][‡] | 3.3 | 11.0 | 7.9 | 8.8 | 5→[5-6m][‡] | 19.4 | 26.9 | 25.4 | 25.8 |
| [5-6][‡]→6 | -20.9 | -22.0 | -18.2 | -13.4 | [5-6m][‡]→6m | -30.6 | -34.3 | -35.8 | -28.7 |
| 6+IV→7a | 7.3 | 25.1 | 19.1 | -7.6 | 6m+IV→7m | -0.2 | 16.8 | 14.9 | -2.6 |
| 7a→[7a-8a][‡] | 7.1 | 1.7 | 2.4 | 20.7 | 7m→[7m-1][‡] | 26.2 | 26.7 | 26.6 | 37.1 |
| [7a-8a][‡]→8a+IV | 0.8 | -13.0 | -11.9 | -3.4 | [7m-1][‡]→1+VII | -18.0 | -35.8 | -32.5 | -20.4 |
| 8a→[8a-10][‡] | 8.4 | 7.9 | 8.1 | 11.0 | 8a→8az | -8.2 | -7.0 | -6.5 | -2.9 |
| [8a-10][‡]→10 | -11.2 | -11.0 | -10.7 | -13.1 | 8az→[8az-10z][‡] | 26.8 | 26.0 | 26.2 | 25.4 |
| 6+IV→7b | 4.1 | 21.1 | 14.9 | -12.7 | [8az-10z][‡]→10z | -29.3 | -29.6 | -30.1 | -30.9 |
| 7b→[7b-8b][‡] | 31.7 | 23.5 | 24.5 | 46.2 | 10z→[10z-11z][‡] | 26.0 | 26.5 | 27.0 | 27.8 |
| [7b-8b][‡]→8b+IV | -34.6 | -41.6 | -38.8 | -37.1 | [10z-11z][‡]→11z | -2.7 | -4.7 | -5.9 | -3.7 |
| 8b→[8b-9b][‡] | 11.1 | 9.1 | 7.3 | 10.1 | 11z+IV→1+VI | -15.3 | -15.1 | -14.3 | -10.7 |

Table S5. Energy changes (in kcal/mol) for all steps involved in catalyst system **1c**. For different energy terms refer Computational Details.

| Step | ΔE_e | ΔH_{298} | ΔG_{298} | ΔE_L | ΔE_L^S | ΔE_L^{BP86D} | ΔE_L^{B97D} | ΔE_L^{M06-2X} |
|--|--------------|------------------|------------------|--------------|----------------|----------------------|---------------------|-----------------------|
| 1_c+I→2_c | -14.3 | -10.3 | -3.2 | -13.3 | -9.0 | -31.2 | -30.3 | -23.7 |
| 2_c→[2_c-3_c][‡] | 33.8 | 30.8 | 31.5 | 21.7 | 20.9 | 16.0 | 20.8 | 20.9 |
| [2_c-3_c][‡]→3_c | -31.4 | -29.3 | -26.8 | -34.2 | -33.5 | -38.3 | -37.2 | -38.8 |
| 3_c+II→[3_c-4_c][‡] | 28.8 | 29.9 | 41.2 | 31.1 | 30.9 | 20.9 | 17.0 | 14.1 |
| [3_c-4_c][‡]→4_c | -20.0 | -19.3 | -17.5 | -18.8 | -16.2 | -25.7 | -17.6 | -10.8 |
| 4_c→[4_c-5_c][‡] | 10.4 | 9.1 | 9.7 | 8.4 | 8.4 | 8.8 | 9.8 | 6.5 |
| [4_c-5_c][‡]→5_c | -44.0 | -40.7 | -41.5 | -36.4 | -35.3 | -30.6 | -33.8 | -42.0 |
| 5_c→6_c | 4.9 | 5.0 | 5.1 | 4.3 | 4.2 | 4.1 | 4.0 | 4.5 |
| 6_c→[6_c-7a_c][‡] | 37.4 | 34.2 | 34.3 | 30.8 | 29.4 | 28.5 | 28.9 | 39.7 |
| [6_c-7a_c][‡]→7a_c | -12.9 | -11.8 | -13.7 | -10.1 | -10.3 | -6.7 | -9.1 | -3.5 |
| 7a_c→[7a_c-8a_c][‡] | 8.1 | 7.2 | 8.5 | 10.5 | 9.8 | 11.6 | 12.3 | 10.9 |
| [7a_c-8a_c][‡]→8a_c | -14.0 | -12.3 | -13.2 | -9.7 | -10.1 | -8.2 | -8.3 | -14.9 |
| 8a_c→[8a_c-9a_c][‡] | 3.6 | 1.8 | 0.8 | 3.8 | 3.8 | 6.5 | 5.6 | 5.8 |
| [8a_c-9a_c][‡]→9a_c | -3.8 | -0.3 | -0.2 | -6.3 | -6.8 | -5.9 | -7.5 | -6.6 |
| 9a_c→1_c+VI | -26.7 | -31.3 | -39.3 | -14.3 | -23.5 | 11.5 | 11.5 | 3.3 |
| 5_c→[5_c-9b_c][‡] | 69.0 | 66.8 | 65.5 | 72.3 | 71.2 | 71.0 | 69.9 | 87.3 |
| [5_c-9b_c][‡]→9b_c | -58.0 | -55.5 | -53.7 | -63.0 | -62.2 | -62.9 | -61.4 | -78.2 |
| 6_c→[6_c-7b_c][‡] | 54.8 | 50.2 | 46.6 | 54.4 | 52.2 | 66.4 | 63.9 | 74.6 |
| [6_c-7b_c][‡]→7b_c | -31.9 | -27.8 | -29.3 | -29.8 | -29.1 | -29.5 | -32.6 | -34.7 |
| 7b_c→8b_c | -1.0 | -0.8 | -0.5 | 0.5 | 1.1 | 1.2 | 1.2 | 0.2 |
| 8b_c→[8b_c-9b_c][‡] | 35.7 | 32.8 | 33.9 | 32.9 | 32.3 | 30.8 | 33.6 | 34.3 |
| [8b_c-9b_c][‡]→9b_c | -51.5 | -48.0 | -44.0 | -53.1 | -51.8 | -64.8 | -61.5 | 69.6 |
| 9b_c→[9b_c-10b_c][‡] | 33.3 | 29.8 | 29.3 | 27.1 | 25.2 | 26.7 | 25.8 | 36.3 |
| [9b_c-10b_c][‡]→10b_c | -12.3 | -11.1 | -12.2 | -9.8 | -10.0 | -7.3 | -8.6 | -3.8 |
| 7a_c→[7a_c-10b_c][‡] | 6.8 | 6.1 | 6.9 | 5.2 | 3.8 | 9.5 | 8.9 | 6.6 |
| [7a_c-10b_c][‡]→10b_c | -4.2 | -3.4 | -3.7 | -3.7 | -2.8 | -7.9 | -7.1 | -5.6 |
| 10b_c→[10b_c-11b_c][‡] | 7.4 | 6.4 | 6.9 | 11.4 | 11.3 | 13.7 | 15.0 | 14.0 |
| [10b_c-11b_c][‡]→11b_c | -20.1 | -18.8 | -19.6 | -15.3 | -16.2 | -12.8 | -14.7 | -22.9 |
| 11b_c→12b_c | 13.7 | 13.6 | 12.8 | 2.7 | 2.0 | 1.6 | -0.1 | -0.5 |
| 12b_c→[12b_c-13b_c][‡] | 1.7 | 0.4 | 1.4 | 12.8 | 15.0 | 12.9 | 15.5 | 17.8 |

| | | | | | | | | |
|--|-------|-------|-------|-------|-------|-------|-------|-------|
| [12b_c-13b_c][‡]→13b_c | -18.9 | -14.8 | -14.7 | -17.0 | -17.1 | -18.9 | -19.2 | -18.1 |
| 13b_c→[13b_c-1_c][‡] | 4.1 | 2.9 | 2.6 | 6.7 | 5.0 | 15.8 | 13.0 | 4.4 |
| [13b_c-1_c][‡]→1_c+III | -27.1 | -31.2 | -40.0 | -22.8 | -25.5 | -1.2 | -0.5 | -0.6 |

Table S6. Energy changes at higher basis (in kcal/mol) for all steps involved in catalyst system **1_c**. For different energy terms refer Computational Details.

| Step | ΔH _L | ΔG _L | ΔG _L ^S | ΔG _L ^{SD} | Step | ΔH _L | ΔG _L | ΔG _L ^S | ΔG _L ^{SD} |
|---|-----------------|-----------------|------------------------------|-------------------------------|--|-----------------|-----------------|------------------------------|-------------------------------|
| 1_c+I→2_c | -13.6 | -0.3 | -0.4 | -18.4 | 6_c→[6_c-7b_c][‡] | 50.4 | 46.0 | 45.3 | 57.2 |
| 2_c→[2_c-3_c][‡] | 19.7 | 18.7 | 18.1 | 12.4 | [6_c-7b_c][‡]→7b_c | -26.1 | -27.9 | -26.5 | -26.4 |
| [2_c-3_c][‡]→3_c | -32.3 | -29.1 | -29.5 | -33.6 | 7b_c→8b_c | 0.6 | 1.1 | 1.5 | 2.3 |
| 3_c+II→[3_c-4_c][‡] | 32.2 | 43.6 | 39.6 | 29.4 | 8b_c→[8b_c-9b_c][‡] | 30.2 | 31.6 | 30.6 | 28.5 |
| [3_c-4_c][‡]→4_c | -18.0 | -15.6 | -13.8 | -20.7 | [8b_c-9b_c][‡]→9b_c | -50.0 | -45.0 | -45.4 | -57.2 |
| 4_c→[4_c-5_c][‡] | 7.1 | 7.6 | 7.4 | 7.9 | 9b_c→[9b_c-10b_c][‡] | 24.0 | 23.4 | 21.8 | 21.4 |
| [4_c-5_c][‡]→5_c | -33.6 | -35.1 | -33.5 | -27.7 | [9b_c-10b_c][‡]→10b_c | -8.6 | -10.2 | -9.9 | -7.4 |
| 5_c→6_c | 4.4 | 4.9 | 5.5 | 4.3 | 7a_c→[7a_c-10b_c][‡] | 4.4 | 5.7 | 3.8 | 8.1 |
| 6_c→[6_c-7a_c][‡] | 27.9 | 28.4 | 26.9 | 24.6 | [7a_c-10b_c][‡]→10b_c | -2.8 | -3.4 | -2.4 | -6.6 |
| [6_c-7a_c][‡]→7a_c | -9.0 | -11.7 | -11.0 | -7.6 | 10b_c→[10b_c-11b_c][‡] | 9.9 | 10.1 | 10.0 | 11.7 |
| 7a_c→[7a_c-8a_c][‡] | 9.6 | 11.4 | 10.0 | 11.1 | [10b_c-11b_c][‡]→11b_c | -13.6 | -14.2 | -14.9 | -13.1 |
| [7a_c-8a_c][‡]→8a_c | -8.0 | -10.0 | -9.4 | -8.3 | 11b_c→12b_c | 2.7 | 1.2 | 1.0 | 1.2 |
| 8a_c→[8a_c-9a_c][‡] | 1.6 | 0.6 | 0.6 | 3.7 | 12b_c→[12b_c-13b_c][‡] | 11.4 | 13.3 | 14.9 | 16.9 |
| [8a_c-9a_c][‡]→9a_c | -5.8 | -2.6 | -4.0 | -3.6 | [12b_c-13b_c][‡]→13b_c | -13.3 | -13.2 | -13.3 | -17.1 |
| 9a_c→1_c+VI | -12.1 | -27.2 | -25.1 | 0.7 | 13b_c→[13b_c-1_c][‡] | 5.5 | 5.2 | 3.6 | 7.7 |
| 5_c→[5_c-9b_c][‡] | 70.3 | 69.2 | 68.5 | 68.0 | [13b_c-1_c][‡]→1_c+III | -24.1 | -36.8 | -34.9 | -8.3 |
| [5_c-9b_c][‡]→9b_c | -60.8 | -58.6 | -58.6 | -58.5 | | | | | |

Table S7. NPA charges of selected atoms for all intermediates and transition states involved in the reaction pathways for catalyst **1**.

| No. | Ru | N ¹ | N ² | N ³ | O | P ¹ | P ² | C ^a | C ^b | H ¹ | H ² |
|--------------------------|--------|----------------|----------------|----------------|--------|----------------|----------------|----------------|----------------|----------------|----------------|
| 1 | -0.570 | -0.422 | -0.422 | — | — | 1.071 | 1.067 | — | — | — | — |
| 2 | -0.656 | -0.416 | -0.427 | -0.584 | -0.615 | 1.073 | 1.083 | — | — | 0.433 | — |
| [2-3][‡] | -0.351 | -0.499 | -0.434 | -0.622 | -0.709 | 1.105 | 1.225 | — | — | 0.115 | — |

| | | | | | | | | | | | |
|------------------------------|--------|--------|--------|--------|--------|-------|-------|--------|--------|--------|--------|
| 3 | -0.323 | -0.441 | -0.406 | -0.558 | -0.661 | 1.155 | 1.105 | — | — | 0.017 | — |
| 4 | -0.284 | -0.460 | — | -0.606 | -0.613 | 1.268 | 1.092 | — | — | 0.005 | — |
| [4-5][‡] | -0.273 | -0.456 | — | -0.563 | -0.676 | 1.276 | 1.083 | -0.332 | 0.062 | -0.013 | 0.233 |
| 5 | -0.323 | -0.436 | — | -0.532 | -0.680 | 1.116 | 1.146 | -0.378 | 0.063 | 0.094 | 0.224 |
| [5-6][‡] | -0.273 | -0.408 | -0.442 | -0.515 | -0.698 | 1.057 | 1.130 | -0.383 | 0.032 | 0.181 | 0.219 |
| 6 | -0.021 | -0.338 | — | -0.516 | -0.590 | 0.993 | 1.165 | -0.348 | -0.304 | 0.195 | 0.156 |
| 7a | -0.035 | -0.372 | -0.364 | -0.543 | -0.659 | 0.949 | 1.127 | -0.361 | -0.311 | 0.189 | 0.154 |
| [7a-8a][‡] | -0.203 | -0.404 | -0.449 | -0.527 | -0.697 | 0.990 | 1.155 | -0.044 | -0.421 | 0.228 | 0.151 |
| 8a | -0.238 | -0.447 | — | -0.543 | -0.656 | 0.968 | 1.147 | 0.193 | -0.501 | 0.236 | 0.070 |
| [8a-10][‡] | -0.349 | -0.444 | — | -0.520 | -0.589 | 0.982 | 1.162 | 0.230 | -0.503 | 0.230 | 0.044 |
| 7b | -0.125 | -0.407 | -0.439 | -0.570 | -0.652 | 1.181 | 1.120 | -0.300 | -0.304 | 0.202 | 0.143 |
| [7b-8b][‡] | -0.082 | -0.442 | -0.466 | -0.520 | -0.677 | 1.059 | 1.059 | -0.322 | -0.262 | 0.229 | 0.230 |
| 8b | -0.027 | -0.346 | — | -0.511 | -0.594 | 0.972 | 1.160 | -0.338 | -0.306 | 0.177 | 0.172 |
| [8b-9b][‡] | -0.201 | -0.405 | — | -0.534 | -0.668 | 1.015 | 1.135 | -0.073 | -0.435 | 0.227 | 0.185 |
| 9b | -0.234 | -0.441 | — | -0.536 | -0.660 | 0.996 | 1.136 | 0.151 | -0.505 | 0.242 | 0.089 |
| [9b-10][‡] | -0.348 | -0.447 | — | -0.511 | -0.592 | 0.991 | 1.163 | 0.198 | -0.492 | 0.226 | 0.055 |
| 10 | -0.374 | -0.450 | — | -0.465 | -0.534 | 0.954 | 1.222 | 0.058 | -0.339 | 0.182 | -0.004 |
| [10-11][‡] | -0.328 | -0.487 | — | -0.423 | -0.571 | 0.999 | 1.170 | -0.146 | -0.258 | 0.189 | 0.201 |
| 11 | -0.683 | -0.437 | — | -0.373 | 0.564 | 1.169 | 1.040 | -0.044 | -0.250 | 0.197 | 0.253 |
| [5-6m][‡] | -0.379 | -0.447 | — | -0.473 | -0.588 | 1.093 | 1.188 | -0.559 | 0.152 | 0.042 | 0.215 |
| 6m | -1.172 | -0.381 | — | -0.391 | -0.573 | 1.127 | 1.387 | -0.315 | 0.071 | 0.98 | 0.180 |
| 7m | -0.392 | -0.437 | -0.401 | -0.402 | -0.598 | 1.023 | 1.202 | -0.344 | 0.028 | -0.025 | 0.156 |
| [7m-1][‡] | -0.932 | -0.385 | -0.366 | -0.417 | -0.570 | 1.118 | 1.193 | -0.403 | 0.115 | 0.204 | 0.229 |
| 8az | -0.415 | -0.419 | — | -0.442 | -0.456 | 1.018 | 1.163 | 0.140 | -0.367 | 0.199 | -0.029 |
| [8az-10z][‡] | -0.328 | -0.445 | — | -0.530 | -0.625 | 0.974 | 1.175 | 0.247 | -0.484 | 0.248 | 0.015 |

| | | | | | | | | | | | |
|------------------------------|--------|--------|---|--------|--------|-------|-------|--------|--------|-------|--------|
| 10z | -0.353 | -0.453 | — | -0.426 | -0.629 | 0.980 | 1.303 | 0.014 | -0.288 | 0.192 | -0.080 |
| [10z-11z][‡] | -0.419 | -0.481 | — | -0.412 | -0.600 | 1.001 | 1.155 | -0.121 | -0.220 | 0.194 | 0.192 |
| 11z | -0.576 | -0.454 | — | -0.403 | -0.581 | 1.157 | 1.028 | -0.070 | -0.184 | 0.201 | 0.226 |

Table S8. NPA charges of atoms particularly involve on reaction coordinates for all intermediates and transition states involve in the reaction pathway of catalyst **1c**.

| No | Ru | P ¹ | P ² | P ₁ ¹ | P ₁ ² | N | O | C ^a | C ^b | H ¹ | H ² |
|--|--------|----------------|----------------|-----------------------------|-----------------------------|--------|--------|----------------|----------------|----------------|----------------|
| 1_c | -0.903 | 0.973 | 1.009 | 0.973 | 1.009 | — | — | — | — | — | — |
| 2_c | -1.056 | 1.004 | 1.034 | 1.013 | 0.999 | -0.584 | -0.615 | — | — | 0.442 | — |
| [2_c-3_c][‡] | -0.690 | 0.868 | 1.073 | 1.036 | 0.999 | -0.612 | -0.610 | — | — | 0.289 | — |
| 3_c | -0.638 | 0.890 | 1.130 | 1.051 | 1.059 | -0.535 | -0.655 | — | — | 0.066 | — |
| [3_c-4_c][‡] | -0.341 | 0.855 | 1.276 | 0.970 | 0.747 | -0.550 | -0.658 | -0.320 | 0.036 | 0.022 | 0.259 |
| 4_c | -0.419 | 0.946 | 1.112 | 1.072 | 0.753 | -0.521 | -0.658 | -0.346 | 0.022 | 0.102 | 0.233 |
| [4_c-5_c][‡] | -0.404 | 1.030 | 1.030 | 1.059 | 0.754 | -0.513 | -0.665 | -0.340 | -0.075 | 0.189 | 0.227 |
| 5_c | -0.234 | 1.163 | 0.940 | 1.106 | 0.736 | -0.502 | -0.616 | -0.321 | -0.321 | 0.188 | 0.161 |
| 6_c | -0.233 | 1.141 | 0.946 | 1.114 | 0.762 | -0.501 | -0.611 | -0.328 | -0.309 | 0.133 | 0.157 |
| [6_c-7a_c][‡] | -0.363 | 1.031 | 0.976 | 1.070 | 0.785 | -0.525 | -0.663 | 0.019 | -0.469 | 0.253 | 0.140 |
| 7a_c | -0.340 | 0.961 | 0.932 | 1.081 | 0.746 | -0.546 | -0.635 | 0.183 | -0.535 | 0.245 | 0.107 |
| [7a_c-8a_c][‡] | -0.447 | 0.946 | 0.946 | 1.091 | 0.760 | -0.519 | -0.592 | 0.264 | -0.528 | 0.271 | 0.079 |
| 8a_c | -0.447 | 0.917 | 0.929 | 1.151 | 0.745 | -0.468 | -0.541 | 0.073 | -0.341 | 0.220 | -0.002 |
| [8a_c-9a_c][‡] | -0.583 | 0.959 | 1.001 | 0.961 | 0.730 | -0.433 | -0.580 | 0.047 | -0.292 | 0.205 | 0.182 |
| 9a_c | -0.599 | 1.113 | 0.966 | 0.903 | 0.729 | -0.416 | -0.570 | -0.123 | -0.191 | 0.211 | 0.225 |
| [5_c-9b_c][‡] | -0.207 | 1.153 | 0.982 | 1.019 | 0.736 | -0.565 | -0.651 | -0.420 | -0.230 | 0.185 | 0.239 |
| [6_c-7b_c][‡] | -0.618 | 1.145 | 0.772 | 1.107 | 0.856 | -0.457 | -0.638 | -0/207 | -0.323 | 0.209 | 0.316 |
| 7b_c | -0.592 | 1.063 | 0.777 | 1.106 | 0.820 | -0.470 | -0.653 | 0.192 | -0.573 | 0.235 | 0.249 |
| 8b_c | -0.574 | 1.034 | 0.778 | 1.124 | 0.793 | -0.470 | -0.634 | 0.193 | -0.573 | 0.235 | 0.250 |

| | | | | | | | | | | | |
|--|--------|-------|-------|-------|-------|--------|--------|--------|--------|-------|--------|
| [8b_c-9b_c][‡] | -0.600 | 1.153 | 0.779 | 1.149 | 0.766 | -0.478 | -0.626 | -0.207 | -0.304 | 0.213 | -0.341 |
| 9b_c | -0.236 | 1.129 | 0.956 | 1.103 | 0.765 | -0.493 | -0.614 | -0.318 | -0.312 | 0.174 | 0.161 |
| [9b_c-10b_c][‡] | -0.340 | 1.052 | 0.953 | 1.058 | 0.754 | -0.534 | -0.648 | -0.007 | -0.459 | 0.233 | 0.152 |
| 10b_c | -0.340 | 0.942 | 0.961 | 1.069 | 0.765 | -0.530 | -0.645 | 0.161 | -0.517 | 0.244 | 0.114 |
| [7a_c-10b_c][‡] | -1.121 | 1.097 | 1.060 | 1.169 | 0.762 | -0.452 | -0.643 | 0.373 | -0.511 | 0.241 | 0.152 |
| [10b_c-11b_c][‡] | -0.455 | 0.957 | 0.956 | 1.086 | 0.776 | -0.509 | -0.586 | 0.241 | -0.511 | 0.226 | 0.080 |
| 11b_c | -0.491 | 0.887 | 0.947 | 1.215 | 0.742 | -0.444 | -0.574 | 0.041 | -0.320 | 0.176 | 0.019 |
| 12b_c | -0.492 | 0.828 | 0.949 | 1.225 | 0.789 | -0.421 | -0.618 | -0.013 | -0.239 | 0.184 | 0.031 |
| [12b_c-13b_c][‡] | -0.550 | 0.961 | 1.028 | 1.084 | 0.747 | -0.427 | -0.594 | -0.039 | -0.297 | 0.180 | 0.160 |
| 13b_c | -0.438 | 1.061 | 0.924 | 0.915 | 0.755 | -0.372 | -0.589 | -0.061 | -0.364 | 0.189 | 0.228 |
| [13b_c-1c][‡] | -0.680 | 0.935 | 1.107 | 0.930 | 0.745 | -0.370 | -0.554 | -0.001 | -0.312 | 0.234 | 0.230 |

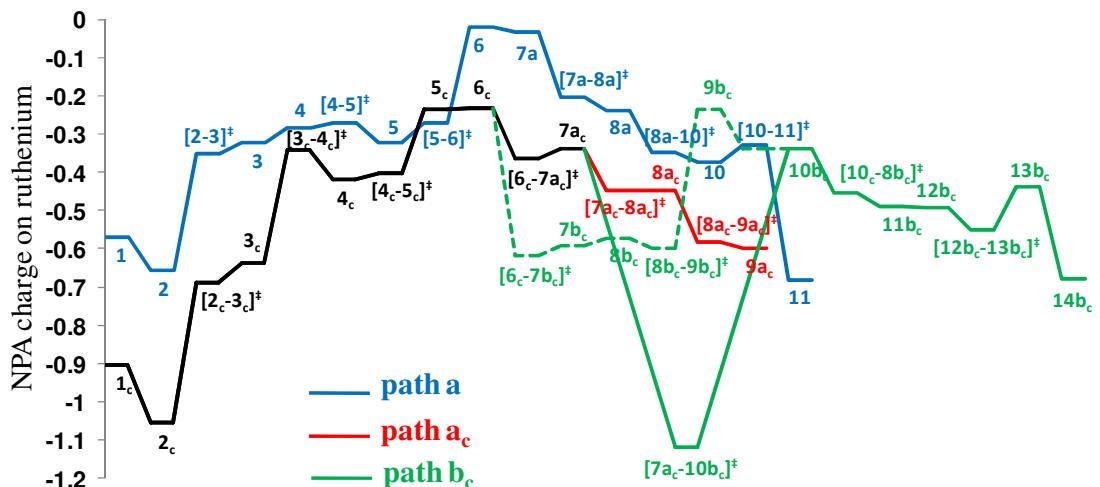


Figure S33. NPA charge on ruthenium center of intermediates and transition states involved in “path a” (blue line) for catalyst **1** (Scheme 3), “path a_c” (red line), “path b_c” (green line) and single-step isomerization of vinylidene **8a_c** (purple line) for catalyst **1_c** (Scheme 4).

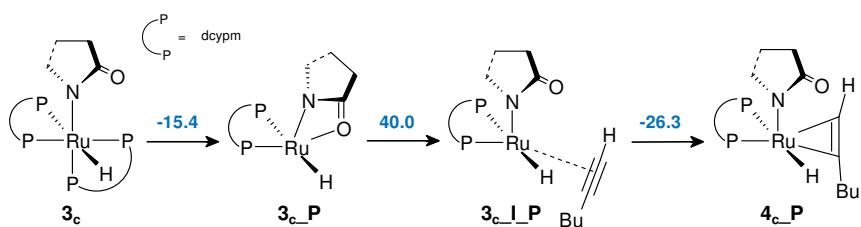


Figure S34. Reaction path involving dcypm decoordination, hexyne coordination and insertion step from ruthenium(II) intermediate **3_c**. The energies (ΔG_L^S) above the arrows are in kcal/mol.

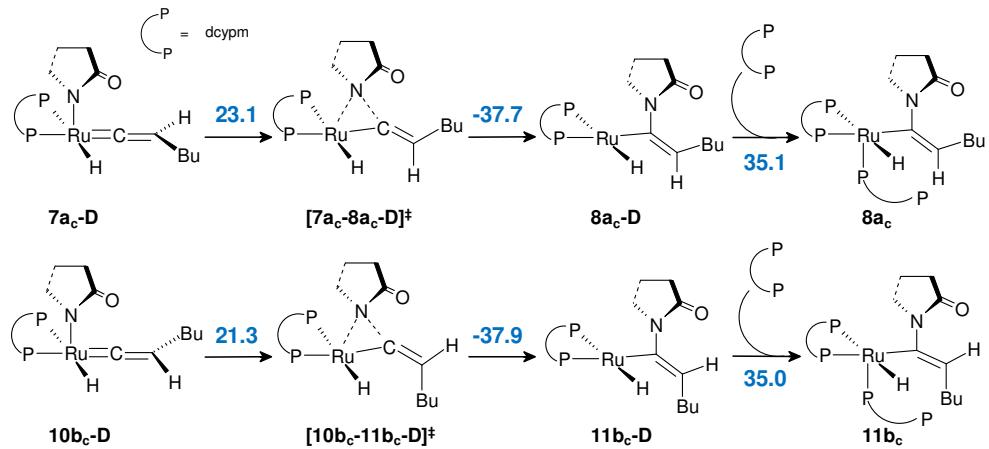


Figure S35. Nucleophilic transfer steps from 16e⁻ vinylidene intermediates **7a_c-D** and **10b_c-D**. The energies (ΔG_L^S) above the arrows are in kcal/mol.

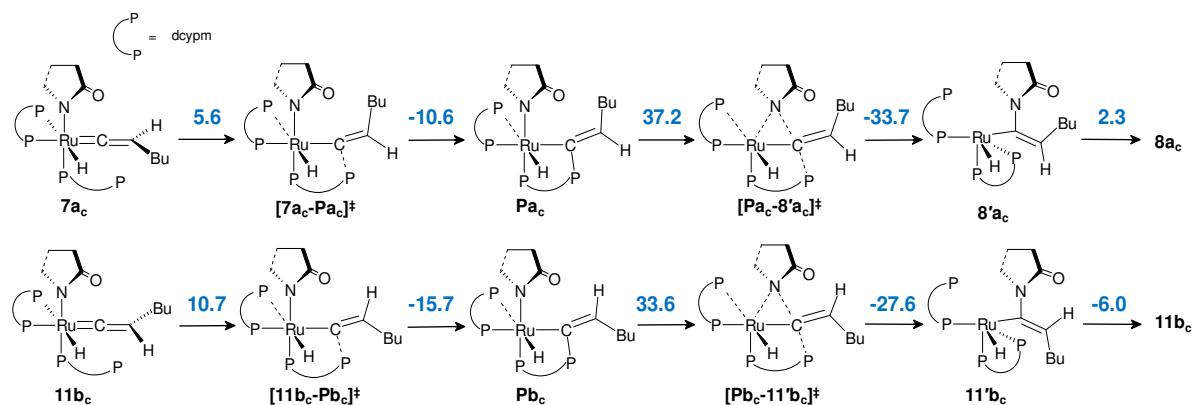


Figure S36. Reaction path involving C_a-P bond formation and nucleophilic transfer steps from vinylidene intermediates **7a_c** and **10b_c**. The energies (ΔG_L^S) above the arrows are in kcal/mol.

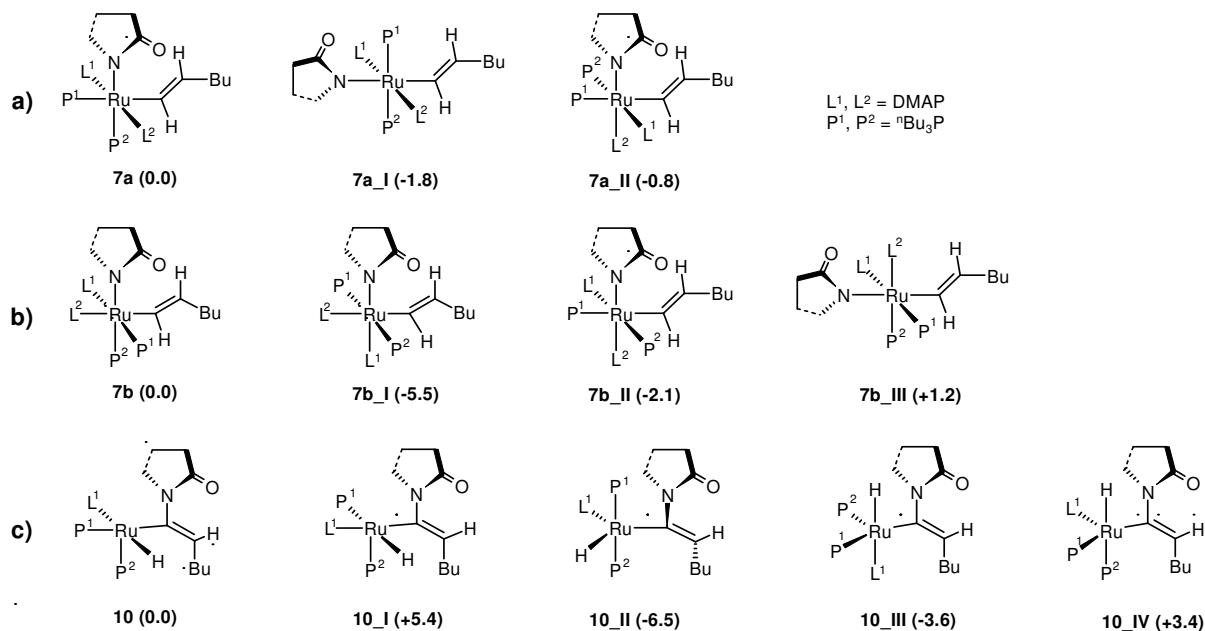


Figure S37. Optimized geometrical isomers of a) 7a, b) 7b and c) 10. The energy values (kcal/mol) in parentheses represents ΔG_{298} (see Computational Details)

Table S9. Cartesian coordinates (\AA) of the optimized structures involved in catalytic system **1** at BP86/LANL2DZ(Ru)/6-31G*(H, C, N, O & P) level.

| I | | | III | | |
|-----------|----------|----------|------------|----------|----------|
| 16 | | | | | |
| XYZ | | | XYZ | | |
| C | 0.10423 | 0.00000 | -0.14008 | C | 0.93039 |
| C | 0.04128 | 0.00000 | 1.39656 | C | -0.57549 |
| H | 1.14872 | 0.00000 | -0.49995 | C | -1.14983 |
| H | -0.39616 | 0.89205 | -0.56049 | O | 2.33298 |
| H | -0.39616 | -0.89205 | -0.56049 | H | -1.51408 |
| C | -1.40063 | 0.00000 | 1.93584 | H | -1.98942 |
| H | 0.57961 | -0.88597 | 1.78977 | H | 1.58433 |
| H | 0.57961 | 0.88597 | 1.78977 | H | 1.16786 |
| C | -1.45314 | 0.00000 | 3.48614 | H | -0.74432 |
| H | -1.94570 | 0.88624 | 1.55784 | 40 | 3.72220 |
| H | -1.94570 | -0.88624 | 1.55784 | XYZ | |
| C | -2.82060 | 0.00000 | 4.01516 | P | -0.17089 |
| H | -0.90598 | -0.88528 | 3.87074 | C | -0.13476 |
| H | -0.90598 | 0.88528 | 3.87074 | C | 1.66902 |
| C | -3.96780 | 0.00000 | 4.43094 | C | -0.77677 |
| H | -4.97635 | 0.00000 | 4.80183 | C | -1.51963 |
| II | | | | | |
| 13 | | | | | |
| XYZ | | | XYZ | | |
| H | -0.03194 | 0.16950 | 0.04705 | H | 0.54229 |
| N | 0.00673 | -0.02028 | 1.04799 | C | -1.46981 |
| C | 1.23293 | -0.00757 | 1.69196 | H | -1.96054 |
| | | | H | -2.21016 | |
| | | | C | -2.85149 | |
| | | | H | -1.02542 | |
| | | | H | 1.07484 | |
| | | | H | -0.66558 | |
| | | | C | -0.00694 | |
| | | | H | 4.16112 | |
| | | | H | 4.60316 | |

| | | | | V |
|---|----------|----------|----------|---------------------------------------|
| H | -0.78377 | 0.63488 | 4.37779 | |
| H | -2.78540 | -0.15172 | 5.69652 | 73 |
| H | -3.30516 | 0.98532 | 4.42277 | XYZ |
| H | -3.54843 | -0.76824 | 4.20579 | P 1.43075 0.60218 -0.57287 |
| C | -0.95474 | -1.48553 | -2.23547 | P -1.43067 -0.60221 -0.57280 |
| H | -0.09220 | -2.19096 | -0.34805 | C 0.00004 0.00004 0.50084 |
| H | -1.75412 | -1.57029 | -0.21519 | H -0.30507 0.83703 1.15884 |
| C | -1.50831 | -2.84816 | -2.69904 | H 0.30515 -0.83691 1.15890 |
| H | -1.63362 | -0.67780 | -2.57454 | C 2.55049 1.40372 0.74634 |
| H | 0.01523 | -1.30159 | -2.74063 | C 2.72277 0.72920 2.12785 |
| C | -1.68713 | -2.93817 | -4.22399 | C 3.92837 1.78100 0.14859 |
| H | -0.82899 | -3.65433 | -2.35613 | H 2.00812 2.36079 0.92228 |
| H | -2.48028 | -3.03365 | -2.19916 | C 3.52029 1.63789 3.09121 |
| H | -2.08655 | -3.92277 | -4.52695 | H 3.25911 -0.23172 2.01393 |
| H | -2.38735 | -2.16466 | -4.59046 | H 1.73749 0.49119 2.57036 |
| H | -0.72484 | -2.79093 | -4.74891 | C 4.73545 2.67885 1.11151 |
| H | 1.75184 | -0.10205 | -1.58288 | H 4.50696 0.85587 -0.05030 |
| C | 2.49853 | 1.35778 | -0.15490 | H 3.79659 2.28740 -0.82688 |
| H | 2.07594 | -0.78507 | 0.02745 | C 4.88985 2.02659 2.49981 |
| C | 3.98915 | 1.21460 | -0.52309 | H 3.65176 1.13106 4.06666 |
| H | 2.07204 | 2.23506 | -0.68098 | H 2.93425 2.55880 3.29134 |
| H | 2.41630 | 1.58127 | 0.92822 | H 5.72921 2.90203 0.67795 |
| C | 4.81652 | 2.46550 | -0.18212 | H 4.21330 3.65174 1.22035 |
| H | 4.41224 | 0.33458 | 0.00183 | H 5.42648 2.70820 3.18706 |
| H | 4.07561 | 0.99557 | -1.60640 | H 5.51687 1.11583 2.40649 |
| H | 5.87843 | 2.33568 | -0.45823 | C 2.17268 -1.06128 -1.11691 |
| H | 4.43637 | 3.35448 | -0.71889 | C 3.11422 -0.87609 -2.33399 |
| H | 4.77654 | 2.68859 | 0.90040 | C 2.82536 -1.98923 -0.06787 |
| | | | | H 1.25772 -1.57276 -1.49269 |
| | | | | C 3.50782 -2.23491 -2.95283 |
| | | | | H 4.03315 -0.34240 -2.01586 |
| | | | | H 2.62691 -0.23595 -3.09299 |
| | | | | C 3.20277 -3.35423 -0.68747 |
| C | -0.11250 | -0.06709 | -0.02760 | H 3.74615 -1.51196 0.32347 |
| H | -0.14264 | -0.14933 | 1.06840 | C 2.15363 -2.14277 0.79813 |
| C | 1.11789 | 0.14096 | -0.65853 | C 4.13053 -3.18018 -1.90618 |
| C | 1.16412 | 0.24666 | -2.07671 | H 4.20859 -2.07923 -3.79553 |
| C | -0.08578 | 0.14184 | -2.74848 | H 2.60149 -2.71114 -3.38009 |
| C | -1.24905 | -0.06625 | -2.00101 | N -1.30363 -0.17600 -0.65563 |
| N | 2.02359 | 0.22090 | -0.05113 | H 3.68477 -3.99605 0.07525 |
| N | 2.35212 | 0.43569 | -2.76083 | H 2.27694 -3.87775 -1.00254 |
| H | -0.15661 | 0.22250 | -3.83665 | H 4.35613 -4.16348 -2.36136 |
| H | -2.21220 | -0.14781 | -2.52501 | H 5.10022 -2.76048 -1.56667 |
| C | 2.32906 | 0.66489 | -4.20149 | C -2.17268 1.06117 -1.11700 |
| C | 3.58674 | 0.66399 | -2.01775 | C -3.11410 0.87584 -2.33414 |
| H | 4.41972 | 0.77585 | -2.72847 | C -2.82556 1.98904 -0.06801 |
| H | 3.54046 | 1.57862 | -1.39025 | H -1.25775 1.57273 -1.49272 |
| H | 3.81952 | -0.19300 | -1.35673 | C -3.50791 2.23460 -2.95300 |
| H | 3.36187 | 0.77656 | -4.56525 | H -4.03295 0.34196 -2.01612 |
| H | 1.87378 | -0.19159 | -4.73509 | H -2.62661 0.23582 -3.09312 |
| H | 1.76343 | 1.57991 | -4.47581 | C -3.20323 3.35396 -0.68764 |
| | | | | H -3.74625 1.51160 0.32337 |
| | | | | H -2.15386 2.14277 0.79797 |

| | | | | | | | |
|---|----------|----------|----------|---|----------|----------|-------------|
| C | -4.13089 | 3.17973 | -1.90639 | H | -3.39954 | -1.10363 | 0.98397 |
| H | -4.20859 | 2.07877 | -3.79576 | H | -4.02528 | 0.51548 | 0.63375 |
| H | -2.60164 | 2.71101 | -3.38018 | H | -5.30445 | -1.22576 | -0.66489 |
| H | -3.68539 | 3.99567 | 0.07507 | H | -4.42407 | -0.15484 | -1.78881 |
| H | -2.27749 | 3.87766 | -1.00266 | H | -3.79629 | -1.78654 | -1.43687 |
| H | -4.35666 | 4.16300 | -2.36158 | | | | |
| H | -5.10052 | 2.75983 | -1.56694 | | | | VII |
| C | -2.55038 | -1.40366 | 0.74649 | | | | 29 |
| C | -2.72234 | -0.72921 | 2.12807 | | | | XYZ |
| C | -3.92842 | -1.78059 | 0.14885 | C | -1.06192 | 1.09480 | 0.37369 |
| C | -3.51997 | -1.63779 | 3.09145 | N | -1.52198 | -0.25808 | 0.03752 |
| H | -3.25842 | 0.23187 | 2.01433 | C | -2.90641 | -0.32275 | -0.19628 |
| H | -1.73694 | -0.49152 | 2.57049 | C | -3.47366 | 1.08665 | 0.01350 |
| C | -4.73560 | -2.67830 | 1.11181 | C | -2.24112 | 2.00715 | -0.05338 |
| H | -4.50682 | -0.85533 | -0.04995 | C | -0.74028 | -1.41661 | -0.06321 |
| H | -3.79684 | -2.28699 | -0.82664 | C | 0.56524 | -1.62847 | 0.23082 |
| C | -4.88970 | -2.02610 | 2.50017 | O | -3.52467 | -1.34348 | -0.49188 |
| H | -3.65121 | -1.13102 | 4.06696 | H | 0.90665 | -2.65006 | 0.01303 |
| H | -2.93415 | -2.55887 | 3.29142 | C | 1.63898 | -0.72090 | 0.78431 |
| H | -5.72946 | -2.90122 | 0.67834 | H | -1.35506 | -2.24247 | -0.43992 |
| H | -4.21367 | -3.65133 | 1.22054 | H | -0.85310 | 1.17493 | 1.45961 |
| H | -5.42642 | -2.70762 | 3.18743 | H | -0.13096 | 1.32999 | -0.17120 |
| H | -5.51651 | -1.11518 | 2.40697 | H | -4.24708 | 1.30267 | -0.74102 |
| H | -2.00821 | -2.36084 | 0.92230 | H | -3.96503 | 1.11778 | 1.00560 |
| | | | | H | -2.31938 | 2.89859 | 0.59039 |
| | | | | H | -2.08357 | 2.35323 | -1.09023 |
| | | | | C | 2.73936 | -0.38103 | -0.25276 |
| | | | | H | 1.22182 | 0.21569 | 1.19417 |
| C | 0.13536 | 1.16880 | 0.55244 | H | 2.12228 | -1.23472 | 1.64221 |
| C | 0.42971 | 2.47825 | 0.38746 | C | 3.90106 | 0.43817 | 0.34099 |
| N | 1.08327 | 0.13650 | 0.28707 | H | 3.13464 | -1.32224 | -0.68605 |
| C | 2.14459 | 0.22593 | -0.62625 | H | 2.28267 | 0.17280 | -1.09781 |
| C | 2.81582 | -1.15609 | -0.68471 | C | 4.98984 | 0.77618 | -0.69133 |
| C | 2.35905 | -1.85045 | 0.60821 | H | 3.50218 | 1.37544 | 0.77933 |
| C | 0.99147 | -1.19478 | 0.91563 | H | 4.35021 | -0.12534 | 1.18348 |
| O | 2.46460 | 1.21815 | -1.27758 | H | 5.80969 | 1.36172 | -0.23777 |
| H | 1.40459 | 2.81965 | 0.03907 | H | 5.43139 | -0.14210 | -1.12105 |
| H | 0.81038 | -1.10038 | 2.00093 | H | 4.57727 | 1.36942 | -1.52852 |
| H | 0.15494 | -1.78068 | 0.48289 | | | | |
| H | 2.45237 | -1.67963 | -1.59064 | | | | VIII |
| H | 3.90723 | -1.04421 | -0.78455 | | | | 29 |
| H | 3.06798 | -1.62999 | 1.42604 | | | | XYZ |
| H | 2.27557 | -2.94641 | 0.52083 | C | 0.12449 | 0.48900 | 0.04280 |
| H | -0.35027 | 3.22540 | 0.56518 | N | 0.02337 | -0.02654 | 1.40938 |
| C | -1.25816 | 0.70781 | 0.94906 | C | 1.19950 | -0.63369 | 1.86885 |
| C | -2.07084 | 0.11831 | -0.23016 | C | 2.22979 | -0.54129 | 0.73473 |
| H | -1.21630 | -0.03788 | 1.76866 | C | 1.65116 | 0.51382 | -0.22971 |
| H | -1.79829 | 1.58043 | 1.35973 | C | -1.15028 | -0.02033 | 2.16883 |
| C | -3.48181 | -0.33980 | 0.18430 | C | -2.34832 | 0.46371 | 1.77026 |
| H | -2.14222 | 0.88428 | -1.02685 | O | 1.33598 | -1.15908 | 2.97236 |
| H | -1.52305 | -0.73564 | -0.67710 | H | -2.46647 | 0.88488 | 0.76192 |
| C | -4.29734 | -0.90802 | -0.98935 | C | -3.58264 | 0.43083 | 2.63695 |

| | | | | | | | |
|----|----------|----------|----------|---|----------|----------|----------|
| H | -0.99296 | -0.46409 | 3.15922 | C | 3.30764 | -4.13660 | -2.41625 |
| H | -0.42037 | -0.17621 | -0.65848 | C | 4.65146 | -4.69688 | -1.92014 |
| H | -0.33529 | 1.49247 | -0.02251 | C | -1.75258 | -3.09090 | -1.31794 |
| H | 3.22408 | -0.29117 | 1.13902 | C | -2.12967 | -2.42016 | -2.64978 |
| H | 2.31098 | -1.53987 | 0.26292 | C | -3.45965 | -2.93637 | -3.23525 |
| H | 1.87928 | 0.31310 | -1.28932 | C | -3.82023 | -2.28366 | -4.58044 |
| H | 2.05389 | 1.51209 | 0.01642 | C | 2.17169 | 6.53625 | -1.85409 |
| C | -4.72191 | -0.43305 | 2.04272 | C | -1.84870 | 1.24110 | 2.18035 |
| H | -3.32127 | 0.05271 | 3.64498 | C | -3.05315 | 1.80496 | 2.96239 |
| H | -3.96821 | 1.46297 | 2.78359 | C | -2.62323 | 2.50731 | 4.26834 |
| C | -5.99910 | -0.42646 | 2.90392 | C | -3.80898 | 3.05025 | 5.08406 |
| H | -4.96443 | -0.06861 | 1.02309 | C | -3.50883 | -0.58413 | 0.49415 |
| H | -4.35872 | -1.47260 | 1.91898 | C | -4.93077 | -0.01057 | 0.66606 |
| C | -7.13004 | -1.28452 | 2.31239 | C | -6.00385 | -1.11991 | 0.69884 |
| H | -5.75356 | -0.78832 | 3.92258 | C | -7.43454 | -0.57203 | 0.83666 |
| H | -6.35076 | 0.61783 | 3.02701 | C | 6.85822 | -1.21466 | 2.21532 |
| H | -8.03175 | -1.26123 | 2.95049 | H | -1.07388 | 2.02801 | 2.08092 |
| H | -7.42099 | -0.92523 | 1.30762 | H | -1.36716 | 0.43066 | 2.76006 |
| H | -6.81868 | -2.34074 | 2.21044 | H | -3.62224 | 2.52562 | 2.34176 |
| | | | | H | -3.75592 | 0.98778 | 3.21710 |
| | | | | H | -2.03998 | 1.79673 | 4.88798 |
| | | | | H | -1.93052 | 3.33701 | 4.02140 |
| | | | | H | -3.47041 | 3.55164 | 6.00913 |
| | | | | H | -4.39330 | 3.78510 | 4.49906 |
| C | 2.71221 | -1.04697 | 1.24227 | H | -4.49845 | 2.23665 | 5.37752 |
| N | 2.22912 | -0.50255 | 0.08573 | H | -3.62898 | 2.42198 | 0.08088 |
| C | 3.16581 | 0.03515 | -0.74730 | H | -1.96779 | 2.85840 | -0.37456 |
| C | 4.53704 | 0.06200 | -0.47692 | H | -2.18327 | 1.36657 | -2.44078 |
| C | 5.03592 | -0.47837 | 0.73916 | H | -3.87708 | 1.07404 | -2.03238 |
| C | 4.05926 | -1.05111 | 1.60442 | H | -4.35626 | 3.55765 | -2.18050 |
| Ru | 0.12825 | -0.16447 | -0.10415 | H | -2.66291 | 3.85246 | -2.60377 |
| P | -1.99080 | 0.54834 | 0.41604 | H | -4.09776 | 3.80363 | -4.68081 |
| C | -2.73096 | 2.06029 | -0.45763 | H | -2.94053 | 2.44387 | -4.70931 |
| C | -3.06313 | 1.82237 | -1.94203 | H | -4.64683 | 2.15307 | -4.28277 |
| C | -3.47933 | 3.10654 | -2.68736 | H | -3.29123 | -1.31691 | 1.29652 |
| C | -3.80907 | 2.86655 | -4.17048 | H | -3.47976 | -1.15699 | -0.45009 |
| N | 6.38593 | -0.44869 | 1.06625 | H | -5.00833 | 0.58985 | 1.59014 |
| C | 7.35490 | -0.06069 | 0.04653 | H | -5.16175 | 0.67972 | -0.16900 |
| N | 0.72731 | 1.89786 | -0.16519 | H | -5.92680 | -1.72841 | -0.22493 |
| C | 0.54516 | 2.63652 | -1.29824 | H | -5.78837 | -1.81146 | 1.53808 |
| C | 1.11933 | 3.88899 | -1.51808 | H | -8.18092 | -1.38684 | 0.85725 |
| C | 1.94066 | 4.48509 | -0.51890 | H | -7.55082 | 0.01263 | 1.76839 |
| C | 2.11075 | 3.72618 | 0.67141 | H | -7.69001 | 0.09520 | -0.00773 |
| C | 1.50816 | 2.47172 | 0.79386 | H | 0.52680 | -3.91734 | -2.33843 |
| N | 2.53663 | 5.72488 | -0.69729 | H | 1.23608 | -2.29465 | -2.50312 |
| C | 3.19784 | 6.36915 | 0.43267 | H | 2.92650 | -2.88761 | -0.68492 |
| P | -0.18617 | -2.39355 | -0.51309 | H | 2.21871 | -4.50991 | -0.57849 |
| C | -0.01576 | -3.70045 | 0.85789 | H | 2.77965 | -4.90900 | -3.01156 |
| C | -1.00625 | -3.51314 | 2.02030 | H | 3.49192 | -3.28974 | -3.10744 |
| C | -0.76266 | -4.48285 | 3.19427 | H | 5.29214 | -5.02362 | -2.75966 |
| C | -1.75616 | -4.29006 | 4.35276 | H | 5.21004 | -3.93393 | -1.34636 |
| C | 1.04864 | -3.11196 | -1.78169 | H | 4.50052 | -5.56803 | -1.25518 |

| | | | | | | | |
|----|-----------|-----------|-----------|---|-----------|-----------|-----------|
| H | -0.11240 | -4.71805 | 0.42435 | C | 3.183565 | -4.952261 | 0.370818 |
| H | 1.01852 | -3.61767 | 1.24544 | C | 4.301493 | -5.376353 | 1.338832 |
| H | -0.93363 | -2.46534 | 2.37712 | N | 2.484242 | 5.733189 | -0.119705 |
| H | -2.04600 | -3.64480 | 1.65718 | C | 2.717977 | 6.466362 | 1.120094 |
| H | -0.81953 | -5.52768 | 2.82733 | N | 0.590642 | -0.830837 | -3.089772 |
| H | 0.27279 | -4.34726 | 3.56780 | C | 1.064852 | -2.147540 | -3.521692 |
| H | -1.55682 | -4.99328 | 5.18194 | C | 1.022711 | -2.060881 | -5.073344 |
| H | -1.69799 | -3.26377 | 4.76104 | C | 1.165751 | -0.552514 | -5.357189 |
| H | -2.79725 | -4.45462 | 4.01716 | C | 0.626787 | 0.119500 | -4.074993 |
| H | -2.58198 | -2.98677 | -0.59454 | O | 0.317762 | 1.319573 | -3.966893 |
| H | -1.59927 | -4.17963 | -1.46773 | P | -2.067971 | 0.632302 | 0.413960 |
| H | -2.17936 | -1.32298 | -2.49983 | C | -2.312026 | 1.543489 | 2.078127 |
| H | -1.32133 | -2.58434 | -3.39081 | C | -3.247096 | 2.765536 | 2.197842 |
| H | -3.40525 | -4.03702 | -3.35994 | C | -3.329173 | 3.302180 | 3.642105 |
| H | -4.27456 | -2.75412 | -2.50475 | C | -4.234116 | 4.539086 | 3.777952 |
| H | -4.77856 | -2.66738 | -4.97572 | N | 2.194852 | -0.535572 | 0.438325 |
| H | -3.91284 | -1.18647 | -4.47848 | C | 2.783178 | -0.516495 | 1.670957 |
| H | -3.04092 | -2.48069 | -5.34033 | C | 4.151631 | -0.350433 | 1.886807 |
| H | 1.65387 | 1.87104 | 1.69696 | C | 5.034567 | -0.200134 | 0.780937 |
| H | 2.71197 | 4.09718 | 1.50522 | C | 4.427037 | -0.249220 | -0.502364 |
| H | -0.10099 | 2.17282 | -2.04920 | C | 3.044663 | -0.408298 | -0.619577 |
| H | 0.90920 | 4.39758 | -2.46227 | N | 6.398682 | -0.021628 | 0.945179 |
| H | 3.62078 | 7.33030 | 0.10211 | C | 7.273692 | -0.037358 | -0.222352 |
| H | 2.50555 | 6.56445 | 1.27925 | C | -3.624663 | -0.446081 | 0.354472 |
| H | 4.03161 | 5.74675 | 0.80902 | C | -5.029402 | 0.186415 | 0.385906 |
| H | 2.75819 | 7.46781 | -1.83947 | C | -6.147590 | -0.842427 | 0.118974 |
| H | 2.40625 | 6.00711 | -2.79681 | C | -7.556964 | -0.228064 | 0.173997 |
| H | 1.09322 | 6.80255 | -1.86815 | C | -2.554446 | 1.987013 | -0.808642 |
| H | 1.95242 | -1.49866 | 1.88689 | C | -2.728640 | 1.508711 | -2.261477 |
| H | 4.33964 | -1.51887 | 2.55150 | C | -3.055341 | 2.666965 | -3.228998 |
| H | 2.77398 | 0.46694 | -1.67285 | C | -3.094546 | 2.222843 | -4.701121 |
| H | 5.20286 | 0.50899 | -1.21949 | C | 6.984408 | -0.101320 | 2.278430 |
| H | 7.94049 | -1.05127 | 2.33546 | C | -1.857533 | -3.393409 | 0.052614 |
| H | 6.36365 | -0.87415 | 3.14395 | C | -2.010119 | -3.393837 | -1.478083 |
| H | 6.67860 | -2.30629 | 2.10975 | C | -3.293401 | -4.098916 | -1.960755 |
| H | 8.36461 | -0.07583 | 0.48546 | C | -3.424357 | -4.137576 | -3.492950 |
| H | 7.34605 | -0.73663 | -0.83558 | C | -0.447575 | -3.015695 | 2.503694 |
| H | 7.15918 | 0.96826 | -0.30896 | C | -1.548719 | -2.332102 | 3.330562 |
| | | | | C | -1.492922 | -2.684324 | 4.831729 |
| | | | 2 | C | -2.595887 | -1.991593 | 5.650786 |
| | | | 132 | C | 2.434438 | 6.481041 | -1.373580 |
| | | | XYZ | H | 0.293352 | -0.623118 | -2.080005 |
| C | 1.172141 | 2.513208 | 1.188034 | H | -1.294898 | 1.842307 | 2.392798 |
| N | 0.732556 | 1.852959 | 0.081771 | H | -2.623903 | 0.759830 | 2.797963 |
| C | 0.880116 | 2.516049 | -1.103155 | H | -2.886864 | 3.576328 | 1.535276 |
| C | 1.437500 | 3.791212 | -1.211162 | H | -4.268490 | 2.519009 | 1.850499 |
| C | 1.903494 | 4.477342 | -0.056276 | H | -3.699044 | 2.497420 | 4.309396 |
| C | 1.740906 | 3.786608 | 1.175049 | H | -2.308307 | 3.548070 | 3.997893 |
| Ru | 0.069143 | -0.220004 | 0.300371 | H | -4.282162 | 4.894964 | 4.823351 |
| P | -0.347156 | -2.437600 | 0.691977 | H | -3.864682 | 5.375522 | 3.155553 |
| C | 0.973551 | -3.679753 | 0.076283 | H | -5.266924 | 4.315165 | 3.452121 |
| C | 2.122364 | -4.050275 | 1.037101 | H | -3.480804 | 2.481051 | -0.458556 |

| | | | | | | | |
|---|-----------|-----------|-----------|----|----------|--------------------|-----------|
| H | -1.755648 | 2.751312 | -0.769768 | H | 1.053445 | 1.969887 | 2.130061 |
| H | -1.799696 | 1.011787 | -2.598848 | H | 2.048638 | 4.229826 | 2.126052 |
| H | -3.536854 | 0.751686 | -2.321401 | H | 2.982700 | 7.427717 | -1.249166 |
| H | -4.023310 | 3.128947 | -2.944106 | H | 2.924481 | 5.914404 | -2.186723 |
| H | -2.288000 | 3.457756 | -3.110084 | H | 1.397016 | 6.714618 | -1.693582 |
| H | -3.353769 | 3.062607 | -5.372433 | H | 3.183594 | 7.435016 | 0.882008 |
| H | -2.106982 | 1.832740 | -5.004725 | H | 1.782953 | 6.657668 | 1.688195 |
| H | -3.844113 | 1.424258 | -4.860424 | H | 3.413766 | 5.913570 | 1.779718 |
| H | -3.518325 | -1.152323 | 1.200480 | H | 2.571003 | -0.439440 | -1.604720 |
| H | -3.510673 | -1.051827 | -0.565513 | H | 5.019582 | -0.166283 | -1.416375 |
| H | -5.210901 | 0.657572 | 1.371671 | H | 2.095917 | -0.657515 | 2.511162 |
| H | -5.107281 | 0.997243 | -0.365898 | H | 4.522201 | -0.360159 | 2.915229 |
| H | -5.983380 | -1.305518 | -0.875135 | H | 8.311508 | 0.135478 | 0.101482 |
| H | -6.075287 | -1.667028 | 0.856894 | H | 7.235975 | -1.004132 | -0.767142 |
| H | -8.337969 | -0.988509 | -0.008126 | H | 7.002854 | 0.767329 | -0.933254 |
| H | -7.755889 | 0.226386 | 1.162669 | H | 8.057157 | 0.137020 | 2.214761 |
| H | -7.677910 | 0.565701 | -0.586721 | H | 6.516688 | 0.633545 | 2.960769 |
| H | 0.453789 | -4.610474 | -0.232046 | H | 6.879034 | -1.109373 | 2.733671 |
| H | 1.399834 | -3.236988 | -0.844041 | | | [2-3] [‡] | |
| H | 2.617850 | -3.137091 | 1.418966 | | | 132 | |
| H | 1.716458 | -4.582653 | 1.919072 | | | | XYZ |
| H | 2.692962 | -5.851532 | -0.051389 | C | 0.89806 | 2.54265 | 1.27495 |
| H | 3.627443 | -4.412085 | -0.490653 | N | 0.50791 | 1.90285 | 0.14158 |
| H | 5.056571 | -6.008690 | 0.837214 | C | 0.56102 | 2.62209 | -1.01676 |
| H | 4.822858 | -4.494222 | 1.754883 | C | 0.97421 | 3.95315 | -1.06359 |
| H | 3.894333 | -5.954020 | 2.190734 | C | 1.37629 | 4.63295 | 0.11996 |
| H | -0.563302 | -4.118752 | 2.543610 | C | 1.32120 | 3.86978 | 1.32098 |
| H | 0.533879 | -2.785960 | 2.961465 | Ru | -0.05524 | -0.19491 | 0.08215 |
| H | -1.445863 | -1.236985 | 3.201243 | P | -0.30209 | -2.44986 | -0.36753 |
| H | -2.549117 | -2.604890 | 2.936470 | C | 1.20588 | -3.08864 | -1.31479 |
| H | -1.567673 | -3.782958 | 4.962647 | C | 2.39958 | -3.61120 | -0.49411 |
| H | -0.499718 | -2.395640 | 5.233337 | C | 3.58399 | -4.02528 | -1.39191 |
| H | -2.529368 | -2.247849 | 6.724055 | C | 4.78717 | -4.55094 | -0.59125 |
| H | -2.525800 | -0.891402 | 5.562373 | N | 1.79643 | 5.94826 | 0.10543 |
| H | -3.601400 | -2.289194 | 5.297476 | C | 2.09648 | 6.62983 | 1.35974 |
| H | -2.764941 | -2.960883 | 0.511371 | N | 1.87604 | 0.06018 | -2.77060 |
| H | -1.779362 | -4.433642 | 0.430127 | C | 3.11722 | -0.19291 | -3.51373 |
| H | -1.990379 | -2.345904 | -1.844673 | C | 2.72759 | -0.39359 | -5.00938 |
| H | -1.134182 | -3.895995 | -1.939082 | C | 1.42951 | 0.42063 | -5.10650 |
| H | -3.318381 | -5.132299 | -1.558896 | C | 0.92214 | 0.43346 | -3.63418 |
| H | -4.174060 | -3.582894 | -1.527042 | O | -0.26975 | 0.80833 | -3.36378 |
| H | -4.350425 | -4.651889 | -3.808960 | P | -2.12408 | 0.36003 | 0.70900 |
| H | -3.445951 | -3.117079 | -3.918447 | C | -2.26797 | 0.54756 | 2.59796 |
| H | -2.571417 | -4.671666 | -3.953013 | C | -3.16324 | 1.65095 | 3.19990 |
| H | 2.096467 | -2.338434 | -3.154564 | C | -3.16119 | 1.63113 | 4.74294 |
| H | 0.417383 | -2.949360 | -3.126782 | C | -4.02695 | 2.74202 | 5.36144 |
| H | 0.613047 | -0.195642 | -6.241874 | N | 2.01677 | -0.48155 | 1.03631 |
| H | 2.223397 | -0.248384 | -5.485467 | C | 2.26519 | -0.87115 | 2.31229 |
| H | 1.802885 | -2.682136 | -5.544944 | C | 3.53112 | -0.87579 | 2.89730 |
| H | 0.041822 | -2.420018 | -5.434473 | C | 4.66196 | -0.46338 | 2.13525 |
| H | 0.534893 | 1.999104 | -2.005938 | C | 4.39778 | -0.07919 | 0.78959 |

| | | | | | | | |
|---|----------|----------|----------|---|----------|----------|----------|
| C | 3.09329 | -0.09027 | 0.29766 | H | 2.09698 | -4.48590 | 0.11544 |
| N | 5.93474 | -0.43932 | 2.66903 | H | 3.24778 | -4.80053 | -2.10959 |
| C | 7.07490 | -0.12320 | 1.81233 | H | 3.89419 | -3.15495 | -2.00315 |
| C | -3.60320 | -0.72731 | 0.29745 | H | 5.62161 | -4.84180 | -1.25525 |
| C | -5.00457 | -0.31202 | 0.78803 | H | 5.16497 | -3.78022 | 0.10670 |
| C | -6.10649 | -1.26224 | 0.27232 | H | 4.51276 | -5.43816 | 0.01031 |
| C | -7.51313 | -0.87159 | 0.75595 | H | -0.35813 | -4.76176 | 0.51809 |
| C | -2.72618 | 2.02324 | 0.05812 | H | 0.45487 | -3.63515 | 1.62890 |
| C | -2.93904 | 2.03075 | -1.46974 | H | -1.79435 | -2.67111 | 2.28865 |
| C | -3.08309 | 3.44827 | -2.05817 | H | -2.60524 | -3.85671 | 1.24368 |
| C | -3.18632 | 3.42193 | -3.59317 | H | -1.59176 | -5.74036 | 2.59161 |
| C | 6.16757 | -0.94534 | 4.01821 | H | -0.79633 | -4.55728 | 3.64183 |
| C | -1.64309 | -3.03615 | -1.55374 | H | -2.92466 | -5.39882 | 4.70656 |
| C | -1.54518 | -2.40277 | -2.95653 | H | -3.06842 | -3.65488 | 4.35466 |
| C | -2.79527 | -2.65118 | -3.82378 | H | -3.86869 | -4.84703 | 3.29645 |
| C | -2.65543 | -2.03288 | -5.22545 | H | -2.62415 | -2.80165 | -1.10356 |
| C | -0.44015 | -3.76053 | 0.98903 | H | -1.57693 | -4.14226 | -1.61815 |
| C | -1.70201 | -3.69155 | 1.86505 | H | -1.36959 | -1.31226 | -2.87600 |
| C | -1.69572 | -4.72098 | 3.01440 | H | -0.65745 | -2.80715 | -3.48178 |
| C | -2.95693 | -4.65323 | 3.89169 | H | -2.99463 | -3.73972 | -3.90750 |
| C | 1.73073 | 6.71585 | -1.13548 | H | -3.68033 | -2.21641 | -3.31502 |
| H | -0.72373 | 0.04942 | -1.33711 | H | -3.58567 | -2.13752 | -5.81364 |
| H | -1.22879 | 0.69226 | 2.95030 | H | -2.40716 | -0.95865 | -5.15189 |
| H | -2.57841 | -0.44663 | 2.97896 | H | -1.84197 | -2.52116 | -5.79413 |
| H | -2.81423 | 2.64299 | 2.85286 | H | 3.82399 | 0.66725 | -3.41630 |
| H | -4.20381 | 1.54668 | 2.83808 | H | 3.65615 | -1.07638 | -3.10819 |
| H | -3.51730 | 0.64245 | 5.09626 | H | 0.66585 | 0.00148 | -5.78476 |
| H | -2.11786 | 1.72743 | 5.10587 | H | 1.61378 | 1.46515 | -5.43217 |
| H | -4.00682 | 2.70372 | 6.46566 | H | 3.52208 | -0.07922 | -5.71181 |
| H | -3.67210 | 3.74327 | 5.05364 | H | 2.51944 | -1.46392 | -5.19937 |
| H | -5.08187 | 2.65111 | 5.04218 | H | 0.24013 | 2.08001 | -1.92204 |
| H | -3.65373 | 2.32172 | 0.58419 | H | 0.98103 | 4.45122 | -2.03618 |
| H | -1.95290 | 2.76444 | 0.33174 | H | 0.86451 | 1.94583 | 2.19268 |
| H | -2.09028 | 1.52731 | -1.97064 | H | 1.60647 | 4.29603 | 2.28615 |
| H | -3.84455 | 1.44172 | -1.72247 | H | 2.11122 | 7.73183 | -0.95095 |
| H | -3.96469 | 3.96091 | -1.62082 | H | 2.35649 | 6.25597 | -1.92403 |
| H | -2.19665 | 4.04422 | -1.76025 | H | 0.69446 | 6.79708 | -1.52264 |
| H | -3.22677 | 4.44222 | -4.01771 | H | 2.42445 | 7.65757 | 1.14244 |
| H | -2.31555 | 2.89556 | -4.02475 | H | 1.21445 | 6.68244 | 2.03151 |
| H | -4.09696 | 2.88696 | -3.92306 | H | 2.91471 | 6.12201 | 1.90655 |
| H | -3.35838 | -1.73402 | 0.68209 | H | 2.85606 | 0.19133 | -0.74135 |
| H | -3.60155 | -0.80740 | -0.80601 | H | 5.20259 | 0.23002 | 0.11814 |
| H | -5.03336 | -0.30005 | 1.89547 | H | 1.39508 | -1.20691 | 2.88744 |
| H | -5.23748 | 0.71868 | 0.45649 | H | 3.63045 | -1.21114 | 3.93272 |
| H | -6.08377 | -1.27484 | -0.83553 | H | 7.99343 | -0.13117 | 2.41830 |
| H | -5.87596 | -2.29728 | 0.59519 | H | 7.19576 | -0.85501 | 0.98750 |
| H | -8.28055 | -1.56628 | 0.36952 | H | 6.97057 | 0.88402 | 1.36584 |
| H | -7.57515 | -0.88445 | 1.86028 | H | 7.23051 | -0.81732 | 4.27235 |
| H | -7.78291 | 0.14668 | 0.41910 | H | 5.57151 | -0.38424 | 4.76346 |
| H | 0.84975 | -3.89342 | -1.98959 | H | 5.91524 | -2.02172 | 4.11419 |
| H | 1.51564 | -2.23290 | -1.94881 | | | | |
| H | 2.74413 | -2.83702 | 0.21571 | | | | |

| | | | | | | | |
|----|----------|----------|----------|---|----------|----------|----------|
| | | | 132 | | | | |
| | | | XYZ | | | | |
| C | 0.63650 | 2.41457 | -1.90507 | C | 3.13843 | 6.57554 | -1.30895 |
| N | 0.88514 | 2.00671 | -0.63475 | H | 1.22788 | 0.38677 | 1.41928 |
| C | 1.64576 | 2.85102 | 0.11980 | H | 0.80737 | -0.72983 | -3.11495 |
| C | 2.16513 | 4.05674 | -0.34841 | H | -0.12332 | -2.07088 | -2.43142 |
| C | 1.91686 | 4.47712 | -1.68539 | H | 2.78435 | -2.35500 | -3.45675 |
| C | 1.11031 | 3.60132 | -2.46432 | H | 1.71491 | -3.66945 | -2.93020 |
| Ru | 0.00331 | 0.27871 | 0.39679 | H | 0.10643 | -3.10270 | -4.79588 |
| P | -0.83680 | -1.24417 | 1.94929 | H | 1.18478 | -1.80009 | -5.32520 |
| C | -1.72269 | -0.56143 | 3.47538 | H | 1.54397 | -3.86853 | -6.72523 |
| C | -3.10808 | 0.08783 | 3.31980 | H | 3.02028 | -3.50178 | -5.79164 |
| C | -3.71167 | 0.48874 | 4.68272 | H | 1.93328 | -4.81291 | -5.26190 |
| C | -5.09839 | 1.14188 | 4.55949 | H | 3.64009 | -0.92099 | -1.95760 |
| N | 2.42715 | 5.65628 | -2.19284 | H | 2.77258 | 0.62831 | -1.87474 |
| C | 2.02285 | 6.10728 | -3.52038 | H | 3.31568 | 0.73017 | 0.63195 |
| N | -0.85907 | 1.92265 | 1.55237 | H | 4.31381 | -0.71325 | 0.44745 |
| C | -1.66880 | 2.98196 | 0.92610 | H | 5.74269 | 0.50277 | -1.27704 |
| C | -2.06219 | 3.95477 | 2.06745 | H | 4.75638 | 1.95641 | -1.03140 |
| C | -0.89057 | 3.79554 | 3.04369 | H | 6.87443 | 2.09021 | 0.33375 |
| C | -0.34673 | 2.37284 | 2.73590 | H | 5.45354 | 2.02088 | 1.41521 |
| O | 0.46009 | 1.78808 | 3.49754 | H | 6.45428 | 0.56773 | 1.16550 |
| P | 1.44583 | -1.12103 | -0.81370 | H | 1.28801 | -3.43777 | -0.06069 |
| C | 0.90610 | -1.68118 | -2.55082 | H | 2.25382 | -2.43239 | 1.02550 |
| C | 1.72374 | -2.66965 | -3.40501 | H | 3.34501 | -3.67452 | -1.59008 |
| C | 1.17156 | -2.79783 | -4.84115 | H | 4.26628 | -2.67214 | -0.46241 |
| C | 1.95874 | -3.79922 | -5.70321 | H | 3.82751 | -4.34726 | 1.37934 |
| N | -1.97609 | 0.22026 | -0.97075 | H | 2.92192 | -5.35656 | 0.24125 |
| C | -2.05937 | 0.04624 | -2.31522 | H | 5.28309 | -6.20790 | 0.48671 |
| C | -3.24340 | -0.05267 | -3.04873 | H | 5.01725 | -5.63714 | -1.18332 |
| C | -4.49622 | 0.01680 | -2.38060 | H | 5.92781 | -4.62627 | -0.02963 |
| C | -4.42330 | 0.21491 | -0.97363 | H | -1.80490 | -1.41269 | 4.18252 |
| C | -3.18176 | 0.30728 | -0.34590 | H | -1.01503 | 0.17198 | 3.90393 |
| N | -5.69915 | -0.10418 | -3.04732 | H | -3.01004 | 0.99225 | 2.69154 |
| C | -6.95249 | 0.07593 | -2.32103 | H | -3.81515 | -0.59985 | 2.81037 |
| C | 2.12054 | -2.70726 | -0.03537 | H | -3.78104 | -0.40911 | 5.33004 |
| C | 3.41970 | -3.38206 | -0.52783 | H | -3.01588 | 1.18266 | 5.19343 |
| C | 3.75914 | -4.63307 | 0.31053 | H | -5.50956 | 1.41262 | 5.54915 |
| C | 5.06720 | -5.31422 | -0.12645 | H | -5.05194 | 2.06599 | 3.95307 |
| C | 3.06105 | -0.26043 | -1.28225 | H | -5.82118 | 0.45972 | 4.07249 |
| C | 3.93802 | 0.17756 | -0.09549 | H | -2.37464 | -3.14054 | 2.34598 |
| C | 5.13725 | 1.04733 | -0.52384 | H | -3.02008 | -2.00825 | 1.13696 |
| C | 6.03020 | 1.45542 | 0.65997 | H | -1.31506 | -2.86190 | -0.54254 |
| C | -5.71462 | -0.21484 | -4.50178 | H | -0.81417 | -4.10467 | 0.62192 |
| C | 0.35065 | -2.35330 | 2.91360 | H | -3.17749 | -5.01867 | 0.66356 |
| C | 1.53069 | -1.62457 | 3.58297 | H | -3.65882 | -3.79780 | -0.52719 |
| C | 2.37356 | -2.55807 | 4.47450 | H | -3.18953 | -5.99756 | -1.66719 |
| C | 3.55970 | -1.83751 | 5.13765 | H | -2.00262 | -4.77424 | -2.19890 |
| C | -2.10674 | -2.55284 | 1.44394 | H | -1.53368 | -6.01127 | -1.00250 |
| C | -1.67535 | -3.48411 | 0.30040 | H | 0.72030 | -3.14262 | 2.23443 |
| C | -2.80304 | -4.41566 | -0.18824 | H | -0.26098 | -2.86883 | 3.68216 |
| C | -2.36050 | -5.35122 | -1.32558 | H | 2.17148 | -1.17164 | 2.80208 |
| | | | | H | 1.16393 | -0.76410 | 4.17245 |
| | | | | H | 1.72700 | -3.00445 | 5.25755 |

| | | | | | | | |
|----|----------|----------|----------|---|----------|----------|----------|
| H | 2.74787 | -3.40973 | 3.86840 | C | -0.01832 | -3.27786 | -1.92700 |
| H | 4.14809 | -2.52283 | 5.77529 | O | -1.58299 | -0.64484 | -3.72222 |
| H | 4.24275 | -1.41325 | 4.37848 | P | -1.57289 | -0.57282 | 0.84908 |
| H | 3.21127 | -1.00078 | 5.77046 | C | -1.18458 | -0.02269 | 2.62771 |
| H | -1.08634 | 3.52121 | 0.14498 | C | -2.32523 | 0.41459 | 3.57106 |
| H | -2.55665 | 2.56921 | 0.41382 | C | -1.81046 | 0.78536 | 4.97797 |
| H | -1.15444 | 3.89219 | 4.11087 | C | -2.92654 | 1.26892 | 5.91928 |
| H | -0.08161 | 4.52698 | 2.84121 | C | 2.01086 | 2.05110 | 1.09990 |
| H | -2.22614 | 4.98782 | 1.70857 | C | 2.64425 | 3.43341 | 1.35353 |
| H | -3.00225 | 3.61490 | 2.54387 | C | 3.88141 | 3.35847 | 2.27371 |
| H | 1.81211 | 2.52727 | 1.15141 | C | 4.51609 | 4.73323 | 2.54413 |
| H | 2.75726 | 4.66521 | 0.33945 | C | -0.64461 | 3.14275 | 0.31056 |
| H | 0.00036 | 1.75289 | -2.49892 | C | -0.39861 | 4.61996 | -0.05925 |
| H | 0.83665 | 3.83916 | -3.49541 | C | -1.52316 | 5.54451 | 0.45277 |
| H | 3.48895 | 7.43883 | -1.89464 | C | -1.31977 | 7.01648 | 0.05597 |
| H | 2.49705 | 6.95072 | -0.48463 | C | -1.93986 | -2.40710 | 1.07243 |
| H | 4.02460 | 6.08777 | -0.86060 | C | -2.99858 | -2.84510 | 2.10399 |
| H | 2.54340 | 7.04800 | -3.75530 | C | -3.21932 | -4.37292 | 2.10371 |
| H | 2.29985 | 5.36546 | -4.29390 | C | -4.25845 | -4.83263 | 3.14015 |
| H | 0.92972 | 6.28764 | -3.59077 | C | -3.28364 | 0.14254 | 0.53764 |
| H | -3.13305 | 0.46564 | 0.73373 | C | -3.98267 | -0.41511 | -0.71765 |
| H | -5.32462 | 0.30262 | -0.36150 | C | -5.28864 | 0.33713 | -1.04284 |
| H | -1.10549 | -0.03793 | -2.84155 | C | -6.00421 | -0.22910 | -2.28100 |
| H | -3.17916 | -0.18985 | -4.13138 | C | 6.56571 | -3.39665 | -0.34591 |
| H | -7.79485 | -0.07869 | -3.01204 | H | -1.28851 | 0.43786 | -1.47852 |
| H | -7.04839 | -0.65994 | -1.49941 | H | 2.78974 | 1.33724 | 0.76492 |
| H | -7.04292 | 1.09223 | -1.88514 | H | 1.62730 | 1.63707 | 2.05404 |
| H | -6.75383 | -0.33350 | -4.84393 | H | 2.94076 | 3.90061 | 0.39367 |
| H | -5.28682 | 0.68152 | -4.99729 | H | 1.89871 | 4.11171 | 1.81258 |
| H | -5.14284 | -1.10042 | -4.84081 | H | 3.59357 | 2.88633 | 3.23471 |
| | | | | H | 4.63281 | 2.68486 | 1.81482 |
| | | | 4 | H | 5.40165 | 4.64890 | 3.19965 |
| | | | 113 | H | 4.84003 | 5.21545 | 1.60303 |
| | | | XYZ | H | 3.79842 | 5.41546 | 3.03679 |
| C | 2.76757 | -1.61354 | -1.07685 | H | 1.80777 | 3.52875 | -1.55466 |
| N | 1.85653 | -1.34009 | -0.10319 | H | 2.31326 | 1.85885 | -1.89665 |
| C | 2.24117 | -1.66432 | 1.15877 | H | 0.02802 | 1.46328 | -3.05187 |
| C | 3.46917 | -2.23497 | 1.49133 | H | -0.33208 | 3.17370 | -2.82918 |
| C | 4.42561 | -2.50666 | 0.47175 | H | 1.72598 | 3.79226 | -4.19456 |
| C | 4.02509 | -2.17077 | -0.85279 | H | 2.07235 | 2.06760 | -4.41671 |
| Ru | -0.06545 | -0.29046 | -0.73683 | H | 0.86555 | 2.94947 | -6.43623 |
| N | 5.65962 | -3.05901 | 0.74797 | H | -0.17888 | 1.77110 | -5.58187 |
| C | 5.98623 | -3.46442 | 2.11134 | H | -0.48241 | 3.51904 | -5.41331 |
| P | 0.61886 | 1.82184 | -0.16184 | H | -0.79577 | 3.04883 | 1.40563 |
| C | 1.42561 | 2.50227 | -1.72598 | H | -1.58657 | 2.80325 | -0.15934 |
| C | 0.50575 | 2.46002 | -2.96546 | H | 0.56943 | 4.97147 | 0.34371 |
| C | 1.24648 | 2.79464 | -4.27477 | H | -0.32959 | 4.71800 | -1.15969 |
| C | 0.31415 | 2.75632 | -5.49780 | H | -2.49548 | 5.18536 | 0.06025 |
| N | -0.42667 | -1.86776 | -2.07615 | H | -1.58924 | 5.46259 | 1.55657 |
| C | -1.12455 | -1.70459 | -3.25569 | H | -2.13774 | 7.65427 | 0.43685 |
| C | -1.23479 | -3.06988 | -3.98508 | H | -0.36952 | 7.41339 | 0.45960 |
| C | -0.93148 | -4.09127 | -2.88088 | H | -1.28851 | 7.13270 | -1.04327 |

| | | | | | | | |
|---|----------|----------|----------|----|----------|----------|----------|
| H | -2.21402 | -2.76275 | 0.06162 | C | 3.24043 | -2.15343 | -2.66491 |
| H | -0.96487 | -2.87887 | 1.30531 | Ru | -0.26516 | -0.32952 | -0.37289 |
| H | -2.69249 | -2.52943 | 3.12106 | C | -2.25748 | -0.42523 | -3.01111 |
| H | -3.96417 | -2.34183 | 1.89762 | C | -1.22054 | -0.62586 | -3.63432 |
| H | -3.53665 | -4.69266 | 1.09138 | N | 5.11747 | -3.64794 | -2.13994 |
| H | -2.25214 | -4.87949 | 2.29549 | C | 5.77595 | -4.54108 | -1.19102 |
| H | -4.39726 | -5.92848 | 3.11389 | P | 0.71169 | 1.75167 | -0.73620 |
| H | -3.94993 | -4.55857 | 4.16641 | C | 0.24078 | 2.51961 | -2.39316 |
| H | -5.24334 | -4.36581 | 2.95299 | C | -1.23023 | 2.96217 | -2.50015 |
| H | -0.61990 | -0.86116 | 3.08552 | C | -1.61702 | 3.39408 | -3.92843 |
| H | -0.46243 | 0.80806 | 2.52706 | C | -3.06129 | 3.91340 | -4.02794 |
| H | -2.85037 | 1.28831 | 3.13846 | N | -1.33133 | -2.19636 | -0.40420 |
| H | -3.08328 | -0.38640 | 3.66455 | C | -2.60094 | -2.45598 | 0.01075 |
| H | -1.30210 | -0.09346 | 5.42348 | C | -3.04261 | -3.86783 | -0.45176 |
| H | -1.03531 | 1.57283 | 4.88626 | C | -1.72569 | -4.55256 | -0.83630 |
| H | -2.52910 | 1.52777 | 6.91722 | C | -0.79916 | -3.34826 | -1.15492 |
| H | -3.42851 | 2.16726 | 5.51466 | O | -3.36795 | -1.70117 | 0.66257 |
| H | -3.69935 | 0.49013 | 6.05799 | P | -0.18865 | -0.21552 | 1.85132 |
| H | -3.14061 | 1.23487 | 0.42954 | C | 1.52080 | 0.10785 | 2.62066 |
| H | -3.91878 | -0.01286 | 1.43186 | C | 1.62934 | 0.78746 | 4.00294 |
| H | -3.29433 | -0.35367 | -1.58189 | C | 3.09295 | 0.91021 | 4.47633 |
| H | -4.21437 | -1.48964 | -0.56998 | C | 3.22923 | 1.60674 | 5.84099 |
| H | -5.97068 | 0.30419 | -0.16815 | C | 2.60001 | 1.73015 | -0.89736 |
| H | -5.05388 | 1.40756 | -1.21054 | C | 3.43281 | 3.02151 | -1.01481 |
| H | -6.92538 | 0.33691 | -2.51113 | C | 4.90958 | 2.73658 | -1.36337 |
| H | -5.34726 | -0.18705 | -3.16850 | C | 5.76925 | 4.01001 | -1.43258 |
| H | -6.29065 | -1.28667 | -2.12760 | C | 0.34503 | 3.16946 | 0.45827 |
| H | 1.04913 | -3.41780 | -2.21142 | C | 0.62657 | 4.64116 | 0.08573 |
| H | -0.10670 | -3.60490 | -0.87493 | C | 0.06447 | 5.61969 | 1.13926 |
| H | -2.22585 | -3.17221 | -4.45817 | C | 0.33179 | 7.09393 | 0.79157 |
| H | -0.47968 | -3.10200 | -4.79638 | C | -0.70904 | -1.83386 | 2.65936 |
| H | -0.45749 | -5.02504 | -3.23474 | C | -0.51404 | -2.03215 | 4.17450 |
| H | -1.86637 | -4.36835 | -2.35657 | C | -1.06742 | -3.39302 | 4.65010 |
| H | 1.51083 | -1.44068 | 1.94339 | C | -0.88140 | -3.62589 | 6.15889 |
| H | 3.67412 | -2.46368 | 2.54034 | C | -1.26857 | 1.02511 | 2.76884 |
| H | 2.44733 | -1.37269 | -2.09793 | C | -2.72286 | 1.14614 | 2.27321 |
| H | 4.67863 | -2.35045 | -1.71004 | C | -3.62803 | 1.85540 | 3.30031 |
| H | 7.01077 | -3.86490 | 2.13282 | C | -5.06844 | 2.03954 | 2.79335 |
| H | 5.94372 | -2.60457 | 2.80797 | C | 5.50306 | -3.68312 | -3.54776 |
| H | 5.29976 | -4.24948 | 2.48991 | H | -1.67399 | 0.40875 | -0.15629 |
| H | 7.49186 | -3.82032 | 0.07040 | H | 2.78706 | 1.09459 | -1.78579 |
| H | 6.12433 | -4.14283 | -1.03788 | H | 2.96382 | 1.13144 | -0.03999 |
| H | 6.83746 | -2.49933 | -0.93533 | H | 3.00827 | 3.69527 | -1.78525 |
| | | | | H | 3.39541 | 3.57882 | -0.05900 |
| | | | | H | 5.33373 | 2.04158 | -0.61099 |
| | | | | H | 4.95592 | 2.20202 | -2.33350 |
| | | | | H | 6.81850 | 3.77695 | -1.68905 |
| C | 2.11973 | -1.45655 | -2.21526 | H | 5.38518 | 4.71114 | -2.19684 |
| N | 1.65268 | -1.46900 | -0.93849 | H | 5.77205 | 4.54346 | -0.46386 |
| C | 2.36623 | -2.24198 | -0.07747 | H | 0.91759 | 3.36805 | -2.61793 |
| C | 3.50228 | -2.97433 | -0.41744 | H | 0.43799 | 1.73714 | -3.15211 |
| C | 3.99157 | -2.94895 | -1.75451 | H | -1.87725 | 2.12849 | -2.17245 |

| | | | | | | | |
|---|----------|----------|----------|----|----------|----------|----------|
| H | -1.42701 | 3.80044 | -1.80240 | H | 6.65954 | -4.98811 | -1.67076 |
| H | -0.91690 | 4.17942 | -4.27995 | H | 6.12038 | -3.98818 | -0.29619 |
| H | -1.48499 | 2.52974 | -4.60863 | H | 5.11016 | -5.36270 | -0.85502 |
| H | -3.31619 | 4.20679 | -5.06244 | H | 6.42767 | -4.27017 | -3.65315 |
| H | -3.78575 | 3.14017 | -3.71172 | H | 4.72288 | -4.14662 | -4.18635 |
| H | -3.21518 | 4.79708 | -3.38064 | H | 5.70360 | -2.66470 | -3.93233 |
| H | 0.86986 | 2.92076 | 1.40207 | H | -0.36304 | -0.84704 | -4.24154 |
| H | -0.73400 | 3.05169 | 0.67627 | C | -3.54825 | -0.21552 | -2.34760 |
| H | 1.71157 | 4.81768 | -0.02259 | C | -4.68016 | -1.10280 | -2.93006 |
| H | 0.17706 | 4.88073 | -0.89679 | H | -3.43591 | -0.42427 | -1.26524 |
| H | -1.02639 | 5.45439 | 1.24421 | H | -3.83750 | 0.85209 | -2.43215 |
| H | 0.50589 | 5.38582 | 2.12901 | C | -5.95798 | -1.00843 | -2.07635 |
| H | -0.08311 | 7.77172 | 1.55918 | H | -4.88775 | -0.81254 | -3.97918 |
| H | 1.41624 | 7.29770 | 0.71514 | H | -4.33224 | -2.15327 | -2.95738 |
| H | -0.12668 | 7.36476 | -0.17770 | C | -7.10400 | -1.88139 | -2.61321 |
| H | -1.77510 | -1.94073 | 2.38212 | H | -5.70456 | -1.30571 | -1.04053 |
| H | -0.17671 | -2.62865 | 2.10348 | H | -6.28935 | 0.04879 | -2.02687 |
| H | 0.56062 | -1.97247 | 4.44136 | H | -8.00386 | -1.79958 | -1.97709 |
| H | -1.02171 | -1.22817 | 4.74377 | H | -7.39098 | -1.58578 | -3.64016 |
| H | -2.14245 | -3.45509 | 4.39165 | H | -6.81269 | -2.94802 | -2.64325 |
| H | -0.56932 | -4.20552 | 4.08392 | | | | 5 |
| H | -1.28414 | -4.60717 | 6.46863 | | | | 129 |
| H | 0.18809 | -3.59826 | 6.44106 | | | | XYZ |
| H | -1.40134 | -2.84935 | 6.75048 | C | 1.85619 | 0.08599 | -2.84587 |
| H | 2.03225 | -0.87536 | 2.65354 | N | 1.72806 | -0.41526 | -1.59031 |
| H | 2.07840 | 0.70650 | 1.87687 | C | 2.86310 | -0.94622 | -1.06699 |
| H | 1.17858 | 1.79825 | 3.96241 | C | 4.10082 | -0.97228 | -1.70784 |
| H | 1.05230 | 0.22410 | 4.75996 | C | 4.23526 | -0.42318 | -3.01394 |
| H | 3.54372 | -0.10147 | 4.52868 | C | 3.04121 | 0.10730 | -3.57915 |
| H | 3.67740 | 1.46562 | 3.71523 | Ru | -0.32907 | -0.55234 | -0.48184 |
| H | 4.28622 | 1.67695 | 6.15538 | C | -2.11217 | -1.21227 | -1.58110 |
| H | 2.82030 | 2.63368 | 5.80841 | C | -1.24543 | -0.86140 | -2.44610 |
| H | 2.68118 | 1.05561 | 6.62762 | N | 5.43869 | -0.40958 | -3.68648 |
| H | -0.77113 | 2.01174 | 2.73271 | C | 6.60451 | -1.06777 | -3.10262 |
| H | -1.25612 | 0.71666 | 3.83332 | P | -0.78106 | 1.74514 | -0.60745 |
| H | -2.72780 | 1.70986 | 1.32034 | C | -2.05210 | 2.36791 | -1.85498 |
| H | -3.12959 | 0.15139 | 2.01248 | C | -3.50989 | 1.92813 | -1.63512 |
| H | -3.64203 | 1.26956 | 4.24228 | C | -4.49081 | 2.62840 | -2.59730 |
| H | -3.19739 | 2.84416 | 3.56326 | C | -5.94954 | 2.18647 | -2.39341 |
| H | -5.70623 | 2.53323 | 3.54948 | N | -0.03500 | -2.72429 | -0.46793 |
| H | -5.09212 | 2.65914 | 1.87742 | C | -0.73781 | -3.60582 | 0.29051 |
| H | -5.52655 | 1.06504 | 2.54474 | C | -0.63455 | -5.03057 | -0.31318 |
| H | -0.79410 | -3.12431 | -2.24533 | C | 0.52939 | -4.91672 | -1.30591 |
| H | 0.24617 | -3.56042 | -0.86982 | C | 0.52668 | -3.40286 | -1.64502 |
| H | -3.61532 | -4.37373 | 0.34443 | O | -1.40673 | -3.36595 | 1.32803 |
| H | -3.72426 | -3.75530 | -1.31865 | P | 0.63906 | -0.46647 | 1.72142 |
| H | -1.80662 | -5.25903 | -1.68231 | C | 2.07850 | 0.75311 | 1.95396 |
| H | -1.32417 | -5.11438 | 0.02851 | C | 2.35557 | 1.37012 | 3.34090 |
| H | 1.98295 | -2.27791 | 0.94653 | C | 3.59469 | 2.28968 | 3.33198 |
| H | 3.99302 | -3.56748 | 0.35834 | C | 3.86938 | 2.94186 | 4.69751 |
| H | 1.54309 | -0.84400 | -2.91729 | C | 0.69817 | 2.77933 | -1.19104 |

| | | | | | | | |
|---|----------|----------|----------|---|----------|----------|--------------------|
| C | 0.74849 | 4.30592 | -0.99297 | H | 3.17764 | -3.20384 | 6.02141 |
| C | 1.98629 | 4.94300 | -1.66012 | H | 2.98688 | 0.23161 | 1.59308 |
| C | 2.07070 | 6.46361 | -1.44589 | H | 1.89938 | 1.56730 | 1.22789 |
| C | -1.34324 | 2.60183 | 0.98286 | H | 1.47802 | 1.95760 | 3.67365 |
| C | -2.05401 | 3.97158 | 0.96268 | H | 2.49924 | 0.57810 | 4.09878 |
| C | -2.44068 | 4.43843 | 2.38251 | H | 4.48102 | 1.70434 | 3.01425 |
| C | -3.16060 | 5.79731 | 2.39435 | H | 3.45877 | 3.07791 | 2.56416 |
| C | 1.36748 | -2.09762 | 2.31223 | H | 4.75620 | 3.59989 | 4.66042 |
| C | 2.28648 | -2.12259 | 3.54681 | H | 3.01052 | 3.55531 | 5.02747 |
| C | 2.73654 | -3.55664 | 3.90015 | H | 4.05095 | 2.17845 | 5.47650 |
| C | 3.67167 | -3.61157 | 5.11979 | H | -0.57723 | 1.06083 | 3.22494 |
| C | -0.46515 | -0.03824 | 3.18506 | H | 0.10097 | -0.32152 | 4.09380 |
| C | -1.85176 | -0.70987 | 3.20900 | H | -2.48782 | -0.25161 | 2.42620 |
| C | -2.53976 | -0.56098 | 4.58045 | H | -1.77241 | -1.77400 | 2.92051 |
| C | -3.95067 | -1.17294 | 4.60473 | H | -1.91451 | -1.04504 | 5.35835 |
| C | 5.49644 | 0.07238 | -5.06379 | H | -2.59456 | 0.51225 | 4.85841 |
| H | -1.57306 | -0.69850 | 0.51534 | H | -4.42245 | -1.06918 | 5.59902 |
| H | 0.77909 | 2.55422 | -2.27263 | H | -4.61070 | -0.68031 | 3.86651 |
| H | 1.59064 | 2.31417 | -0.73345 | H | -3.91917 | -2.24851 | 4.35337 |
| H | -0.16341 | 4.78144 | -1.40473 | H | -0.09734 | -3.19342 | -2.54243 |
| H | 0.76443 | 4.54579 | 0.08831 | H | 1.54314 | -3.03539 | -1.87548 |
| H | 2.90202 | 4.45956 | -1.26459 | H | -0.50236 | -5.78720 | 0.47910 |
| H | 1.96774 | 4.72051 | -2.74593 | H | -1.59311 | -5.25639 | -0.82268 |
| H | 2.96326 | 6.89259 | -1.93591 | H | 0.43109 | -5.55394 | -2.20361 |
| H | 1.18254 | 6.97605 | -1.86001 | H | 1.47991 | -5.18694 | -0.80731 |
| H | 2.12703 | 6.71401 | -0.37017 | H | 2.75636 | -1.40015 | -0.07834 |
| H | -1.98714 | 3.47399 | -1.88123 | H | 4.94632 | -1.43412 | -1.19224 |
| H | -1.70819 | 2.00359 | -2.84241 | H | 0.93832 | 0.48347 | -3.28747 |
| H | -3.57018 | 0.83531 | -1.77463 | H | 3.02441 | 0.52783 | -4.58762 |
| H | -3.82479 | 2.12745 | -0.59157 | H | 7.46699 | -0.93395 | -3.77232 |
| H | -4.41408 | 3.72711 | -2.46615 | H | 6.86380 | -0.62409 | -2.12238 |
| H | -4.18358 | 2.42307 | -3.64258 | H | 6.44247 | -2.15545 | -2.95831 |
| H | -6.63077 | 2.69945 | -3.09610 | H | 6.53828 | 0.03535 | -5.41547 |
| H | -6.06198 | 1.09798 | -2.55053 | H | 4.87694 | -0.54088 | -5.74978 |
| H | -6.29529 | 2.41097 | -1.36715 | H | 5.15277 | 1.12212 | -5.13349 |
| H | -0.43978 | 2.66422 | 1.62217 | H | -0.95419 | -0.79355 | -3.49065 |
| H | -2.00182 | 1.86002 | 1.47239 | C | -3.37394 | -1.81376 | -1.08409 |
| H | -1.41474 | 4.74123 | 0.49457 | C | -4.22666 | -2.44740 | -2.20814 |
| H | -2.97040 | 3.91533 | 0.34520 | H | -3.12438 | -2.56332 | -0.30741 |
| H | -3.08614 | 3.67164 | 2.85541 | H | -3.96996 | -1.03888 | -0.55759 |
| H | -1.52768 | 4.49772 | 3.00885 | C | -5.52410 | -3.08606 | -1.67824 |
| H | -3.42304 | 6.10587 | 3.42223 | H | -4.47340 | -1.67534 | -2.96475 |
| H | -2.52602 | 6.59104 | 1.95802 | H | -3.62170 | -3.21290 | -2.73282 |
| H | -4.09686 | 5.75966 | 1.80708 | C | -6.38039 | -3.71729 | -2.78877 |
| H | 0.48120 | -2.74561 | 2.45499 | H | -5.26785 | -3.85397 | -0.92197 |
| H | 1.89154 | -2.53375 | 1.44153 | H | -6.11827 | -2.31729 | -1.14393 |
| H | 3.18628 | -1.49769 | 3.37356 | H | -7.30446 | -4.16687 | -2.38237 |
| H | 1.77196 | -1.68786 | 4.42727 | H | -6.67701 | -2.96349 | -3.54198 |
| H | 1.84049 | -4.18051 | 4.08536 | H | -5.82480 | -4.51393 | -3.31778 |
| H | 3.24325 | -4.00434 | 3.02172 | | | | [5-6] [‡] |
| H | 3.97906 | -4.64820 | 5.34746 | | | | 129 |
| H | 4.59033 | -3.01972 | 4.94785 | | | | |

| | XYZ | | | | | | |
|----|----------|----------|----------|---|----------|----------|----------|
| C | 2.11978 | 1.02550 | -2.26004 | H | 4.80435 | 6.08245 | 0.63232 |
| N | 1.78741 | 0.02871 | -1.39135 | H | 3.51592 | 6.15070 | -0.60110 |
| C | 2.75590 | -0.90318 | -1.18361 | H | 3.14752 | 6.55481 | 1.09624 |
| C | 4.01612 | -0.88334 | -1.77792 | H | -0.64983 | 4.32660 | 0.02150 |
| C | 4.36486 | 0.16330 | -2.67669 | H | -0.78640 | 3.32031 | -1.44079 |
| C | 3.34828 | 1.13341 | -2.90710 | H | -2.99558 | 2.42671 | -0.61473 |
| Ru | -0.27877 | -0.15171 | -0.66804 | H | -2.88350 | 3.45449 | 0.82944 |
| C | -2.25678 | 0.22075 | -1.62659 | H | -2.80952 | 5.51072 | -0.65426 |
| C | -1.29813 | 0.76722 | -2.30683 | H | -2.96924 | 4.47067 | -2.08038 |
| N | 5.60235 | 0.23403 | -3.28159 | H | -5.20972 | 5.42999 | -1.43298 |
| C | 6.56151 | -0.85229 | -3.09976 | H | -5.22829 | 3.65557 | -1.24065 |
| P | -0.18229 | 1.92159 | 0.46278 | H | -5.07133 | 4.70573 | 0.19236 |
| C | -1.05706 | 3.37549 | -0.36899 | H | -0.31072 | 1.31639 | 2.81377 |
| C | -2.59246 | 3.38328 | -0.23734 | H | -1.90711 | 1.72944 | 2.18212 |
| C | -3.23970 | 4.55177 | -1.00850 | H | 0.28971 | 3.76017 | 3.00287 |
| C | -4.77051 | 4.58953 | -0.86568 | H | -1.28969 | 4.21579 | 2.34164 |
| N | -0.39486 | -1.94902 | -1.88634 | H | -2.43221 | 3.08556 | 4.28961 |
| C | -1.39621 | -2.86405 | -1.81965 | H | -0.85588 | 2.62247 | 4.94906 |
| C | -1.44931 | -3.69420 | -3.12760 | H | -1.71871 | 4.69846 | 6.09311 |
| C | -0.12816 | -3.35027 | -3.82846 | H | -0.22736 | 5.07838 | 5.18973 |
| C | 0.20936 | -1.96222 | -3.22503 | H | -1.81591 | 5.54486 | 4.52527 |
| O | -2.20248 | -3.05301 | -0.87245 | H | -0.45253 | -3.65650 | 0.48503 |
| P | 0.22561 | -1.49789 | 1.26763 | H | 1.24886 | -3.39113 | 0.12275 |
| C | 1.79268 | -1.02691 | 2.25020 | H | 1.88970 | -3.92704 | 2.52227 |
| C | 1.83382 | -1.19116 | 3.78310 | H | 0.17966 | -4.15555 | 2.93478 |
| C | 3.20904 | -0.81933 | 4.37603 | H | 0.02718 | -6.04394 | 1.27358 |
| C | 3.25910 | -0.94551 | 5.90820 | H | 1.73011 | -5.81719 | 0.84799 |
| C | 1.58136 | 2.59197 | 0.74094 | H | 1.47743 | -7.70819 | 2.50042 |
| C | 1.90046 | 4.07650 | 0.47385 | H | 2.41001 | -6.37755 | 3.23906 |
| C | 3.38751 | 4.40448 | 0.72351 | H | 0.69348 | -6.60822 | 3.66615 |
| C | 3.73426 | 5.87746 | 0.44823 | H | 2.61954 | -1.61401 | 1.80190 |
| C | -0.85575 | 2.07485 | 2.21935 | H | 2.00710 | 0.02727 | 1.99442 |
| C | -0.76821 | 3.43811 | 2.93325 | H | 1.05842 | -0.55249 | 4.25127 |
| C | -1.37197 | 3.40185 | 4.35335 | H | 1.58761 | -2.23172 | 4.06889 |
| C | -1.27907 | 4.75359 | 5.08102 | H | 3.98704 | -1.46737 | 3.92424 |
| C | 0.50193 | -3.32648 | 0.93798 | H | 3.46618 | 0.21768 | 4.07951 |
| C | 0.91100 | -4.24206 | 2.10623 | H | 4.25448 | -0.67478 | 6.30444 |
| C | 1.00549 | -5.72328 | 1.68194 | H | 2.51548 | -0.28264 | 6.38861 |
| C | 1.41921 | -6.65587 | 2.83282 | H | 3.03946 | -1.98001 | 6.23149 |
| C | -1.10017 | -1.56415 | 2.60646 | H | -1.39606 | -0.51783 | 2.79967 |
| C | -2.35073 | -2.38987 | 2.24441 | H | -0.65740 | -1.94824 | 3.54476 |
| C | -3.52377 | -2.11433 | 3.20623 | H | -2.64792 | -2.19663 | 1.19771 |
| C | -4.75495 | -2.98700 | 2.90929 | H | -2.10248 | -3.46908 | 2.27903 |
| C | 5.86254 | 1.26362 | -4.28403 | H | -3.19771 | -2.27761 | 4.25454 |
| H | -1.87491 | -0.37294 | -0.22924 | H | -3.80477 | -1.04319 | 3.13847 |
| H | 2.24440 | 1.96843 | 0.11773 | H | -5.59052 | -2.75872 | 3.59627 |
| H | 1.83497 | 2.34705 | 1.79194 | H | -5.11130 | -2.83053 | 1.87495 |
| H | 1.64866 | 4.33439 | -0.57404 | H | -4.51584 | -4.06147 | 3.01565 |
| H | 1.27565 | 4.73245 | 1.11104 | H | -0.22064 | -1.14167 | -3.84577 |
| H | 3.64607 | 4.15135 | 1.77140 | H | 1.29932 | -1.78877 | -3.18043 |
| H | 4.01387 | 3.74804 | 0.08677 | H | -1.59778 | -4.76563 | -2.90843 |
| H | | | | H | -2.32893 | -3.35655 | -3.71216 |

| | | | | | | | |
|---|----------|----------|----------|---|----------|----------|----------|
| H | -0.18619 | -3.33181 | -4.93209 | P | -2.19738 | -0.38972 | -0.29927 |
| H | 0.65402 | -4.08047 | -3.54587 | C | -2.68743 | -1.23403 | 1.33038 |
| H | 2.47994 | -1.72454 | -0.51880 | C | -3.98902 | -0.82410 | 2.04808 |
| H | 4.71292 | -1.69220 | -1.54512 | C | -4.22897 | -1.63461 | 3.33872 |
| H | 1.33133 | 1.76034 | -2.44292 | C | -5.51265 | -1.22290 | 4.07924 |
| H | 3.50089 | 1.96824 | -3.59551 | C | -0.29330 | 1.33999 | 2.54310 |
| H | 7.49022 | -0.60614 | -3.63596 | C | 0.21663 | 2.07737 | 3.79953 |
| H | 6.81343 | -0.98635 | -2.03042 | C | -0.72809 | 1.89895 | 5.00669 |
| H | 6.18056 | -1.81853 | -3.48972 | C | -0.21328 | 2.58959 | 6.28105 |
| H | 6.90331 | 1.17458 | -4.62974 | C | -0.10033 | 3.16346 | 0.20389 |
| H | 5.19462 | 1.17113 | -5.16506 | C | -0.10916 | 4.40549 | 1.11710 |
| H | 5.73348 | 2.27669 | -3.85736 | C | -0.53378 | 5.68324 | 0.36250 |
| H | -1.17799 | 1.29698 | -3.25454 | C | -0.58237 | 6.92829 | 1.26402 |
| C | -3.69746 | -0.18151 | -1.57530 | C | -3.02738 | -1.52980 | -1.55490 |
| C | -4.45718 | 0.19235 | -2.86510 | C | -4.53967 | -1.80167 | -1.45794 |
| H | -3.73887 | -1.27522 | -1.39816 | C | -5.04369 | -2.74235 | -2.57334 |
| H | -4.19478 | 0.28853 | -0.69917 | C | -6.55467 | -3.01847 | -2.49232 |
| C | -5.93621 | -0.23562 | -2.82827 | C | -3.34548 | 1.10585 | -0.36746 |
| H | -4.38934 | 1.28656 | -3.03136 | C | -3.36194 | 1.79672 | -1.74671 |
| H | -3.95269 | -0.28452 | -3.72831 | C | -4.14710 | 3.12343 | -1.73206 |
| C | -6.69565 | 0.11632 | -4.11858 | C | -4.22216 | 3.79093 | -3.11561 |
| H | -5.99370 | -1.32752 | -2.64918 | C | 2.71936 | -5.26068 | 3.70974 |
| H | -6.43576 | 0.24366 | -1.96211 | H | 2.35875 | 1.04763 | -2.89792 |
| H | -7.75272 | -0.20154 | -4.06572 | H | -0.29691 | 0.25214 | 2.74782 |
| H | -6.68196 | 1.20627 | -4.30694 | H | -1.35250 | 1.60945 | 2.35568 |
| H | -6.24023 | -0.37827 | -4.99672 | H | 1.22026 | 1.69646 | 4.07449 |
| | | | | H | 0.34340 | 3.15814 | 3.59832 |
| | | | | H | -1.72914 | 2.29768 | 4.74627 |
| | | | | H | -0.87142 | 0.81696 | 5.20165 |
| | | | | H | -0.91283 | 2.45390 | 7.12552 |
| | | | | H | 0.76735 | 2.18147 | 6.58935 |
| | | | | H | -0.08563 | 3.67655 | 6.12262 |
| | | | | H | 2.29314 | 2.51563 | 2.35388 |
| | | | | H | 2.87282 | 1.05517 | 1.51828 |
| | | | | H | 3.12162 | 2.38164 | -0.61224 |
| | | | | H | 2.61317 | 3.85908 | 0.24313 |
| | | | | H | 4.55741 | 3.57832 | 1.85461 |
| | | | | H | 5.08155 | 2.15005 | 0.94401 |
| | | | | H | 6.39381 | 4.18341 | 0.23218 |
| | | | | H | 5.40818 | 3.58121 | -1.12979 |
| | | | | H | 4.88316 | 5.02153 | -0.21800 |
| | | | | H | -1.12591 | 2.95104 | -0.15077 |
| | | | | H | 0.48618 | 3.35241 | -0.71487 |
| | | | | H | -0.80396 | 4.24425 | 1.96525 |
| | | | | H | 0.89179 | 4.56883 | 1.56338 |
| | | | | H | 0.16801 | 5.85686 | -0.47718 |
| | | | | H | -1.52774 | 5.51876 | -0.09987 |
| | | | | H | -0.89217 | 7.82550 | 0.69843 |
| | | | | H | -1.29892 | 6.79253 | 2.09577 |
| | | | | H | 0.40802 | 7.13850 | 1.70934 |
| | | | | H | -2.76791 | -1.11536 | -2.54725 |
| O | -0.12255 | 1.18419 | -2.44520 | H | -2.47006 | -2.48530 | -1.49105 |

| | | | | | | | |
|---|----------|----------|----------|----|----------|----------|-----------|
| H | -4.78593 | -2.25102 | -0.47524 | H | 8.57818 | -1.80146 | -1.58019 |
| H | -5.10341 | -0.84951 | -1.51398 | H | 7.54101 | -1.39809 | -0.18423 |
| H | -4.79888 | -2.29974 | -3.55951 | H | 7.11303 | -2.76558 | -1.24564 |
| H | -4.48719 | -3.69981 | -2.52142 | | | | |
| H | -6.88732 | -3.69335 | -3.30156 | | | | 7a |
| H | -6.82424 | -3.49146 | -1.52943 | | | | 148 |
| H | -7.13668 | -2.08179 | -2.57662 | | | | XYZ |
| H | -2.70574 | -2.32122 | 1.11526 | C | -2.60960 | 1.75342 | 0.39312 |
| H | -1.83401 | -1.08184 | 2.01506 | N | -2.18299 | 0.90112 | -0.58197 |
| H | -3.95260 | 0.25384 | 2.30266 | C | -3.14765 | 0.51521 | -1.46761 |
| H | -4.86059 | -0.95008 | 1.37679 | C | -4.47017 | 0.95155 | -1.43054 |
| H | -4.27404 | -2.71354 | 3.08771 | C | -4.90767 | 1.84932 | -0.41870 |
| H | -3.35654 | -1.51412 | 4.01189 | C | -3.90893 | 2.24012 | 0.51705 |
| H | -5.65837 | -1.81849 | 4.99848 | Ru | -0.16395 | 0.11586 | -0.64331 |
| H | -5.48076 | -0.15690 | 4.37202 | C | -1.09441 | -1.63762 | -3.10512 |
| H | -6.40541 | -1.36576 | 3.44226 | C | -0.72455 | -1.52891 | -1.80086 |
| H | -2.98568 | 1.81982 | 0.39907 | N | -6.20969 | 2.30261 | -0.34148 |
| H | -4.37373 | 0.82370 | -0.07000 | C | -7.16150 | 1.95080 | -1.39096 |
| H | -2.32312 | 1.96942 | -2.08838 | P | -0.87133 | -1.24480 | 1.16062 |
| H | -3.82179 | 1.11634 | -2.49237 | C | 0.17115 | -2.77450 | 1.56204 |
| H | -5.17248 | 2.94395 | -1.34889 | C | 1.17445 | -2.65297 | 2.72755 |
| H | -3.66981 | 3.81924 | -1.01195 | C | 2.11072 | -3.87508 | 2.81755 |
| H | -4.78253 | 4.74276 | -3.07722 | C | 3.07409 | -3.80632 | 4.01426 |
| H | -3.21152 | 4.00946 | -3.50657 | N | 0.19742 | 1.24636 | -2.52169 |
| H | -4.72751 | 3.13396 | -3.84813 | C | 1.28923 | 1.22076 | -3.33471 |
| H | 1.22743 | -2.36572 | -3.72549 | C | 0.97696 | 1.93245 | -4.67742 |
| H | -0.44783 | -2.96827 | -3.57972 | C | -0.27060 | 2.75916 | -4.34905 |
| H | -0.78474 | 0.81986 | -5.22241 | C | -0.91000 | 1.93404 | -3.20343 |
| H | 0.96719 | 0.54478 | -5.06335 | O | 2.41733 | 0.72207 | -3.09729 |
| H | 0.41650 | -1.68365 | -5.92409 | P | 0.86042 | 2.25909 | 0.27584 |
| H | -1.26107 | -1.54883 | -5.33498 | C | -0.00941 | 3.80127 | -0.40342 |
| H | -0.18683 | -3.00480 | -0.88050 | C | 0.47172 | 5.19312 | 0.04980 |
| H | 0.41662 | -5.13074 | 0.21429 | C | -0.14459 | 6.32998 | -0.79304 |
| H | 1.70159 | -0.75697 | 2.04945 | C | 0.30278 | 7.72930 | -0.33752 |
| H | 2.40346 | -2.75421 | 3.28941 | C | -2.57896 | -1.97721 | 0.75456 |
| H | 1.89498 | -7.43047 | 2.62430 | C | -2.96176 | -3.39302 | 1.22781 |
| H | 0.50808 | -6.78316 | 1.71318 | C | -4.44396 | -3.71678 | 0.94415 |
| H | 2.15085 | -6.74000 | 0.99002 | C | -4.84062 | -5.14222 | 1.36418 |
| H | 2.86049 | -6.26875 | 4.12859 | C | -1.22200 | -0.52902 | 2.87710 |
| H | 3.71412 | -4.85788 | 3.42397 | C | -2.04417 | -1.34455 | 3.89543 |
| H | 2.30533 | -4.61946 | 4.51052 | C | -2.17045 | -0.62947 | 5.25741 |
| H | 2.87295 | -0.75567 | -0.45330 | C | -3.00704 | -1.41936 | 6.27828 |
| C | 4.39126 | 0.25515 | -2.55470 | C | 2.57799 | 2.58159 | -0.47748 |
| C | 5.22632 | -0.68337 | -1.66790 | C | 3.81300 | 2.71784 | 0.43158 |
| H | 4.47189 | -0.09357 | -3.60880 | C | 5.07637 | 3.07493 | -0.38006 |
| H | 4.87420 | 1.25967 | -2.56020 | C | 6.33862 | 3.19180 | 0.49088 |
| C | 6.69527 | -0.79589 | -2.11808 | C | 1.01937 | 2.82124 | 2.08809 |
| H | 5.19235 | -0.32984 | -0.61725 | C | 1.74721 | 1.88858 | 3.07267 |
| H | 4.76344 | -1.69104 | -1.66413 | C | 1.57572 | 2.32241 | 4.54319 |
| C | 7.52938 | -1.74065 | -1.23611 | C | 2.34845 | 1.43068 | 5.52971 |
| H | 6.72996 | -1.14692 | -3.16947 | C | -6.57069 | 3.30532 | 0.65515 |
| H | 7.15737 | 0.21216 | -2.11881 | H | -1.19035 | -0.72716 | -3.71876 |

| | | | | | | | |
|---|----------|----------|----------|---|----------|----------|----------|
| H | -2.64931 | -1.93723 | -0.34641 | H | 2.01791 | 0.37738 | 5.46098 |
| H | -3.31266 | -1.24054 | 1.13860 | H | 3.43436 | 1.45191 | 5.32105 |
| H | -2.33119 | -4.14000 | 0.70613 | H | -1.64178 | 1.20776 | -3.62582 |
| H | -2.76774 | -3.52403 | 2.31006 | H | -1.47925 | 2.56905 | -2.50047 |
| H | -5.08424 | -2.98139 | 1.47226 | H | 1.84861 | 2.51383 | -5.02320 |
| H | -4.64496 | -3.57720 | -0.13662 | H | 0.76892 | 1.15925 | -5.44466 |
| H | -5.90641 | -5.34470 | 1.15358 | H | -0.96177 | 2.91347 | -5.19792 |
| H | -4.24291 | -5.89898 | 0.82297 | H | 0.02502 | 3.75871 | -3.97380 |
| H | -4.67679 | -5.30112 | 2.44652 | H | -2.81800 | -0.20184 | -2.22397 |
| H | -0.49762 | -3.63108 | 1.76111 | H | -5.15488 | 0.57926 | -2.19697 |
| H | 0.71623 | -3.00665 | 0.62795 | H | -1.84498 | 2.04664 | 1.11759 |
| H | 1.79303 | -1.74317 | 2.61573 | H | -4.13035 | 2.92442 | 1.33990 |
| H | 0.63015 | -2.54487 | 3.68648 | H | -8.14012 | 2.39467 | -1.15384 |
| H | 1.50216 | -4.79951 | 2.88262 | H | -6.84336 | 2.32211 | -2.38692 |
| H | 2.69000 | -3.94985 | 1.87650 | H | -7.29433 | 0.85385 | -1.45952 |
| H | 3.73540 | -4.69087 | 4.05319 | H | -7.64395 | 3.53163 | 0.56708 |
| H | 3.71785 | -2.90856 | 3.95680 | H | -6.38663 | 2.93451 | 1.68223 |
| H | 2.52302 | -3.75847 | 4.97221 | H | -6.00499 | 4.25106 | 0.52380 |
| H | -1.72843 | 0.43804 | 2.69373 | H | -0.60400 | -2.51504 | -1.30054 |
| H | -0.23889 | -0.27419 | 3.31430 | C | -1.36167 | -2.91399 | -3.89591 |
| H | -3.05913 | -1.53335 | 3.49538 | C | -1.21047 | -4.24595 | -3.14221 |
| H | -1.58447 | -2.34028 | 4.05371 | H | -2.38664 | -2.86864 | -4.32985 |
| H | -1.15740 | -0.44707 | 5.66873 | H | -0.68870 | -2.93290 | -4.78270 |
| H | -2.62186 | 0.37125 | 5.10185 | C | -1.49699 | -5.47602 | -4.02446 |
| H | -3.07954 | -0.88463 | 7.24252 | H | -0.18438 | -4.32267 | -2.72916 |
| H | -4.03608 | -1.58601 | 5.90876 | H | -1.89173 | -4.25605 | -2.26685 |
| H | -2.56123 | -2.41150 | 6.47827 | C | -1.34369 | -6.80961 | -3.27348 |
| H | 2.72860 | 1.77068 | -1.21577 | H | -2.52364 | -5.40026 | -4.43701 |
| H | 2.48109 | 3.51152 | -1.07118 | H | -0.81619 | -5.46487 | -4.89969 |
| H | 3.65503 | 3.49352 | 1.20871 | H | -1.55376 | -7.67408 | -3.92958 |
| H | 4.00136 | 1.76714 | 0.96698 | H | -0.31721 | -6.92943 | -2.87900 |
| H | 5.22765 | 2.30714 | -1.16297 | H | -2.03707 | -6.86539 | -2.41333 |
| H | 4.90606 | 4.02991 | -0.91671 | C | 2.23587 | -1.52689 | -1.72985 |
| H | 7.22618 | 3.45154 | -0.11437 | C | 3.46835 | -2.17584 | -1.77211 |
| H | 6.22227 | 3.97251 | 1.26628 | C | 4.38610 | -2.05426 | -0.69593 |
| H | 6.55562 | 2.23916 | 1.01026 | C | 3.94341 | -1.25692 | 0.39490 |
| H | 0.12002 | 3.69661 | -1.49591 | C | 2.67646 | -0.67384 | 0.35806 |
| H | -1.09458 | 3.70580 | -0.21432 | N | 1.79544 | -0.79145 | -0.66776 |
| H | 0.21465 | 5.36063 | 1.11444 | H | 1.53410 | -1.61517 | -2.55761 |
| H | 1.57665 | 5.26055 | -0.01523 | H | 3.71766 | -2.73683 | -2.67570 |
| H | 0.12715 | 6.17984 | -1.85684 | H | 4.57106 | -1.07919 | 1.27151 |
| H | -1.25016 | 6.25984 | -0.74789 | H | 2.33338 | -0.06613 | 1.19864 |
| H | -0.14938 | 8.52213 | -0.96056 | N | 5.62422 | -2.67469 | -0.70295 |
| H | 0.01189 | 7.92114 | 0.71241 | C | 6.09924 | -3.30731 | -1.93074 |
| H | 1.40149 | 7.83810 | -0.40265 | H | 6.19012 | -2.58873 | -2.77185 |
| H | -0.02636 | 2.96164 | 2.43512 | H | 7.08807 | -3.75433 | -1.74498 |
| H | 1.48918 | 3.82286 | 2.12348 | H | 5.41641 | -4.11890 | -2.24435 |
| H | 1.37227 | 0.85329 | 2.95645 | C | 6.59058 | -2.35707 | 0.34297 |
| H | 2.82624 | 1.85630 | 2.83202 | H | 6.18798 | -2.61125 | 1.34167 |
| H | 1.90865 | 3.37389 | 4.65442 | H | 7.50020 | -2.95733 | 0.18710 |
| H | 0.49713 | 2.31360 | 4.80006 | H | 6.87698 | -1.28385 | 0.34964 |
| H | 2.20203 | 1.76005 | 6.57428 | | | | |

| [7a-8a] [‡] | | | | | | | |
|----------------------|----------|----------|----------|---|----------|----------|----------|
| | 148 | | | H | -4.66313 | -4.57690 | -1.53104 |
| | XYZ | | | H | -3.36294 | -4.72248 | -2.72553 |
| C | -3.61692 | 1.24098 | -0.18307 | H | -4.46900 | -6.95823 | -2.34022 |
| N | -2.78010 | 0.63698 | -1.07100 | H | -2.76637 | -7.01934 | -1.80951 |
| C | -3.34603 | 0.29547 | -2.26572 | H | -4.07144 | -6.87495 | -0.60230 |
| C | -4.67616 | 0.52881 | -2.60014 | H | -0.69489 | -4.07284 | 1.15044 |
| C | -5.55110 | 1.15810 | -1.66822 | H | 0.37620 | -3.38081 | -0.09215 |
| C | -4.96317 | 1.51229 | -0.42189 | H | 1.37530 | -1.82191 | 1.59742 |
| Ru | -0.70198 | 0.05450 | -0.78045 | H | 0.27285 | -2.42169 | 2.85295 |
| C | 1.00070 | -1.83528 | -2.73939 | H | 1.22111 | -4.73357 | 2.62795 |
| C | 0.19659 | -1.10406 | -1.95831 | H | 2.33876 | -4.16962 | 1.37447 |
| N | -6.87587 | 1.40387 | -1.95373 | H | 3.41401 | -4.34892 | 3.69146 |
| C | -7.41929 | 1.04582 | -3.26122 | H | 3.55436 | -2.71458 | 3.00583 |
| P | -1.45130 | -1.87514 | 0.33096 | H | 2.32909 | -3.05861 | 4.27146 |
| C | -0.17432 | -3.14665 | 0.83959 | H | -3.31192 | -0.94614 | 1.56974 |
| C | 0.81982 | -2.71814 | 1.93438 | H | -1.89611 | -1.14913 | 2.60487 |
| C | 1.80503 | -3.85188 | 2.29221 | H | -3.87930 | -3.38375 | 1.79792 |
| C | 2.83056 | -3.46587 | 3.37253 | H | -2.40762 | -3.66852 | 2.74567 |
| N | 0.02390 | 1.65393 | -2.09450 | H | -3.24825 | -2.08600 | 4.52386 |
| C | 1.32322 | 1.89485 | -2.39905 | H | -4.71572 | -1.79439 | 3.57562 |
| C | 1.41776 | 2.79189 | -3.65692 | H | -5.15040 | -3.50147 | 5.38236 |
| C | -0.00585 | 3.34562 | -3.80777 | H | -5.34045 | -4.25482 | 3.77562 |
| C | -0.85332 | 2.25381 | -3.10478 | H | -3.86138 | -4.54778 | 4.72881 |
| O | 2.34563 | 1.47878 | -1.79151 | H | 1.80325 | 1.06893 | 1.77454 |
| P | -0.36362 | 1.75887 | 0.97335 | H | 1.91624 | 1.93170 | 0.24162 |
| C | -0.93309 | 3.46025 | 0.35451 | H | 1.71020 | 4.14607 | 1.42653 |
| C | -1.26992 | 4.58947 | 1.34702 | H | 1.43075 | 3.34467 | 2.98394 |
| C | -1.58832 | 5.91819 | 0.62923 | H | 3.72774 | 2.31388 | 2.87272 |
| C | -1.96018 | 7.05320 | 1.59831 | H | 4.00319 | 3.07169 | 1.30260 |
| C | -2.56221 | -2.87662 | -0.82885 | H | 5.08292 | 4.42148 | 3.14588 |
| C | -2.66214 | -4.40999 | -0.69069 | H | 3.79181 | 5.37820 | 2.36924 |
| C | -3.65961 | -5.01793 | -1.69916 | H | 3.50427 | 4.61317 | 3.95523 |
| C | -3.74765 | -6.55083 | -1.60898 | H | -0.13038 | 3.77672 | -0.33710 |
| C | -2.52700 | -1.67171 | 1.86197 | H | -1.81035 | 3.27013 | -0.29191 |
| C | -3.17890 | -2.90835 | 2.51129 | H | -2.14359 | 4.30382 | 1.96746 |
| C | -3.94606 | -2.55912 | 3.80422 | H | -0.43262 | 4.75453 | 2.05183 |
| C | -4.61141 | -3.78125 | 4.45936 | H | -0.71243 | 6.22019 | 0.02122 |
| C | 1.46937 | 1.98763 | 1.25394 | H | -2.41687 | 5.75504 | -0.08921 |
| C | 1.95568 | 3.23757 | 2.01186 | H | 1.46937 | 1.98763 | 1.25394 |
| C | 3.47743 | 3.20707 | 2.26715 | H | -2.17873 | 7.99167 | 1.05746 |
| C | 3.99286 | 4.47269 | 2.97238 | H | -2.85490 | 6.79403 | 2.19503 |
| C | -1.02893 | 1.72686 | 2.75139 | H | -1.13677 | 7.25925 | 2.30718 |
| C | -0.25396 | 0.81338 | 3.72154 | H | -2.08771 | 1.40150 | 2.70690 |
| C | -0.95241 | 0.67165 | 5.08954 | H | -1.03600 | 2.75487 | 3.15949 |
| C | -0.14954 | -0.17910 | 6.08807 | H | -0.10945 | -0.19098 | 3.27757 |
| C | -7.72183 | 2.07218 | -0.96915 | H | 0.76312 | 1.22078 | 3.87858 |
| H | 0.51447 | -2.29705 | -3.61556 | H | -1.12707 | 1.67998 | 5.51609 |
| H | -2.18493 | -2.63078 | -1.83827 | H | -1.95695 | 0.22480 | 4.94173 |
| H | -3.56996 | -2.42004 | -0.75526 | H | 0.02046 | -1.20000 | 5.69851 |
| H | -1.66572 | -4.86227 | -0.85810 | H | 0.84201 | 0.26794 | 6.28616 |
| H | -2.96558 | -4.70005 | 0.33331 | H | -1.18658 | 1.48663 | -3.84187 |
| | | | | H | -1.76823 | 2.66985 | -2.64156 |

| | | | | | | | |
|---|----------|----------|----------|----|----------|----------|----------|
| H | 2.20349 | 3.55756 | -3.53729 | N | 0.89803 | 1.85973 | -0.72750 |
| H | 1.70784 | 2.15330 | -4.51544 | C | 1.31465 | 2.35576 | -1.92112 |
| H | -0.32062 | 3.52246 | -4.85206 | C | 1.95135 | 3.58406 | -2.07574 |
| H | -0.10232 | 4.30280 | -3.26094 | C | 2.21865 | 4.39800 | -0.93933 |
| H | -2.66770 | -0.19242 | -2.97042 | C | 1.79419 | 3.86823 | 0.31131 |
| H | -5.02401 | 0.21575 | -3.58748 | Ru | -0.14556 | -0.15219 | -0.73826 |
| H | -3.16939 | 1.51276 | 0.77655 | C | -2.24015 | -0.01868 | -3.12921 |
| H | -5.54210 | 2.00195 | 0.36491 | C | -1.35045 | -0.03166 | -2.13153 |
| H | -8.48449 | 1.31829 | -3.29577 | N | 2.84655 | 5.62227 | -1.04382 |
| H | -6.90067 | 1.57978 | -4.08241 | C | 3.39452 | 6.04710 | -2.32995 |
| H | -7.33850 | -0.04262 | -3.45131 | P | -1.98952 | 0.67870 | 0.50357 |
| H | -8.73886 | 2.17315 | -1.37598 | C | -3.53808 | -0.37611 | 0.41538 |
| H | -7.78639 | 1.49168 | -0.02760 | C | -3.41599 | -1.73304 | 1.13204 |
| H | -7.34674 | 3.08636 | -0.72484 | C | -4.68065 | -2.60327 | 0.98009 |
| H | 0.92119 | -0.50005 | -0.76947 | C | -4.56770 | -3.95501 | 1.70441 |
| C | 2.49225 | -2.06933 | -2.58566 | N | 1.32268 | -0.76028 | -2.21707 |
| C | 2.87117 | -3.56046 | -2.44113 | C | 2.66213 | -0.57857 | -2.10590 |
| H | 3.01711 | -1.65522 | -3.47260 | C | 3.37579 | -1.08810 | -3.38281 |
| H | 2.86667 | -1.49641 | -1.71809 | C | 2.23094 | -1.25592 | -4.39176 |
| C | 4.39251 | -3.79336 | -2.37247 | C | 1.00595 | -1.46999 | -3.46604 |
| H | 2.39338 | -3.97053 | -1.52777 | O | 3.28471 | -0.11066 | -1.11961 |
| H | 2.44769 | -4.13523 | -3.29154 | P | 1.35855 | -1.11841 | 1.12050 |
| C | 4.76932 | -5.27556 | -2.20979 | C | 0.45636 | -1.41813 | 2.75659 |
| H | 4.86283 | -3.38959 | -3.29189 | C | 1.17624 | -2.18987 | 3.88128 |
| H | 4.81217 | -3.20761 | -1.53175 | C | 0.35240 | -2.23120 | 5.18600 |
| H | 5.86513 | -5.41268 | -2.16624 | C | 1.05335 | -3.00233 | 6.31722 |
| H | 4.34368 | -5.69550 | -1.27922 | C | -2.53251 | 2.33827 | -0.23500 |
| H | 4.38814 | -5.88219 | -3.05312 | C | -4.03469 | 2.65018 | -0.38473 |
| C | 4.50512 | -0.63845 | 0.93681 | C | -4.27823 | 4.04372 | -1.00133 |
| C | 4.81409 | 0.16916 | -0.15901 | C | -5.77056 | 4.36706 | -1.18541 |
| C | 6.17405 | 0.29852 | -0.55967 | C | -1.93489 | 1.09954 | 2.34594 |
| C | 7.12186 | -0.41110 | 0.23217 | C | -3.11192 | 1.87537 | 2.96993 |
| C | 6.68011 | -1.18851 | 1.30927 | C | -2.93323 | 2.09018 | 4.48822 |
| N | 5.39276 | -1.32785 | 1.69189 | C | -4.09285 | 2.87448 | 5.12509 |
| H | 3.45107 | -0.74032 | 1.23134 | C | 2.83925 | -0.12813 | 1.75611 |
| H | 3.99602 | 0.66096 | -0.69350 | C | 4.17319 | -0.86977 | 1.95151 |
| H | 8.19450 | -0.35721 | 0.02695 | C | 5.29596 | 0.07410 | 2.42814 |
| H | 7.42090 | -1.73281 | 1.91326 | C | 6.64196 | -0.64517 | 2.62052 |
| N | 6.55239 | 1.04845 | -1.66534 | C | 1.92975 | -2.89640 | 0.85975 |
| C | 5.66386 | 2.07472 | -2.21786 | C | 2.56781 | -3.31460 | -0.47280 |
| H | 5.73994 | 3.03386 | -1.65951 | C | 2.95041 | -4.80865 | -0.47325 |
| H | 5.95438 | 2.26438 | -3.26624 | C | 3.56456 | -5.27070 | -1.80522 |
| H | 4.60800 | 1.75789 | -2.21038 | C | 3.21061 | 6.35467 | 0.16575 |
| C | 7.97248 | 1.22910 | -1.94258 | H | -2.35274 | 0.95373 | -3.64056 |
| H | 8.48242 | 0.25223 | -2.02227 | H | -2.05607 | 2.37345 | -1.22984 |
| H | 8.08060 | 1.74524 | -2.91044 | H | -2.03870 | 3.12464 | 0.37078 |
| H | 8.49658 | 1.83179 | -1.16780 | H | -4.50577 | 1.88433 | -1.03081 |
| | | | | H | -4.55132 | 2.59515 | 0.59302 |
| | | | | H | -3.80667 | 4.81512 | -0.35935 |
| | | | | H | -3.76083 | 4.10209 | -1.97963 |
| | | | | H | -5.91622 | 5.37087 | -1.62374 |
| C | 1.15218 | 2.63188 | 0.35656 | H | -6.25820 | 3.63474 | -1.85533 |

8a

129

XYZ

| | | | | | | | |
|---|----------|----------|----------|----|----------|----------|----------------------|
| H | -6.30726 | 4.34219 | -0.21858 | H | 1.14182 | 1.69712 | -2.77685 |
| H | -4.40144 | 0.19032 | 0.81248 | H | 2.25257 | 3.89119 | -3.08012 |
| H | -3.71798 | -0.53484 | -0.66398 | H | 0.82945 | 2.22328 | 1.31966 |
| H | -2.53780 | -2.27471 | 0.72913 | H | 1.96803 | 4.40279 | 1.24824 |
| H | -3.22246 | -1.57808 | 2.21319 | H | 3.85130 | 7.04159 | -2.21504 |
| H | -5.55912 | -2.04731 | 1.36566 | H | 4.16954 | 5.34864 | -2.70668 |
| H | -4.87522 | -2.77515 | -0.09739 | H | 2.59905 | 6.12620 | -3.09513 |
| H | -5.48553 | -4.55764 | 1.58092 | H | 3.67524 | 7.31083 | -0.11853 |
| H | -3.72087 | -4.54811 | 1.31229 | H | 2.31608 | 6.58259 | 0.77609 |
| H | -4.40217 | -3.81549 | 2.78922 | H | 3.92849 | 5.79352 | 0.79916 |
| H | -0.99505 | 1.66298 | 2.51222 | H | -0.65583 | -1.68886 | -0.56061 |
| H | -1.80804 | 0.13941 | 2.87733 | C | -3.04414 | -1.16954 | -3.72577 |
| H | -3.22077 | 2.86238 | 2.48042 | C | -2.86347 | -2.53569 | -3.04160 |
| H | -4.06209 | 1.33328 | 2.79462 | H | -4.12275 | -0.89970 | -3.72443 |
| H | -2.83230 | 1.10535 | 4.98634 | H | -2.77259 | -1.26882 | -4.79950 |
| H | -1.97913 | 2.62470 | 4.67049 | C | -3.65777 | -3.65694 | -3.73757 |
| H | -3.93835 | 3.01297 | 6.21024 | H | -1.78822 | -2.79726 | -3.02012 |
| H | -4.19546 | 3.87746 | 4.67044 | H | -3.17601 | -2.46461 | -1.98111 |
| H | -5.05525 | 2.34721 | 4.98837 | C | -3.48149 | -5.02707 | -3.06124 |
| H | 2.98757 | 0.65527 | 0.99647 | H | -4.73426 | -3.38999 | -3.75716 |
| H | 2.52425 | 0.34946 | 2.70714 | H | -3.34101 | -3.72546 | -4.79803 |
| H | 4.06524 | -1.69755 | 2.68103 | H | -4.06031 | -5.81360 | -3.57869 |
| H | 4.46760 | -1.31784 | 0.98500 | H | -2.41990 | -5.33654 | -3.05934 |
| H | 5.41299 | 0.89013 | 1.68853 | H | -3.82000 | -4.99874 | -2.00873 |
| H | 4.99426 | 0.55709 | 3.38041 | | | | |
| H | 7.43133 | 0.05342 | 2.95321 | | | | [8a-10] [‡] |
| H | 6.56390 | -1.44736 | 3.37832 | | | | 129 |
| H | 6.98140 | -1.11042 | 1.67673 | | | | XYZ |
| H | 0.18781 | -0.41399 | 3.13251 | C | 1.10916 | 2.88669 | 0.18715 |
| H | -0.49701 | -1.92118 | 2.50249 | N | 0.19355 | 2.17017 | -0.51248 |
| H | 1.38718 | -3.22809 | 3.56143 | C | -0.67729 | 2.91186 | -1.24887 |
| H | 2.15928 | -1.72396 | 4.09242 | C | -0.67918 | 4.30494 | -1.30729 |
| H | 0.14281 | -1.19429 | 5.51832 | C | 0.27457 | 5.05168 | -0.56002 |
| H | -0.63447 | -2.69160 | 4.97839 | C | 1.19616 | 4.27867 | 0.20080 |
| H | 0.44218 | -3.01560 | 7.23776 | Ru | -0.01617 | -0.17721 | -0.47249 |
| H | 1.24426 | -4.05205 | 6.02638 | C | -2.12136 | -0.10827 | -2.91100 |
| H | 2.02824 | -2.54441 | 6.56827 | C | -1.26889 | -0.15625 | -1.87626 |
| H | 1.00456 | -3.48811 | 1.01589 | N | 0.30384 | 6.43124 | -0.57125 |
| H | 2.61009 | -3.15515 | 1.69300 | C | -0.60193 | 7.17004 | -1.44620 |
| H | 1.85757 | -3.10795 | -1.29255 | P | -1.43424 | -0.30200 | 1.33361 |
| H | 3.46260 | -2.69766 | -0.67279 | C | -2.88302 | -1.46577 | 1.05205 |
| H | 3.66453 | -5.00777 | 0.35200 | C | -2.49840 | -2.94900 | 0.89968 |
| H | 2.05042 | -5.41826 | -0.25154 | C | -3.71439 | -3.84575 | 0.59079 |
| H | 3.82944 | -6.34360 | -1.78032 | C | -3.33747 | -5.32888 | 0.43791 |
| H | 2.85884 | -5.11800 | -2.64282 | N | 0.68212 | -0.31484 | -2.60965 |
| H | 4.48480 | -4.70323 | -2.03878 | C | 0.78380 | -1.47729 | -3.36277 |
| H | 0.85399 | -2.55725 | -3.26564 | C | 1.27801 | -1.10717 | -4.78388 |
| H | 0.06973 | -1.09203 | -3.90828 | C | 1.87147 | 0.29826 | -4.61285 |
| H | 4.17411 | -0.39107 | -3.69130 | C | 1.06467 | 0.85994 | -3.41323 |
| H | 3.86178 | -2.05613 | -3.14480 | O | 0.51111 | -2.63078 | -3.00583 |
| H | 2.37318 | -2.08345 | -5.11028 | P | 2.17318 | -0.67403 | 0.50956 |
| H | 2.09785 | -0.32522 | -4.97653 | C | 2.65618 | -0.01380 | 2.22171 |

| | | | | | | | |
|---|----------|----------|----------|---|----------|----------|----------|
| C | 4.12815 | 0.02568 | 2.67728 | H | 5.35322 | -0.42318 | -2.72305 |
| C | 4.27149 | 0.41675 | 4.16372 | H | 5.85164 | 0.97476 | -1.75629 |
| C | 5.73549 | 0.48809 | 4.62978 | H | 7.86839 | -0.30300 | -2.57382 |
| C | -2.28262 | 1.33042 | 1.78720 | H | 7.78495 | -0.37446 | -0.79241 |
| C | -3.72705 | 1.33450 | 2.32895 | H | 7.28074 | -1.78160 | -1.76593 |
| C | -4.21594 | 2.75713 | 2.67323 | H | 2.21577 | 0.99793 | 2.31519 |
| C | -5.66652 | 2.78922 | 3.18375 | H | 2.07753 | -0.64762 | 2.92197 |
| C | -0.78321 | -0.89706 | 3.00034 | H | 4.60738 | -0.96000 | 2.51791 |
| C | -1.75690 | -1.14061 | 4.17016 | H | 4.69349 | 0.75111 | 2.06037 |
| C | -1.04507 | -1.69807 | 5.42120 | H | 3.77921 | 1.39585 | 4.33291 |
| C | -2.00110 | -1.93803 | 6.60182 | H | 3.71843 | -0.31500 | 4.78603 |
| C | 3.52250 | -0.08494 | -0.66757 | H | 5.80690 | 0.76569 | 5.69684 |
| C | 4.96114 | -0.63766 | -0.59454 | H | 6.24311 | -0.48600 | 4.50216 |
| C | 5.83130 | -0.13390 | -1.76578 | H | 6.30461 | 1.23808 | 4.04939 |
| C | 7.26980 | -0.67664 | -1.72347 | H | 1.78751 | -2.84903 | 1.47738 |
| C | 2.55720 | -2.49530 | 0.76250 | H | 3.53838 | -2.60130 | 1.26807 |
| C | 2.50444 | -3.35657 | -0.51253 | H | 1.59018 | -3.12293 | -1.08982 |
| C | 2.55058 | -4.86764 | -0.20993 | H | 3.35562 | -3.09824 | -1.17455 |
| C | 2.55817 | -5.71847 | -1.49151 | H | 3.44253 | -5.10736 | 0.40584 |
| C | 1.36400 | 7.14158 | 0.13722 | H | 1.66945 | -5.13653 | 0.40734 |
| H | -1.79312 | -0.35480 | -3.93010 | H | 2.52131 | -6.79935 | -1.26250 |
| H | -2.24171 | 1.93775 | 0.86442 | H | 1.69297 | -5.46889 | -2.13109 |
| H | -1.60460 | 1.83305 | 2.50664 | H | 3.47255 | -5.53271 | -2.08594 |
| H | -4.40904 | 0.89467 | 1.57511 | H | 0.15790 | 1.39749 | -3.76621 |
| H | -3.81353 | 0.69737 | 3.23012 | H | 1.65003 | 1.56976 | -2.80262 |
| H | -3.54314 | 3.19871 | 3.43589 | H | 1.97872 | -1.86974 | -5.16201 |
| H | -4.12306 | 3.40007 | 1.77500 | H | 0.39960 | -1.10315 | -5.46130 |
| H | -5.98862 | 3.81873 | 3.42357 | H | 1.79481 | 0.93793 | -5.51031 |
| H | -6.36558 | 2.38694 | 2.42712 | H | 2.94240 | 0.22665 | -4.34363 |
| H | -5.78214 | 2.18027 | 4.09974 | H | -1.39858 | 2.33067 | -1.83472 |
| H | -3.61553 | -1.34552 | 1.87360 | H | -1.42168 | 4.79973 | -1.93890 |
| H | -3.37005 | -1.11514 | 0.12245 | H | 1.81773 | 2.29673 | 0.77602 |
| H | -1.74893 | -3.04443 | 0.09201 | H | 1.98055 | 4.74948 | 0.79894 |
| H | -2.01205 | -3.31141 | 1.82876 | H | -0.44390 | 8.24911 | -1.29994 |
| H | -4.47401 | -3.73440 | 1.39158 | H | -0.43295 | 6.93682 | -2.51755 |
| H | -4.19592 | -3.48975 | -0.34211 | H | -1.65971 | 6.94665 | -1.20797 |
| H | -4.22223 | -5.95007 | 0.20819 | H | 1.20505 | 8.22525 | 0.03170 |
| H | -2.60531 | -5.46908 | -0.37815 | H | 1.35420 | 6.90139 | 1.21800 |
| H | -2.88282 | -5.72369 | 1.36599 | H | 2.37075 | 6.89874 | -0.26109 |
| H | -0.02187 | -0.15205 | 3.30104 | H | -0.16562 | -1.77229 | -0.49314 |
| H | -0.22617 | -1.82802 | 2.77618 | C | -3.60176 | 0.18740 | -2.71942 |
| H | -2.26668 | -0.19548 | 4.44068 | C | -4.51401 | -1.00917 | -3.07519 |
| H | -2.55256 | -1.84845 | 3.86567 | H | -3.78901 | 0.49292 | -1.67102 |
| H | -0.53636 | -2.64661 | 5.15633 | H | -3.89545 | 1.05486 | -3.35080 |
| H | -0.24394 | -0.99591 | 5.72833 | C | -6.01535 | -0.69101 | -2.94208 |
| H | -1.46521 | -2.33914 | 7.48088 | H | -4.29632 | -1.33710 | -4.11216 |
| H | -2.49814 | -0.99981 | 6.91162 | H | -4.24989 | -1.86588 | -2.42395 |
| H | -2.79339 | -2.66139 | 6.33356 | C | -6.91954 | -1.88271 | -3.29986 |
| H | 3.09117 | -0.30855 | -1.66255 | H | -6.22915 | -0.36327 | -1.90434 |
| H | 3.53335 | 1.02136 | -0.59425 | H | -6.26549 | 0.17213 | -3.59214 |
| H | 5.44529 | -0.35489 | 0.35767 | H | -7.98966 | -1.62694 | -3.19495 |
| H | 4.94247 | -1.74404 | -0.61530 | H | -6.75323 | -2.21059 | -4.34290 |

| | | | | | | | |
|-----------|----------|----------|----------|---|----------|----------|----------|
| H | -6.71523 | -2.74920 | -2.64394 | C | 2.45411 | -0.22286 | 6.72104 |
| 7b | | | | | | | |
| | 148 | | | C | -1.50797 | -1.85931 | 2.44859 |
| | | XYZ | | C | -1.70285 | -2.19826 | 3.93931 |
| C | 2.52227 | 1.82899 | -1.00094 | C | -2.74317 | -3.32043 | 4.14609 |
| N | 1.63563 | 1.58893 | 0.00449 | C | -2.94045 | -3.69544 | 5.62448 |
| C | 1.91735 | 2.22433 | 1.17269 | C | 6.02224 | 4.22786 | -0.58180 |
| C | 3.01556 | 3.05690 | 1.39217 | H | 1.91060 | -0.11058 | 2.53640 |
| C | 3.94347 | 3.29434 | 0.33957 | H | 1.32457 | -1.71673 | 2.96174 |
| C | 3.65197 | 2.63784 | -0.88973 | H | 1.01166 | 0.87959 | 4.61865 |
| Ru | -0.06861 | -0.00113 | -0.36836 | H | 0.23251 | -0.64280 | 5.07564 |
| C | -1.48659 | -1.43233 | -0.79865 | H | 2.48488 | -1.76864 | 5.18940 |
| C | -2.30921 | -1.59187 | -1.86958 | H | 3.27088 | -0.25910 | 4.70250 |
| N | 5.04631 | 4.10922 | 0.49828 | H | 3.38926 | -0.55548 | 7.20649 |
| C | 5.35966 | 4.65622 | 1.81467 | H | 2.40280 | 0.87845 | 6.81094 |
| N | -1.61401 | 1.63224 | -0.30435 | H | 1.60946 | -0.64265 | 7.29843 |
| C | -1.32156 | 2.90753 | 0.05685 | H | -1.09002 | 0.91217 | 3.96304 |
| C | -2.20030 | 3.98473 | -0.05469 | H | -0.94082 | 1.95761 | 2.54047 |
| C | -3.50587 | 3.78393 | -0.58446 | H | -3.18039 | 1.00415 | 1.69354 |
| C | -3.81463 | 2.44407 | -0.95162 | H | -3.32041 | 0.11031 | 3.21584 |
| C | -2.86610 | 1.43500 | -0.79529 | H | -3.20968 | 2.28781 | 4.50225 |
| N | -4.40935 | 4.81615 | -0.73260 | H | -3.08734 | 3.17266 | 2.96863 |
| C | -5.68249 | 4.57155 | -1.40557 | H | -5.46707 | 3.18945 | 3.80653 |
| P | 1.57454 | -1.70083 | -0.58981 | H | -5.36123 | 2.28931 | 2.26689 |
| C | 3.23351 | -1.31728 | 0.24707 | H | -5.49647 | 1.40495 | 3.81037 |
| C | 4.37430 | -2.35252 | 0.17008 | H | -1.08765 | -2.74137 | 1.93128 |
| C | 5.69207 | -1.80670 | 0.76164 | H | -2.48977 | -1.68905 | 1.96776 |
| C | 6.84243 | -2.82670 | 0.71675 | H | -0.74070 | -2.52028 | 4.38369 |
| N | 0.05494 | 0.63426 | -2.51803 | H | -2.02524 | -1.30446 | 4.51003 |
| C | -0.11948 | 2.07299 | -2.81316 | H | -3.71084 | -3.00134 | 3.71006 |
| C | 0.34066 | 2.27124 | -4.27424 | H | -2.43102 | -4.21603 | 3.57291 |
| C | -0.09514 | 0.94198 | -4.89476 | H | -3.69402 | -4.49498 | 5.74111 |
| C | -0.00628 | -0.05431 | -3.70297 | H | -1.99738 | -4.05624 | 6.07597 |
| O | -0.01062 | -1.28966 | -3.90070 | H | -3.28106 | -2.82507 | 6.21618 |
| P | -0.44187 | -0.38029 | 1.94275 | H | 2.71564 | -3.21997 | -2.12654 |
| C | -1.35141 | 0.99162 | 2.89160 | H | 1.26476 | -2.42272 | -2.85836 |
| C | -2.88698 | 1.02047 | 2.75777 | H | 2.54985 | -0.32168 | -3.17498 |
| C | -3.50871 | 2.25983 | 3.43459 | H | 4.02353 | -1.07140 | -2.51168 |
| C | -5.04254 | 2.28939 | 3.32560 | H | 3.89400 | -2.82891 | -4.36195 |
| C | 2.18543 | -2.25672 | -2.27112 | H | 2.45770 | -1.99328 | -4.99449 |
| C | 3.08050 | -1.28397 | -3.05766 | H | 4.53815 | -1.31384 | -6.27578 |
| C | 3.41262 | -1.83412 | -4.45959 | H | 3.85362 | 0.09034 | -5.41476 |
| C | 4.32458 | -0.90065 | -5.27295 | H | 5.29479 | -0.73895 | -4.76469 |
| C | 1.19486 | -3.40694 | 0.13132 | H | 3.57281 | -0.36936 | -0.21076 |
| C | 0.35082 | -4.34886 | -0.75416 | H | 3.02603 | -1.08058 | 1.30383 |
| C | -0.06298 | -5.63387 | -0.00857 | H | 4.09898 | -3.27494 | 0.71828 |
| C | -0.85882 | -6.60698 | -0.89446 | H | 4.55257 | -2.65837 | -0.87884 |
| C | -3.99868 | 6.18702 | -0.44555 | H | 5.98426 | -0.89135 | 0.20879 |
| C | 1.08707 | -0.63697 | 3.04980 | H | 5.51766 | -1.48855 | 1.80935 |
| C | 1.10115 | -0.22229 | 4.53584 | H | 7.77228 | -2.40918 | 1.14413 |
| C | 2.39622 | -0.66534 | 5.24906 | H | 6.59082 | -3.73871 | 1.28967 |
| | | | | H | 7.06062 | -3.13734 | -0.32194 |
| | | | | H | 0.68831 | -3.25126 | 1.10175 |

| | | | | XYZ | | |
|---|----------|----------|----------|-----|----------|----------|
| H | 2.15943 | -3.90056 | 0.35966 | | | |
| H | -0.54773 | -3.82075 | -1.11958 | C | -6.12139 | -1.90356 |
| H | 0.93077 | -4.62701 | -1.65453 | N | -5.63551 | -1.29389 |
| H | 0.84118 | -6.14257 | 0.38502 | C | -6.22836 | -0.12076 |
| H | -0.67090 | -5.36214 | 0.87893 | C | -7.27109 | 0.47116 |
| H | -1.15556 | -7.51420 | -0.33698 | C | -7.77939 | -0.17755 |
| H | -1.77855 | -6.12982 | -1.27951 | C | -7.15771 | -1.41177 |
| H | -0.26217 | -6.92895 | -1.76812 | Ru | 1.54036 | -0.09721 |
| H | -1.18595 | 2.37669 | -2.72430 | C | 3.32978 | -0.61698 |
| H | 0.44533 | 2.70230 | -2.10110 | C | 4.22055 | -1.21348 |
| H | 0.51624 | 0.58560 | -5.74103 | N | -8.81038 | 0.35509 |
| H | -1.14820 | 0.98089 | -5.24148 | C | -9.36872 | 1.65679 |
| H | -0.09794 | 3.17201 | -4.74286 | N | 0.04580 | -0.94326 |
| H | 1.44361 | 2.37089 | -4.31596 | C | -1.30273 | -0.97813 |
| H | -3.09003 | 0.40013 | -1.07922 | C | -2.19325 | -1.69563 |
| H | -4.78726 | 2.17719 | -1.37323 | C | -1.70327 | -2.45827 |
| H | -0.30772 | 3.07759 | 0.42758 | C | -0.28949 | -2.43437 |
| H | -1.85204 | 4.97491 | 0.25016 | C | 0.51256 | -1.68104 |
| H | -6.26034 | 5.50759 | -1.43501 | N | -2.53368 | -3.16327 |
| H | -5.54309 | 4.21566 | -2.44680 | C | -1.94015 | -4.01867 |
| H | -6.28425 | 3.81837 | -0.86180 | P | 0.25414 | 1.24087 |
| H | -4.85415 | 6.86050 | -0.60540 | C | -1.04650 | 2.41519 |
| H | -3.67606 | 6.29488 | 0.60790 | C | -1.94504 | 3.23665 |
| H | -3.16591 | 6.52250 | -1.09794 | C | -2.86764 | 4.21338 |
| H | 2.28583 | 1.31775 | -1.94037 | C | -3.77697 | 5.03151 |
| H | 4.30121 | 2.74587 | -1.76229 | N | 1.08166 | -1.84256 |
| H | 1.20854 | 2.04919 | 1.98947 | C | 0.89714 | -3.13312 |
| H | 3.14175 | 3.50810 | 2.37975 | C | 0.56998 | -4.15805 |
| H | 6.80955 | 4.93482 | -0.27972 | C | 1.29847 | -3.56223 |
| H | 6.50113 | 3.25692 | -0.82461 | C | 1.39752 | -2.05359 |
| H | 5.55120 | 4.61923 | -1.50353 | O | 1.73967 | -1.20534 |
| H | 6.26379 | 5.27889 | 1.74029 | P | 2.10513 | 1.61277 |
| H | 4.53790 | 5.29715 | 2.18861 | C | 2.93657 | 0.95513 |
| H | 5.54691 | 3.86189 | 2.56672 | C | 4.24653 | 0.17882 |
| H | -1.61220 | -2.23234 | -0.04386 | C | 4.79263 | -0.44928 |
| C | -3.29949 | -2.72687 | -2.04776 | C | 6.11351 | -1.20753 |
| H | -2.25088 | -0.89930 | -2.72105 | C | -0.73754 | 0.47541 |
| C | -4.76287 | -2.25742 | -2.22697 | C | -1.87816 | -0.46576 |
| H | -3.02140 | -3.32711 | -2.94272 | C | -2.62937 | -1.05045 |
| H | -3.24402 | -3.41503 | -1.17809 | C | -3.74362 | -2.03392 |
| C | -5.75952 | -3.40463 | -2.47901 | C | 1.24590 | 2.51172 |
| H | -5.07405 | -1.69100 | -1.32439 | C | 2.53757 | 1.99205 |
| H | -4.81166 | -1.53993 | -3.07262 | C | 3.20277 | 3.04699 |
| C | -7.20991 | -2.92440 | -2.65812 | C | 4.51547 | 2.54715 |
| H | -5.44323 | -3.96991 | -3.37885 | C | -3.91426 | -3.47691 |
| H | -5.71003 | -4.12286 | -1.63543 | C | 0.86065 | 2.76237 |
| H | -7.90105 | -3.76883 | -2.83572 | C | -0.34272 | 2.08850 |
| H | -7.56565 | -2.38378 | -1.76061 | C | -1.27906 | 3.10736 |
| H | -7.29803 | -2.23349 | -3.51765 | C | -2.47063 | 2.44215 |
| | | | | C | 3.36249 | 2.88575 |
| | | | | C | 3.94519 | 3.91322 |
| | | | | C | 4.97210 | 4.85115 |

[7b-8b][‡]

| | | | | | | | |
|---|----------|----------|----------|----|-----------|----------|-----------|
| C | 5.56447 | 5.88442 | 2.09790 | H | 3.39863 | 3.97141 | -3.57122 |
| C | -9.24199 | -0.30926 | -2.20823 | H | 4.97562 | 3.31397 | -5.43101 |
| H | 0.50721 | 3.47525 | 1.46918 | H | 5.25213 | 2.28021 | -4.00047 |
| H | 1.41953 | 3.36113 | 2.98443 | H | 4.34175 | 1.64331 | -5.39293 |
| H | -0.91255 | 1.50358 | 2.17559 | H | 1.82932 | -3.41828 | -0.16289 |
| H | 0.00957 | 1.35866 | 3.67521 | H | 0.09177 | -3.08369 | 0.04852 |
| H | -0.70115 | 3.70940 | 4.33071 | H | 0.79740 | -3.71706 | -4.00069 |
| H | -1.65097 | 3.82271 | 2.83972 | H | 2.33034 | -3.95457 | -3.12772 |
| H | -3.13538 | 3.19239 | 4.77477 | H | 0.88191 | -5.18489 | -1.55512 |
| H | -3.07448 | 1.84791 | 3.59931 | H | -0.52180 | -4.17542 | -2.00026 |
| H | -2.12857 | 1.75607 | 5.10647 | H | 1.60058 | -1.68842 | 2.46190 |
| H | 3.10432 | 1.80696 | 3.66025 | H | 0.19820 | -3.01308 | 3.98595 |
| H | 2.19035 | 0.30048 | 3.46115 | H | -1.67555 | -0.40809 | 0.26828 |
| H | 4.08256 | -0.60911 | 1.98895 | H | -3.26129 | -1.63989 | 1.68026 |
| H | 5.01587 | 0.85525 | 2.32587 | H | -2.74520 | -4.41561 | 5.53370 |
| H | 4.93662 | 0.34185 | 4.81296 | H | -1.37883 | -4.87742 | 4.46905 |
| H | 4.03141 | -1.13997 | 4.46598 | H | -1.25388 | -3.43967 | 5.53891 |
| H | 6.47804 | -1.65861 | 4.77714 | H | -4.49374 | -3.68082 | 4.41037 |
| H | 5.99102 | -2.02061 | 3.09762 | H | -4.39580 | -2.63636 | 2.96837 |
| H | 6.90446 | -0.53321 | 3.45926 | H | -3.97223 | -4.37315 | 2.83950 |
| H | 2.86956 | 3.40765 | -0.03872 | H | -5.64190 | -2.85347 | -0.05768 |
| H | 4.18740 | 2.30535 | 0.34581 | H | -7.47149 | -1.98265 | -1.45982 |
| H | 3.13483 | 4.52711 | 2.23438 | H | -5.83621 | 0.38299 | 2.53357 |
| H | 4.43501 | 3.39191 | 2.64085 | H | -7.67698 | 1.42647 | 1.26755 |
| H | 5.78731 | 4.24291 | 0.68517 | H | -10.06809 | 0.26262 | -2.65625 |
| H | 4.48815 | 5.37352 | 0.27582 | H | -8.42408 | -0.37699 | -2.95359 |
| H | 6.29509 | 6.54120 | 1.59270 | H | -9.60864 | -1.33403 | -2.00458 |
| H | 4.77499 | 6.52919 | 2.52702 | H | -10.18279 | 1.90224 | -1.32448 |
| H | 6.08448 | 5.38990 | 2.93936 | H | -9.78971 | 1.64908 | 0.39770 |
| H | -1.13156 | 1.30491 | -3.63098 | H | -8.61069 | 2.46426 | -0.68185 |
| H | 0.00770 | -0.08001 | -3.60785 | H | 3.39904 | 0.41647 | -0.27651 |
| H | -1.44893 | -1.29090 | -1.98916 | C | 5.30592 | -2.17241 | -1.14260 |
| H | -2.60925 | 0.06322 | -1.93897 | H | 4.09890 | -1.08524 | -2.68073 |
| H | -3.05960 | -0.22291 | -4.40230 | C | 5.10121 | -3.62638 | -1.63487 |
| H | -1.90011 | -1.56019 | -4.46109 | H | 6.28563 | -1.81472 | -1.53072 |
| H | -4.26995 | -2.43029 | -4.29428 | H | 5.37697 | -2.16501 | -0.03759 |
| H | -3.33062 | -2.89600 | -2.84999 | C | 6.26459 | -4.56400 | -1.25902 |
| H | -4.49617 | -1.54917 | -2.75579 | H | 4.15441 | -4.01647 | -1.21185 |
| H | -1.68160 | 1.81140 | -0.19156 | H | 4.97004 | -3.62287 | -2.73604 |
| H | -0.48378 | 3.10625 | -0.21300 | C | 6.05756 | -6.00943 | -1.74239 |
| H | -1.32326 | 3.81297 | -2.52796 | H | 7.20757 | -4.16306 | -1.68299 |
| H | -2.56968 | 2.55772 | -2.42735 | H | 6.39830 | -4.55734 | -0.15818 |
| H | -3.48941 | 3.64262 | -0.33676 | H | 6.90703 | -6.65839 | -1.46108 |
| H | -2.24790 | 4.90123 | -0.44566 | H | 5.14083 | -6.44856 | -1.30665 |
| H | -4.42547 | 5.72276 | -1.42003 | H | 5.95357 | -6.05084 | -2.84262 |
| H | -3.18131 | 5.63722 | -2.69643 | | | | 8b |
| H | -4.43210 | 4.37145 | -2.58714 | | | | 129 |
| H | 1.47786 | 3.34618 | -1.90022 | | | | XYZ |
| H | 0.57388 | 2.92940 | -3.37109 | | | | |
| H | 3.24320 | 1.68258 | -2.45316 | Ru | 0.13239 | -0.29822 | -0.62748 |
| H | 2.32419 | 1.06863 | -3.81608 | C | -0.55498 | -2.07678 | -1.44405 |
| H | 2.49816 | 3.33937 | -4.95943 | C | -1.76782 | -2.59619 | -1.77726 |

| | | | | | | | |
|---|----------|----------|----------|---|----------|----------|----------|
| N | -1.48846 | -0.21066 | 0.70144 | H | -0.01143 | -4.15160 | -0.08490 |
| C | -2.23400 | 0.92290 | 0.84940 | H | 1.72502 | -4.48700 | -0.15845 |
| C | -3.37628 | 1.02304 | 1.63970 | H | 1.54728 | -5.93382 | 1.91065 |
| C | -3.84101 | -0.10199 | 2.37556 | H | -0.19178 | -5.60697 | 1.98714 |
| C | -3.08753 | -1.29405 | 2.19333 | H | 0.23809 | -7.83417 | 0.88763 |
| C | -1.96335 | -1.30232 | 1.37228 | H | -0.50804 | -6.70965 | -0.28245 |
| N | -4.94615 | -0.04223 | 3.20740 | H | 1.24123 | -7.04558 | -0.36043 |
| C | -5.48349 | -1.27700 | 3.77193 | H | 3.45560 | -0.89789 | -0.55981 |
| P | 1.11369 | 1.93366 | -0.08022 | H | 2.75623 | -2.41362 | -1.08986 |
| C | 0.80817 | 2.72564 | 1.61542 | H | 4.61154 | -2.07712 | 1.38078 |
| C | 1.21293 | 4.19319 | 1.86214 | H | 3.87202 | -3.61416 | 0.89765 |
| C | 0.97427 | 4.63025 | 3.32267 | H | 5.06305 | -3.49228 | -1.32169 |
| C | 1.36221 | 6.09512 | 3.58716 | H | 5.78996 | -1.94825 | -0.85296 |
| N | -0.59394 | 0.61303 | -2.54555 | H | 7.41564 | -3.84109 | -0.47555 |
| C | -1.62759 | 0.91312 | -3.53729 | H | 6.98508 | -3.08860 | 1.08444 |
| C | -0.85455 | 1.07204 | -4.88577 | H | 6.25357 | -4.64618 | 0.61364 |
| C | 0.42790 | 0.23153 | -4.67391 | H | 1.33168 | 4.20848 | -1.04026 |
| C | 0.50069 | 0.17615 | -3.15238 | H | 0.88795 | 2.98380 | -2.25747 |
| O | 1.45570 | -0.32079 | -2.43284 | H | -1.45381 | 2.93502 | -1.43455 |
| P | 1.52144 | -1.50077 | 0.77383 | H | -1.08291 | 4.13290 | -0.17127 |
| C | 1.12841 | -3.20765 | 1.50653 | H | -0.45679 | 5.80944 | -1.96112 |
| C | 0.87117 | -4.37794 | 0.53992 | H | -0.85482 | 4.61631 | -3.20836 |
| C | 0.65935 | -5.71270 | 1.28371 | H | -2.77996 | 6.20964 | -2.86833 |
| C | 0.39280 | -6.89135 | 0.33210 | H | -3.26570 | 4.55927 | -2.39355 |
| C | 0.65936 | 3.35009 | -1.24015 | H | -2.86648 | 5.76681 | -1.14185 |
| C | -0.80996 | 3.80221 | -1.19479 | H | -0.26902 | 2.59663 | 1.83535 |
| C | -1.11620 | 4.94628 | -2.18309 | H | 1.33338 | 2.07402 | 2.34005 |
| C | -2.58636 | 5.39632 | -2.14593 | H | 2.28174 | 4.34607 | 1.61355 |
| C | 2.99740 | 2.10314 | -0.17103 | H | 0.64353 | 4.86432 | 1.18986 |
| C | 3.59807 | 2.00901 | -1.58804 | H | -0.09329 | 4.47617 | 3.57897 |
| C | 5.13979 | 1.97038 | -1.57207 | H | 1.54882 | 3.96611 | 3.99922 |
| C | 5.75104 | 1.93383 | -2.98283 | H | 1.17647 | 6.37904 | 4.63879 |
| C | -5.79089 | 1.14840 | 3.19429 | H | 2.43401 | 6.26922 | 3.37770 |
| C | 2.18825 | -0.74369 | 2.37190 | H | 0.78191 | 6.78490 | 2.94626 |
| C | 1.13428 | -0.56078 | 3.48152 | H | 3.41832 | 1.29291 | 0.45536 |
| C | 1.69929 | 0.12698 | 4.74125 | H | 3.30175 | 3.05907 | 0.30045 |
| C | 0.65848 | 0.26644 | 5.86486 | H | 3.19922 | 1.11137 | -2.09633 |
| C | 3.09675 | -1.87487 | -0.18522 | H | 3.27043 | 2.88176 | -2.18737 |
| C | 4.23983 | -2.64507 | 0.50476 | H | 5.52861 | 2.85105 | -1.02084 |
| C | 5.42376 | -2.91306 | -0.44869 | H | 5.47526 | 1.08048 | -1.00124 |
| C | 6.58319 | -3.66298 | 0.22884 | H | 6.85496 | 1.89592 | -2.94597 |
| H | 2.62990 | 0.23639 | 2.11035 | H | 5.40117 | 1.04825 | -3.54453 |
| H | 3.01692 | -1.37446 | 2.75105 | H | 5.46577 | 2.83055 | -3.56426 |
| H | 0.27956 | 0.02355 | 3.09007 | H | -2.35852 | 0.08009 | -3.59155 |
| H | 0.72550 | -1.54756 | 3.77468 | H | -2.19555 | 1.82683 | -3.27390 |
| H | 2.57190 | -0.44810 | 5.11097 | H | 1.33693 | 0.66300 | -5.12879 |
| H | 2.08790 | 1.12963 | 4.46961 | H | 0.32275 | -0.80015 | -5.06321 |
| H | 1.08513 | 0.76624 | 6.75320 | H | -1.45253 | 0.74720 | -5.75473 |
| H | -0.21224 | 0.86005 | 5.52993 | H | -0.58851 | 2.13402 | -5.04080 |
| H | 0.28288 | -0.72338 | 6.18498 | H | -1.41964 | -2.22943 | 1.18712 |
| H | 1.98176 | -3.45506 | 2.17057 | H | -3.37825 | -2.23198 | 2.67299 |
| H | 0.25475 | -3.08552 | 2.17480 | H | -1.88679 | 1.78317 | 0.27347 |

| | | | | | | | |
|----------------------------|----------|----------|----------|---|----------|----------|----------|
| H | -3.89876 | 1.98241 | 1.66851 | C | 5.07968 | 1.76188 | -3.47678 |
| H | -6.33380 | -1.03246 | 4.42676 | C | -2.38102 | -0.93482 | 2.66082 |
| H | -5.83407 | -1.98600 | 2.99243 | C | -3.14365 | 0.39949 | 2.73783 |
| H | -4.72188 | -1.79063 | 4.38776 | C | -3.72870 | 0.65780 | 4.14169 |
| H | -6.58641 | 1.03209 | 3.94616 | C | -4.47858 | 1.99646 | 4.24351 |
| H | -5.20556 | 2.04773 | 3.46220 | C | -1.16403 | -3.14385 | 1.29605 |
| H | -6.26639 | 1.32638 | 2.20640 | C | 0.08716 | -3.41127 | 2.15537 |
| H | 0.29049 | -2.70847 | -1.78404 | C | 0.15879 | -4.87314 | 2.64095 |
| C | -3.14962 | -2.00493 | -1.57467 | C | 1.43269 | -5.16680 | 3.45103 |
| H | -1.78727 | -3.57612 | -2.29500 | C | -3.83065 | 5.50064 | -2.06043 |
| C | -4.07359 | -2.21098 | -2.79627 | C | -0.53372 | -1.94789 | -2.74412 |
| H | -3.65518 | -2.46406 | -0.69478 | C | -1.54560 | -0.96305 | -3.35921 |
| H | -3.06303 | -0.92505 | -1.34971 | C | -2.65987 | -1.66949 | -4.15778 |
| C | -5.48817 | -1.63342 | -2.60499 | C | -3.64875 | -0.68565 | -4.80497 |
| H | -3.60683 | -1.75306 | -3.69265 | C | 1.94673 | -2.62901 | -1.40170 |
| H | -4.14837 | -3.29628 | -3.01838 | C | 2.53574 | -3.37411 | -2.61427 |
| C | -6.40661 | -1.85048 | -3.81968 | C | 3.44177 | -4.55041 | -2.19253 |
| H | -5.94891 | -2.09074 | -1.70555 | C | 4.04306 | -5.30488 | -3.39014 |
| H | -5.41137 | -0.54842 | -2.38885 | H | -1.05850 | -2.68360 | -2.10399 |
| H | -7.41293 | -1.42399 | -3.65315 | H | -0.04444 | -2.52749 | -3.55189 |
| H | -5.98746 | -1.37551 | -4.72647 | H | -1.99771 | -0.34391 | -2.56106 |
| H | -6.53121 | -2.92759 | -4.03869 | H | -1.01826 | -0.25845 | -4.03218 |
| | | | | H | -2.20188 | -2.30636 | -4.94108 |
| [8b-9b][‡] | | | | H | -3.20933 | -2.35926 | -3.48583 |
| | 129 | | | H | -4.43947 | -1.21614 | -5.36530 |
| | XYZ | | | H | -4.14234 | -0.05659 | -4.04120 |
| Ru | 0.31912 | 0.00264 | 0.31768 | H | -3.13359 | -0.00843 | -5.51147 |
| C | 2.17141 | 0.04088 | 0.69847 | H | 1.76692 | -0.86296 | -3.92858 |
| C | 3.41099 | -0.13796 | 1.17898 | H | 1.02104 | 0.62745 | -3.32391 |
| N | -0.77088 | 1.59569 | -0.70037 | H | 3.00470 | 0.95938 | -1.75547 |
| C | -2.07640 | 1.93294 | -0.52612 | H | 3.77310 | -0.47239 | -2.43662 |
| C | -2.67170 | 3.08113 | -1.04601 | H | 3.74554 | 0.59799 | -4.74200 |
| C | -1.90637 | 3.99251 | -1.82495 | H | 2.99908 | 2.04585 | -4.05030 |
| C | -0.53472 | 3.64731 | -1.99537 | H | 5.48480 | 2.37427 | -4.30253 |
| C | -0.03235 | 2.47878 | -1.43089 | H | 5.04712 | 2.39547 | -2.57138 |
| N | -2.45294 | 5.13191 | -2.37624 | H | 5.79791 | 0.94429 | -3.28183 |
| C | -1.59168 | 6.09145 | -3.06278 | H | 1.36998 | -3.33046 | -0.76717 |
| P | -1.61414 | -1.33937 | 0.99877 | H | 2.75588 | -2.23732 | -0.75610 |
| C | -3.16009 | -1.61121 | -0.07850 | H | 1.72642 | -3.76402 | -3.26313 |
| C | -4.35289 | -2.38866 | 0.51398 | H | 3.12563 | -2.67617 | -3.24081 |
| C | -5.49859 | -2.57960 | -0.50234 | H | 4.25572 | -4.16746 | -1.54561 |
| C | -6.69548 | -3.35071 | 0.07975 | H | 2.85733 | -5.25273 | -1.56540 |
| N | 0.16820 | 1.18160 | 2.13434 | H | 4.68596 | -6.14018 | -3.05930 |
| C | 0.39359 | 2.63139 | 2.06597 | H | 3.25096 | -5.72755 | -4.03608 |
| C | 0.34440 | 3.12868 | 3.53376 | H | 4.66087 | -4.63468 | -4.01647 |
| C | 0.84296 | 1.89922 | 4.30594 | H | -3.04462 | -1.77579 | 2.94599 |
| C | 0.49228 | 0.71367 | 3.37238 | H | -1.52402 | -0.91737 | 3.36003 |
| O | 0.52538 | -0.48125 | 3.75401 | H | -2.44525 | 1.21698 | 2.47825 |
| P | 0.80693 | -1.16185 | -1.67817 | H | -3.97302 | 0.42385 | 1.99798 |
| C | 1.69469 | -0.20450 | -3.03960 | H | -4.41123 | -0.17232 | 4.41502 |
| C | 3.08074 | 0.35709 | -2.68145 | H | -2.90444 | 0.63432 | 4.88051 |
| C | 3.68651 | 1.20696 | -3.81721 | H | -4.88460 | 2.15839 | 5.25847 |

| | | | | 9b |
|---|----------|----------|----------|---------------------------------------|
| H | -3.80915 | 2.84578 | 4.01147 | |
| H | -5.32685 | 2.03687 | 3.53391 | 129 |
| H | -3.50832 | -0.61653 | -0.41724 | XYZ |
| H | -2.80402 | -2.12377 | -0.99269 | Ru 0.28070 -0.16131 0.42732 |
| H | -4.02284 | -3.38388 | 0.87019 | C 2.08425 -0.24568 0.84974 |
| H | -4.74640 | -1.85737 | 1.40206 | C 3.26523 -0.52704 1.40502 |
| H | -5.83573 | -1.58698 | -0.86321 | N -0.13348 1.79803 -0.66934 |
| H | -5.11077 | -3.11328 | -1.39341 | C -1.30308 2.48809 -0.63608 |
| H | -7.50015 | -3.47319 | -0.66745 | C -1.51129 3.72581 -1.24254 |
| H | -6.39464 | -4.35987 | 0.41707 | C -0.45222 4.35646 -1.95358 |
| H | -7.12473 | -2.82325 | 0.95172 | C 0.78247 3.64721 -1.96709 |
| H | -1.06037 | -3.62761 | 0.30324 | C 0.88437 2.41140 -1.33221 |
| H | -2.04512 | -3.61161 | 1.77897 | N -0.61048 5.57272 -2.58264 |
| H | 0.99126 | -3.17887 | 1.56081 | C 0.53697 6.22205 -3.21132 |
| H | 0.12132 | -2.71532 | 3.01350 | P -2.09689 -0.93220 0.76999 |
| H | -0.73272 | -5.09595 | 3.26191 | C -3.43763 -0.65297 -0.54350 |
| H | 0.10399 | -5.56060 | 1.77123 | C -4.89550 -0.99420 -0.17606 |
| H | 1.45733 | -6.21387 | 3.80434 | C -5.86032 -0.84410 -1.37092 |
| H | 2.34023 | -4.99597 | 2.84253 | C -7.31849 -1.17412 -1.00925 |
| H | 1.49914 | -4.50762 | 4.33551 | N 0.15119 0.90334 2.30608 |
| H | 1.38590 | 2.84750 | 1.60689 | C 0.68936 2.26548 2.41072 |
| H | -0.36693 | 3.12799 | 1.43480 | C 0.53616 2.66193 3.90211 |
| H | 0.39813 | 1.76264 | 5.30640 | C 0.63480 1.30166 4.60677 |
| H | 1.94390 | 1.91170 | 4.43516 | C 0.16765 0.29396 3.52535 |
| H | 0.94326 | 4.04384 | 3.69269 | O -0.13674 -0.89197 3.79297 |
| H | -0.70081 | 3.35807 | 3.81635 | P 0.73237 -1.43299 -1.50491 |
| H | 1.02685 | 2.22636 | -1.52786 | C 1.90530 -0.73115 -2.80830 |
| H | 0.15154 | 4.29099 | -2.55072 | C 3.37015 -0.52267 -2.38741 |
| H | -2.65999 | 1.24909 | 0.09227 | C 4.21697 0.12526 -3.50230 |
| H | -3.72749 | 3.26027 | -0.82952 | C 5.69132 0.31153 -3.10659 |
| H | -2.20978 | 6.91172 | -3.45712 | C -2.95473 -0.37203 2.33442 |
| H | -0.82539 | 6.52655 | -2.38893 | C -3.27884 1.13164 2.38579 |
| H | -1.07236 | 5.61854 | -3.91770 | C -3.96412 1.54260 3.70498 |
| H | -4.09166 | 6.41955 | -2.60616 | C -4.27654 3.04666 3.77585 |
| H | -4.53617 | 4.70829 | -2.37489 | C -2.18104 -2.80449 0.94204 |
| H | -3.97790 | 5.68586 | -0.97668 | C -1.74898 -3.35337 2.31849 |
| H | 1.26029 | -1.03834 | 1.25111 | C -1.47091 -4.86873 2.27894 |
| C | 4.56020 | 0.82067 | 0.92297 | C -1.11021 -5.44116 3.66009 |
| H | 3.61183 | -0.97944 | 1.86177 | C -1.86372 6.30817 -2.43429 |
| C | 5.09885 | 1.47385 | 2.21682 | C -0.61860 -2.01808 -2.68561 |
| H | 5.39732 | 0.28736 | 0.42171 | C -1.27115 -0.90876 -3.53246 |
| H | 4.23084 | 1.61360 | 0.22361 | C -2.42391 -1.42819 -4.41549 |
| C | 6.29713 | 2.41066 | 1.97297 | C -3.05215 -0.33021 -5.28966 |
| H | 4.27592 | 2.03354 | 2.70341 | C 1.55049 -3.06044 -1.04551 |
| H | 5.39258 | 0.67840 | 2.93196 | C 2.07724 -4.00299 -2.14310 |
| C | 6.83379 | 3.05491 | 3.26239 | C 2.71254 -5.28078 -1.55389 |
| H | 7.11019 | 1.84273 | 1.47666 | C 3.25042 -6.23779 -2.63101 |
| H | 6.00022 | 3.20512 | 1.25838 | H -1.38435 -2.53566 -2.07605 |
| H | 7.69213 | 3.72051 | 3.05790 | H -0.18308 -2.78337 -3.35831 |
| H | 6.05286 | 3.65747 | 3.76226 | H -1.64436 -0.10068 -2.87379 |
| H | 7.16968 | 2.28573 | 3.98247 | H -0.50762 -0.44293 -4.18582 |
| | | | | H -2.04932 -2.24877 -5.05986 |

| | | | | | | | |
|---|----------|----------|----------|----------------------|----------|----------|----------|
| H | -3.20500 | -1.88003 | -3.77095 | H | 1.68137 | 1.05022 | 4.87149 |
| H | -3.87472 | -0.72854 | -5.91049 | H | 1.29132 | 3.40176 | 4.22485 |
| H | -3.46504 | 0.48630 | -4.66860 | H | -0.46303 | 3.10742 | 4.07191 |
| H | -2.30328 | 0.11554 | -5.97073 | H | 1.83552 | 1.87206 | -1.32770 |
| H | 1.86158 | -1.39695 | -3.69426 | H | 1.66876 | 4.05472 | -2.45962 |
| H | 1.47092 | 0.23705 | -3.12562 | H | -2.11146 | 2.02402 | -0.06541 |
| H | 3.41347 | 0.09890 | -1.47354 | H | -2.49315 | 4.19534 | -1.14492 |
| H | 3.82355 | -1.49281 | -2.10462 | H | 0.20547 | 7.15786 | -3.68566 |
| H | 4.15430 | -0.49524 | -4.41916 | H | 1.33401 | 6.46670 | -2.47958 |
| H | 3.77677 | 1.10765 | -3.76997 | H | 0.97549 | 5.57994 | -3.99884 |
| H | 6.27179 | 0.78702 | -3.91782 | H | -1.80492 | 7.24100 | -3.01470 |
| H | 5.78625 | 0.94639 | -2.20643 | H | -2.71950 | 5.72186 | -2.82045 |
| H | 6.16814 | -0.65956 | -2.87787 | H | -2.07240 | 6.57017 | -1.37689 |
| H | 0.80830 | -3.58720 | -0.41402 | H | 0.34699 | -1.53462 | 1.27697 |
| H | 2.36588 | -2.77153 | -0.35547 | C | 4.54286 | 0.27460 | 1.21271 |
| H | 1.25957 | -4.29915 | -2.82990 | H | 3.30536 | -1.37640 | 2.10745 |
| H | 2.83275 | -3.48466 | -2.76616 | C | 5.09891 | 0.85858 | 2.53135 |
| H | 3.53236 | -4.99353 | -0.86607 | H | 5.32705 | -0.36401 | 0.75026 |
| H | 1.96117 | -5.80577 | -0.93114 | H | 4.35791 | 1.10277 | 0.50036 |
| H | 3.70026 | -7.14078 | -2.18050 | C | 6.41264 | 1.64014 | 2.34214 |
| H | 2.44363 | -6.56928 | -3.31125 | H | 4.33126 | 1.51679 | 2.98374 |
| H | 4.02693 | -5.74922 | -3.24883 | H | 5.26058 | 0.03347 | 3.25492 |
| H | -3.87380 | -0.97749 | 2.46650 | C | 6.97032 | 2.21596 | 3.65478 |
| H | -2.24822 | -0.63305 | 3.14430 | H | 7.16998 | 0.97647 | 1.87745 |
| H | -2.33022 | 1.69020 | 2.27685 | H | 6.24529 | 2.46478 | 1.61939 |
| H | -3.93547 | 1.42289 | 1.53800 | H | 7.90693 | 2.77802 | 3.48590 |
| H | -4.90032 | 0.96186 | 3.83107 | H | 6.24569 | 2.90454 | 4.12776 |
| H | -3.30868 | 1.25796 | 4.55074 | H | 7.18803 | 1.41273 | 4.38312 |
| H | -4.75983 | 3.31610 | 4.73244 | [9b-10] [‡] | | | |
| H | -3.35307 | 3.64889 | 3.68601 | 129 | | | |
| H | -4.95664 | 3.35490 | 2.95899 | XYZ | | | |
| H | -3.37629 | 0.40277 | -0.87035 | Ru | 0.04914 | -0.37165 | -0.47846 |
| H | -3.12699 | -1.25176 | -1.42096 | C | -1.48487 | -0.62255 | -1.56429 |
| H | -4.96028 | -2.03159 | 0.20769 | C | -2.47792 | -0.90017 | -2.42494 |
| H | -5.24019 | -0.34052 | 0.64841 | N | -0.47796 | 1.80898 | 0.16991 |
| H | -5.79944 | 0.19155 | -1.76185 | C | 0.32859 | 2.62213 | 0.89851 |
| H | -5.52368 | -1.50299 | -2.19651 | C | -0.02834 | 3.88581 | 1.36914 |
| H | -7.98721 | -1.06089 | -1.88148 | C | -1.32369 | 4.40501 | 1.08897 |
| H | -7.41418 | -2.21412 | -0.64575 | C | -2.16677 | 3.56249 | 0.31041 |
| H | -7.69296 | -0.50728 | -0.21041 | C | -1.70934 | 2.31380 | -0.10849 |
| H | -1.51214 | -3.20462 | 0.15609 | N | -1.73481 | 5.64178 | 1.54153 |
| H | -3.20523 | -3.15016 | 0.69895 | C | -3.04176 | 6.16144 | 1.14991 |
| H | -0.85992 | -2.80550 | 2.68375 | P | 2.47238 | -0.50443 | -0.26295 |
| H | -2.54905 | -3.15167 | 3.05767 | C | 3.53304 | 0.32183 | 1.08308 |
| H | -2.35391 | -5.40454 | 1.87254 | C | 5.06937 | 0.27533 | 0.95899 |
| H | -0.64043 | -5.06518 | 1.57005 | C | 5.78205 | 0.91021 | 2.17198 |
| H | -0.89065 | -6.52323 | 3.60645 | C | 7.31530 | 0.87766 | 2.05334 |
| H | -0.22270 | -4.93290 | 4.07862 | N | 0.04614 | 0.24283 | -2.63573 |
| H | -1.93989 | -5.30156 | 4.37791 | C | -0.38525 | 1.56667 | -3.12408 |
| H | 1.76108 | 2.28531 | 2.10530 | C | 0.16414 | 1.68225 | -4.56988 |
| H | 0.15307 | 2.96115 | 1.73859 | C | 0.24453 | 0.21572 | -5.01633 |

| | | | | | | | |
|---|----------|----------|----------|---|----------|----------|----------|
| C | 0.45026 | -0.55891 | -3.69268 | H | 2.88824 | -0.49007 | -2.64469 |
| O | 0.89913 | -1.71211 | -3.62809 | H | 2.30588 | 1.90142 | -2.09687 |
| P | -0.56502 | -1.30278 | 1.53691 | H | 3.82295 | 2.09311 | -1.19792 |
| C | -1.97846 | -0.48482 | 2.47895 | H | 5.13963 | 1.60549 | -3.30021 |
| C | -3.34226 | -0.46778 | 1.77069 | H | 3.62741 | 1.44464 | -4.20563 |
| C | -4.39004 | 0.37021 | 2.53134 | H | 4.61578 | 3.74754 | -4.52402 |
| C | -5.77643 | 0.35564 | 1.86659 | H | 3.04766 | 3.86751 | -3.68008 |
| C | 3.38065 | 0.03964 | -1.80984 | H | 4.56832 | 4.02864 | -2.76192 |
| C | 3.35749 | 1.55941 | -2.05226 | H | 3.21025 | 1.37962 | 1.14386 |
| C | 4.09226 | 1.96643 | -3.34573 | H | 3.22331 | -0.14256 | 2.03943 |
| C | 4.08170 | 3.48425 | -3.59309 | H | 5.41580 | -0.77109 | 0.84934 |
| C | 3.06557 | -2.28781 | -0.09507 | H | 5.38956 | 0.80250 | 0.03934 |
| C | 2.98847 | -3.12515 | -1.38793 | H | 5.44093 | 1.95883 | 2.28793 |
| C | 3.16107 | -4.63292 | -1.11657 | H | 5.46947 | 0.38283 | 3.09563 |
| C | 3.14955 | -5.47323 | -2.40463 | H | 7.79917 | 1.33628 | 2.93453 |
| C | -0.79933 | 6.50128 | 2.26039 | H | 7.68738 | -0.16029 | 1.96874 |
| C | 0.64136 | -1.50934 | 2.97845 | H | 7.65880 | 1.42783 | 1.15761 |
| C | 0.95204 | -0.22716 | 3.77459 | H | 2.41723 | -2.74590 | 0.67662 |
| C | 2.03802 | -0.43939 | 4.84919 | H | 4.09971 | -2.30205 | 0.30228 |
| C | 2.32013 | 0.82535 | 5.67737 | H | 2.02722 | -2.93929 | -1.90275 |
| C | -1.16365 | -3.07312 | 1.31946 | H | 3.78040 | -2.79293 | -2.08811 |
| C | -1.81898 | -3.80855 | 2.50365 | H | 4.10708 | -4.81065 | -0.56395 |
| C | -2.26204 | -5.23936 | 2.13055 | H | 2.34589 | -4.97416 | -0.44616 |
| C | -2.92053 | -5.99015 | 3.30012 | H | 3.25012 | -6.55230 | -2.18639 |
| H | 1.57460 | -1.92599 | 2.55314 | H | 2.20869 | -5.32408 | -2.96458 |
| H | 0.23858 | -2.27572 | 3.66983 | H | 3.98188 | -5.18681 | -3.07431 |
| H | 1.26809 | 0.58040 | 3.08511 | H | -1.49402 | 1.63174 | -3.12050 |
| H | 0.03107 | 0.13673 | 4.27015 | H | -0.00490 | 2.36464 | -2.46246 |
| H | 1.72741 | -1.26351 | 5.52238 | H | 1.04953 | -0.01370 | -5.73370 |
| H | 2.97430 | -0.78107 | 4.36299 | H | -0.70827 | -0.12848 | -5.46876 |
| H | 3.09679 | 0.64380 | 6.44195 | H | -0.47185 | 2.31851 | -5.21082 |
| H | 2.67032 | 1.65392 | 5.03405 | H | 1.17624 | 2.12789 | -4.55480 |
| H | 1.40912 | 1.17151 | 6.20038 | H | -2.34811 | 1.66389 | -0.71678 |
| H | -2.07111 | -0.97513 | 3.46947 | H | -3.17436 | 3.87360 | 0.02269 |
| H | -1.65273 | 0.55612 | 2.66585 | H | 1.32460 | 2.22304 | 1.11241 |
| H | -3.21547 | -0.06592 | 0.74808 | H | 0.70449 | 4.45780 | 1.94388 |
| H | -3.72041 | -1.50334 | 1.65189 | H | -3.19600 | 7.14277 | 1.62308 |
| H | -4.47516 | -0.00250 | 3.57221 | H | -3.12948 | 6.28879 | 0.05144 |
| H | -4.02468 | 1.41419 | 2.60740 | H | -3.85664 | 5.49094 | 1.48491 |
| H | -6.50177 | 0.97386 | 2.42631 | H | -1.31435 | 7.42792 | 2.55498 |
| H | -5.72811 | 0.74625 | 0.83312 | H | -0.43028 | 6.01049 | 3.18181 |
| H | -6.18370 | -0.67129 | 1.81395 | H | 0.07872 | 6.77544 | 1.64016 |
| H | -0.27981 | -3.63289 | 0.95630 | H | 0.33491 | -1.88550 | -0.92664 |
| H | -1.85208 | -3.03328 | 0.45447 | C | -3.85101 | -1.39773 | -2.00525 |
| H | -1.11905 | -3.86724 | 3.36115 | H | -2.30986 | -0.82748 | -3.50891 |
| H | -2.70162 | -3.24394 | 2.86514 | C | -5.00594 | -0.49401 | -2.49496 |
| H | -2.96558 | -5.18999 | 1.27589 | H | -4.00512 | -2.41857 | -2.41751 |
| H | -1.38297 | -5.80936 | 1.76956 | H | -3.90203 | -1.49941 | -0.90544 |
| H | -3.22882 | -7.00884 | 3.00345 | C | -6.40302 | -1.06416 | -2.18512 |
| H | -2.22647 | -6.08629 | 4.15604 | H | -4.90065 | 0.50991 | -2.03492 |
| H | -3.82145 | -5.45913 | 3.66051 | H | -4.90766 | -0.33879 | -3.58930 |
| H | 4.42558 | -0.32612 | -1.75840 | C | -7.54845 | -0.16588 | -2.68176 |

| | | | | | | | |
|----|----------|----------|-----------|---|----------|----------|----------|
| H | -6.49503 | -2.06898 | -2.64448 | C | 0.62787 | 7.14059 | 0.50258 |
| H | -6.50063 | -1.21796 | -1.09161 | H | -2.18306 | -0.16398 | -3.95041 |
| H | -8.53694 | -0.60144 | -2.44805 | H | -2.37533 | 1.69565 | 0.71506 |
| H | -7.50413 | 0.83499 | -2.21275 | H | -1.76660 | 1.57615 | 2.36943 |
| H | -7.49624 | -0.02128 | -3.77708 | H | -4.46110 | 0.44743 | 1.33058 |
| | | | | H | -3.88319 | 0.22414 | 2.98848 |
| | | | 10 | H | -3.83087 | 2.72932 | 3.30995 |
| | | | 129 | H | -4.40218 | 2.95436 | 1.64868 |
| | | | XYZ | H | -6.32216 | 3.13462 | 3.27670 |
| C | 0.88064 | 2.89400 | 0.24672 | H | -6.55508 | 1.71922 | 2.21475 |
| N | 0.12450 | 2.13094 | -0.58583 | H | -5.98101 | 1.49307 | 3.88810 |
| C | -0.72741 | 2.82989 | -1.38605 | H | -3.44155 | -1.77779 | 1.62434 |
| C | -0.85137 | 4.21958 | -1.39087 | H | -3.26987 | -1.42672 | -0.11212 |
| C | -0.05503 | 5.01158 | -0.51769 | H | -1.52039 | -3.18007 | -0.34455 |
| C | 0.83278 | 4.28476 | 0.32482 | H | -1.58767 | -3.53952 | 1.39314 |
| Ru | 0.10974 | -0.19676 | -0.50682 | H | -4.01822 | -4.21963 | 1.16517 |
| C | -2.20469 | -0.05895 | -2.85062 | H | -3.94222 | -3.87761 | -0.57239 |
| C | -1.05640 | -0.25335 | -2.14677 | H | -3.64805 | -6.34457 | -0.14822 |
| N | -0.13465 | 6.38964 | -0.48986 | H | -2.15676 | -5.66143 | -0.85629 |
| C | -1.14104 | 7.07428 | -1.29582 | H | -2.23399 | -6.01574 | 0.89059 |
| P | -1.39027 | -0.48885 | 1.12514 | H | -0.07116 | -0.27940 | 3.14990 |
| C | -2.72238 | -1.77435 | 0.78145 | H | -0.08184 | -1.94375 | 2.55153 |
| C | -2.19646 | -3.19929 | 0.52990 | H | -2.32648 | -0.61177 | 4.22264 |
| C | -3.33399 | -4.21304 | 0.29179 | H | -2.42785 | -2.25236 | 3.55688 |
| C | -2.81707 | -5.63765 | 0.02963 | H | -0.37180 | -2.90875 | 4.86613 |
| N | 0.17784 | -0.46333 | -2.92692 | H | -0.26971 | -1.27155 | 5.53366 |
| C | 0.57907 | -1.73821 | -3.40443 | H | -1.38855 | -2.82607 | 7.17429 |
| C | 1.66875 | -1.51576 | -4.47057 | H | -2.54360 | -1.57488 | 6.64004 |
| C | 1.99412 | -0.01268 | -4.40620 | H | -2.64326 | -3.22486 | 5.96958 |
| C | 0.70459 | 0.59928 | -3.81864 | H | 3.16429 | 0.40221 | -1.51016 |
| O | 0.11840 | -2.82177 | -3.06384 | H | 3.54457 | 1.48804 | -0.17997 |
| P | 2.24961 | -0.45233 | 0.57188 | H | 5.47621 | -0.05497 | 0.49957 |
| C | 2.67069 | 0.12402 | 2.33740 | H | 5.06156 | -1.13371 | -0.83855 |
| C | 4.12762 | 0.22719 | 2.82912 | H | 5.47038 | 0.74417 | -2.47956 |
| C | 4.21927 | 0.56875 | 4.33193 | H | 5.89073 | 1.82346 | -1.14047 |
| C | 5.66726 | 0.69061 | 4.83616 | H | 7.97387 | 0.88809 | -2.21607 |
| C | -2.38385 | 1.05056 | 1.61287 | H | 7.84909 | 0.31421 | -0.53082 |
| C | -3.83426 | 0.90819 | 2.11944 | H | 7.42277 | -0.77513 | -1.87699 |
| C | -4.45105 | 2.26590 | 2.51615 | H | 2.17106 | 1.10421 | 2.47139 |
| C | -5.90618 | 2.14870 | 3.00049 | H | 2.11521 | -0.57762 | 2.98978 |
| C | -0.73925 | -1.08680 | 2.79569 | H | 4.66228 | -0.72523 | 2.64630 |
| C | -1.71601 | -1.48531 | 3.92065 | H | 4.66689 | 1.00483 | 2.25349 |
| C | -0.98456 | -2.03439 | 5.16416 | H | 3.67763 | 1.51698 | 4.52451 |
| C | -1.94056 | -2.43728 | 6.29953 | H | 3.68759 | -0.21039 | 4.91393 |
| C | 3.57181 | 0.42082 | -0.48055 | H | 5.70158 | 0.93205 | 5.91386 |
| C | 5.03220 | -0.07649 | -0.51215 | H | 6.22271 | -0.25393 | 4.68655 |
| C | 5.91249 | 0.76272 | -1.46272 | H | 6.21375 | 1.48667 | 4.29670 |
| C | 7.36888 | 0.27226 | -1.52626 | H | 2.23705 | -2.72239 | 1.41647 |
| C | 2.88755 | -2.22309 | 0.67056 | H | 3.91809 | -2.24130 | 1.07826 |
| C | 2.81887 | -2.99675 | -0.65825 | H | 1.80206 | -2.89595 | -1.08139 |
| C | 3.15889 | -4.49278 | -0.50999 | H | 3.51190 | -2.54159 | -1.39578 |
| C | 3.11569 | -5.23686 | -1.85579 | H | 4.15949 | -4.61125 | -0.04556 |

| | | | | | | | |
|----|----------|----------|----------|---|----------|----------|----------|
| H | 2.43636 | -4.95547 | 0.19199 | C | -2.20284 | -4.75467 | 0.49188 |
| H | 3.28649 | -6.32135 | -1.72769 | C | -1.37346 | -6.04865 | 0.44238 |
| H | 2.13677 | -5.09725 | -2.34955 | N | 0.39151 | -0.49353 | -3.20070 |
| H | 3.89351 | -4.85633 | -2.54510 | C | 0.98300 | -1.69685 | -3.57654 |
| H | -0.03655 | 0.81789 | -4.61542 | C | 2.01467 | -1.37928 | -4.67631 |
| H | 0.87449 | 1.52499 | -3.24707 | C | 2.14204 | 0.15648 | -4.66003 |
| H | 2.52628 | -2.18460 | -4.28784 | C | 0.79580 | 0.62954 | -4.05982 |
| H | 1.23602 | -1.80360 | -5.44842 | O | 0.70673 | -2.81325 | -3.13015 |
| H | 2.25197 | 0.42837 | -5.38411 | P | 2.14557 | -0.10574 | 0.67533 |
| H | 2.84175 | 0.16853 | -3.72076 | C | 2.62548 | 0.69654 | 2.33912 |
| H | -1.34184 | 2.21307 | -2.05269 | C | 4.09879 | 0.85977 | 2.76458 |
| H | -1.57616 | 4.67490 | -2.07101 | C | 4.24042 | 1.38145 | 4.21092 |
| H | 1.55559 | 2.33679 | 0.90181 | C | 5.70362 | 1.57782 | 4.64276 |
| H | 1.48332 | 4.79094 | 1.04296 | C | -2.50178 | 0.67061 | 1.54617 |
| H | -1.04049 | 8.16049 | -1.15125 | C | -3.94962 | 0.25819 | 1.88554 |
| H | -1.00313 | 6.86157 | -2.37342 | C | -4.85323 | 1.47645 | 2.16945 |
| H | -2.17381 | 6.78081 | -1.01598 | C | -6.30818 | 1.08813 | 2.48317 |
| H | 0.44595 | 8.21634 | 0.35923 | C | -0.53551 | -0.97752 | 2.94360 |
| H | 0.34143 | 6.87591 | 1.54148 | C | -1.51836 | -1.41925 | 4.04591 |
| H | 1.71494 | 6.96342 | 0.38985 | C | -0.81757 | -1.64566 | 5.40266 |
| H | 0.07192 | -1.80694 | -0.47571 | C | -1.78645 | -2.07950 | 6.51570 |
| C | -3.55468 | 0.29175 | -2.27333 | C | 3.37708 | 0.67442 | -0.54214 |
| C | -4.65610 | -0.74788 | -2.58986 | C | 4.85406 | 0.22487 | -0.57550 |
| H | -3.46368 | 0.42420 | -1.17818 | C | 5.67431 | 0.99951 | -1.62853 |
| H | -3.89590 | 1.27471 | -2.67261 | C | 7.14538 | 0.55463 | -1.69230 |
| C | -6.04364 | -0.36108 | -2.04497 | C | 2.85202 | -1.83715 | 0.94880 |
| H | -4.71787 | -0.88653 | -3.68904 | C | 2.75575 | -2.73310 | -0.29826 |
| H | -4.35351 | -1.73190 | -2.17902 | C | 3.00952 | -4.22550 | -0.00739 |
| C | -7.13419 | -1.39550 | -2.37066 | C | 3.05522 | -5.06956 | -1.29336 |
| H | -5.97919 | -0.22729 | -0.94557 | C | -0.75310 | 7.21098 | 0.57707 |
| H | -6.33527 | 0.62744 | -2.45500 | H | -2.00088 | -0.38125 | -4.07257 |
| H | -8.11627 | -1.09502 | -1.96192 | H | -2.50515 | 1.31096 | 0.64460 |
| H | -7.25013 | -1.52245 | -3.46327 | H | -2.08356 | 1.29571 | 2.36113 |
| H | -6.88304 | -2.38578 | -1.94725 | H | -4.38170 | -0.31810 | 1.04335 |
| | | | | H | -3.97114 | -0.41718 | 2.76269 |
| | | | | H | -4.43072 | 2.05327 | 3.01689 |
| | | | | H | -4.82966 | 2.15650 | 1.29448 |
| | | | | H | -6.93152 | 1.97882 | 2.68196 |
| C | 0.65024 | 3.22844 | 0.00015 | H | -6.76600 | 0.54027 | 1.63870 |
| N | 0.05212 | 2.32305 | -0.82310 | H | -6.36499 | 0.43421 | 3.37335 |
| C | -1.00558 | 2.80213 | -1.53775 | H | -2.97953 | -2.31124 | 1.67851 |
| C | -1.49691 | 4.10387 | -1.44679 | H | -2.71404 | -2.07852 | -0.06540 |
| C | -0.88629 | 5.03691 | -0.56142 | H | -0.55647 | -3.38640 | 0.08596 |
| C | 0.22883 | 4.54640 | 0.17457 | H | -0.85198 | -3.68269 | 1.81285 |
| Ru | 0.13690 | 0.05180 | -0.44100 | H | -3.02165 | -4.86499 | 1.23200 |
| C | -1.99165 | -0.34059 | -2.96994 | H | -2.69292 | -4.59243 | -0.48877 |
| C | -0.77767 | -0.41475 | -2.32744 | H | -2.00023 | -6.92127 | 0.18308 |
| N | -1.33845 | 6.33610 | -0.43376 | H | -0.56956 | -5.97519 | -0.31246 |
| C | -2.54844 | 6.75457 | -1.13474 | H | -0.89779 | -6.25678 | 1.41938 |
| P | -1.18020 | -0.65777 | 1.19553 | H | -0.04353 | -0.03272 | 3.24260 |
| C | -2.19498 | -2.22233 | 0.90118 | H | 0.27212 | -1.72776 | 2.84120 |
| C | -1.35729 | -3.51267 | 0.83982 | H | -2.30936 | -0.65524 | 4.17650 |

| | | | | | | | |
|---|----------|----------|----------|----|----------|----------|-----------|
| H | -2.03293 | -2.35422 | 3.74916 | H | -3.21986 | -0.18654 | -1.21680 |
| H | -0.02608 | -2.41179 | 5.27941 | H | -3.85766 | 0.68840 | -2.61991 |
| H | -0.29806 | -0.71398 | 5.70437 | C | -5.68876 | -1.31288 | -2.08418 |
| H | -1.25827 | -2.23529 | 7.47366 | H | -4.34309 | -1.51848 | -3.78080 |
| H | -2.56908 | -1.31643 | 6.68463 | H | -3.80384 | -2.38087 | -2.33328 |
| H | -2.29560 | -3.02621 | 6.25587 | C | -6.60573 | -2.49002 | -2.45670 |
| H | 2.92684 | 0.50550 | -1.54025 | H | -5.61752 | -1.23567 | -0.97993 |
| H | 3.32295 | 1.76927 | -0.37522 | H | -6.14604 | -0.36245 | -2.42726 |
| H | 5.32562 | 0.35833 | 0.41501 | H | -7.61351 | -2.37560 | -2.01756 |
| H | 4.91278 | -0.85675 | -0.80146 | H | -6.72466 | -2.57103 | -3.55335 |
| H | 5.20424 | 0.86939 | -2.62456 | H | -6.18959 | -3.44927 | -2.09692 |
| H | 5.62305 | 2.08471 | -1.40670 | | | | |
| H | 7.70803 | 1.12377 | -2.45426 | | | | 11 |
| H | 7.65082 | 0.70525 | -0.72015 | | | | 129 |
| H | 7.22748 | -0.51846 | -1.94656 | | | | XYZ |
| H | 2.12552 | 1.68561 | 2.35159 | C | 2.48813 | 0.94704 | -2.34264 |
| H | 2.09645 | 0.09010 | 3.09999 | N | 2.12871 | 0.71702 | -1.04433 |
| H | 4.63394 | -0.10669 | 2.67982 | C | 3.15561 | 0.54546 | -0.16218 |
| H | 4.61359 | 1.56319 | 2.08110 | C | 4.50304 | 0.55942 | -0.52169 |
| H | 3.69246 | 2.34056 | 4.30743 | C | 4.87958 | 0.77150 | -1.87870 |
| H | 3.74062 | 0.67335 | 4.90194 | C | 3.80667 | 0.97088 | -2.79486 |
| H | 5.77304 | 1.94787 | 5.68168 | Ru | 0.11787 | 0.21020 | -0.60635 |
| H | 6.26756 | 0.62809 | 4.58708 | C | 2.04311 | -3.06952 | -0.05412 |
| H | 6.21863 | 2.30869 | 3.99163 | C | 1.72093 | -2.53078 | 1.14532 |
| H | 2.25237 | -2.27840 | 1.77019 | N | 6.20545 | 0.79442 | -2.28150 |
| H | 3.89711 | -1.77646 | 1.31341 | C | 7.26215 | 0.77514 | -1.27517 |
| H | 1.75482 | -2.60917 | -0.75703 | P | -1.96559 | -0.71491 | -0.49800 |
| H | 3.48172 | -2.38863 | -1.06262 | C | -2.09193 | -2.41587 | 0.33681 |
| H | 3.95758 | -4.34778 | 0.55619 | C | -2.06523 | -2.36160 | 1.87605 |
| H | 2.20590 | -4.60076 | 0.65804 | C | -1.98141 | -3.75895 | 2.52309 |
| H | 3.11951 | -6.15031 | -1.07002 | C | -2.02853 | -3.70345 | 4.05989 |
| H | 2.15851 | -4.89044 | -1.91309 | N | 2.25783 | -2.95025 | 2.37100 |
| H | 3.93578 | -4.80297 | -1.90823 | C | 1.81623 | -2.46033 | 3.60037 |
| H | 0.03884 | 0.80739 | -4.85282 | C | 2.56542 | -3.22412 | 4.70001 |
| H | 0.88488 | 1.55250 | -3.46099 | C | 3.73463 | -3.91136 | 3.96698 |
| H | 2.95755 | -1.91956 | -4.48885 | C | 3.25197 | -4.02134 | 2.49845 |
| H | 1.61039 | -1.75375 | -5.63694 | O | 0.95433 | -1.59084 | 3.75167 |
| H | 2.32843 | 0.59739 | -5.65398 | P | -0.46606 | 2.23723 | 0.06024 |
| H | 2.97105 | 0.46258 | -3.99591 | C | -1.77535 | 3.16173 | -0.97651 |
| H | -1.47708 | 2.07561 | -2.21079 | C | -2.77262 | 4.12390 | -0.29711 |
| H | -2.35760 | 4.38094 | -2.06129 | C | -3.72117 | 4.79645 | -1.31143 |
| H | 1.51371 | 2.85667 | 0.55934 | C | -4.74158 | 5.74079 | -0.65316 |
| H | 0.77504 | 5.18299 | 0.87560 | C | -2.61904 | -1.06698 | -2.26082 |
| H | -2.73966 | 7.81704 | -0.92115 | C | -3.38296 | -2.36949 | -2.57605 |
| H | -2.43411 | 6.64494 | -2.23032 | C | -3.86015 | -2.43407 | -4.04232 |
| H | -3.43906 | 6.17119 | -0.82155 | C | -4.61590 | -3.73210 | -4.37490 |
| H | -1.24072 | 8.19626 | 0.52771 | C | -3.48312 | 0.12020 | 0.27264 |
| H | -0.88172 | 6.81074 | 1.60416 | C | -4.86117 | -0.55879 | 0.15434 |
| H | 0.32962 | 7.36021 | 0.39983 | C | -5.96825 | 0.21113 | 0.90556 |
| H | -0.55543 | -1.26647 | -1.36260 | C | -7.35229 | -0.44823 | 0.77993 |
| C | -3.34344 | -0.25189 | -2.31473 | C | 0.95980 | 3.48233 | 0.00305 |
| C | -4.27263 | -1.43689 | -2.67659 | C | 0.70369 | 4.94199 | 0.42387 |

| | | | | | | | |
|---|----------|----------|----------|----|----------|----------|---------------------|
| C | 1.97877 | 5.80893 | 0.35022 | H | -4.23590 | 6.55925 | -0.10748 |
| C | 1.73847 | 7.27269 | 0.75759 | H | -2.01323 | 1.90885 | 1.93118 |
| C | -1.07042 | 2.47817 | 1.83484 | H | -1.32038 | 3.54348 | 2.01068 |
| C | -0.06376 | 1.98082 | 2.88820 | H | 0.21327 | 0.93424 | 2.65356 |
| C | -0.61067 | 2.06441 | 4.32784 | H | 0.87070 | 2.57643 | 2.82599 |
| C | 0.39762 | 1.56648 | 5.37756 | H | -0.90635 | 3.10966 | 4.55459 |
| C | 6.53555 | 1.20650 | -3.64237 | H | -1.53823 | 1.46101 | 4.39492 |
| H | 2.74804 | -3.91124 | -0.11341 | H | -0.01971 | 1.62803 | 6.39982 |
| H | -1.72403 | -0.99716 | -2.90812 | H | 0.67603 | 0.51589 | 5.18009 |
| H | -3.24269 | -0.18989 | -2.52970 | H | 1.32304 | 2.17379 | 5.35850 |
| H | -2.73246 | -3.24348 | -2.37164 | H | 2.78336 | -5.00268 | 2.27946 |
| H | -4.26079 | -2.48079 | -1.91027 | H | 4.06811 | -3.86981 | 1.76833 |
| H | -4.51207 | -1.56172 | -4.25044 | H | 2.87284 | -2.53534 | 5.50374 |
| H | -2.98589 | -2.32882 | -4.71542 | H | 1.86320 | -3.95431 | 5.14705 |
| H | -4.95071 | -3.74882 | -5.42803 | H | 3.99763 | -4.89679 | 4.38553 |
| H | -3.97660 | -4.62002 | -4.21261 | H | 4.63699 | -3.27625 | 4.01399 |
| H | -5.51157 | -3.84709 | -3.73625 | H | 2.85071 | 0.38847 | 0.87689 |
| H | -3.00246 | -2.94485 | -0.00539 | H | 5.25127 | 0.41482 | 0.26162 |
| H | -1.22629 | -3.00530 | -0.02373 | H | 1.64934 | 1.11712 | -3.02586 |
| H | -1.20808 | -1.75054 | 2.21788 | H | 3.99030 | 1.16593 | -3.85442 |
| H | -2.97839 | -1.85396 | 2.24695 | H | 8.24014 | 0.78322 | -1.78026 |
| H | -2.80815 | -4.39465 | 2.14469 | H | 7.21581 | 1.64804 | -0.58992 |
| H | -1.04256 | -4.24928 | 2.19560 | H | 7.20805 | -0.14478 | -0.66276 |
| H | -1.93970 | -4.71085 | 4.50755 | H | 7.62573 | 1.14644 | -3.78210 |
| H | -1.20856 | -3.07508 | 4.45207 | H | 6.06442 | 0.53488 | -4.38465 |
| H | -2.98152 | -3.26553 | 4.41221 | H | 6.21158 | 2.24553 | -3.86371 |
| H | -3.53487 | 1.13376 | -0.16899 | H | 1.02365 | -1.67615 | 1.22862 |
| H | -3.23288 | 0.27038 | 1.34068 | C | 1.50426 | -2.57775 | -1.37355 |
| H | -5.14759 | -0.64639 | -0.91222 | C | 1.03252 | -3.72030 | -2.30217 |
| H | -4.81462 | -1.59293 | 0.54967 | H | 0.64175 | -1.87693 | -1.19837 |
| H | -5.69164 | 0.29257 | 1.97585 | H | 2.27926 | -1.98817 | -1.90637 |
| H | -6.01455 | 1.25006 | 0.52181 | C | 0.67336 | -3.24891 | -3.72239 |
| H | -8.12434 | 0.12189 | 1.32777 | H | 1.83778 | -4.48216 | -2.36452 |
| H | -7.67036 | -0.51263 | -0.27751 | H | 0.16302 | -4.23240 | -1.84361 |
| H | -7.34270 | -1.47649 | 1.18719 | C | 0.19166 | -4.39002 | -4.63345 |
| H | 1.76517 | 3.04644 | 0.62387 | H | -0.10874 | -2.46677 | -3.65883 |
| H | 1.33373 | 3.44922 | -1.03800 | H | 1.55853 | -2.75854 | -4.17538 |
| H | -0.07176 | 5.39490 | -0.22519 | H | -0.05859 | -4.02172 | -5.64464 |
| H | 0.30547 | 4.98025 | 1.45721 | H | 0.96723 | -5.17126 | -4.74372 |
| H | 2.75759 | 5.36465 | 1.00209 | H | -0.71222 | -4.87557 | -4.22090 |
| H | 2.38490 | 5.77148 | -0.68068 | | | | |
| H | 2.66691 | 7.86906 | 0.69549 | | | | [5-6m] [‡] |
| H | 0.98786 | 7.75209 | 0.10168 | | | | 129 |
| H | 1.36425 | 7.34206 | 1.79603 | | | | XYZ |
| H | -1.19742 | 3.70118 | -1.75457 | C | 1.54557 | -1.89771 | -2.30692 |
| H | -2.32871 | 2.37308 | -1.51733 | N | 1.25130 | -1.70882 | -0.99317 |
| H | -3.37894 | 3.57110 | 0.44821 | C | 2.02696 | -2.39936 | -0.12230 |
| H | -2.23529 | 4.90936 | 0.26932 | C | 3.07635 | -3.24610 | -0.48220 |
| H | -3.12018 | 5.35832 | -2.05459 | C | 3.40076 | -3.42071 | -1.85699 |
| H | -4.25608 | 4.01187 | -1.88374 | C | 2.57582 | -2.71293 | -2.77551 |
| H | -5.41037 | 6.20148 | -1.40280 | Ru | -0.49673 | -0.19322 | -0.38588 |
| H | -5.37536 | 5.19964 | 0.07407 | C | -2.26281 | -0.59327 | -1.67253 |

| | | | | | | | |
|---|----------|----------|----------|---|----------|----------|----------|
| C | -1.23291 | -0.50814 | -2.49892 | H | -3.38294 | 4.63985 | -4.88639 |
| N | 4.44542 | -4.22398 | -2.27027 | H | -3.83009 | 3.40625 | -3.67598 |
| C | 5.18030 | -5.01982 | -1.29208 | H | -3.24116 | 5.00313 | -3.14444 |
| P | 0.71903 | 1.67388 | -0.97541 | H | 1.38370 | 2.79639 | 1.08951 |
| C | 0.19566 | 2.53675 | -2.55987 | H | -0.28859 | 3.14410 | 0.64266 |
| C | -1.25197 | 3.06118 | -2.55519 | H | 2.16169 | 4.54621 | -0.63379 |
| C | -1.66568 | 3.67803 | -3.90636 | H | 0.46696 | 4.88106 | -1.01318 |
| C | -3.10803 | 4.21162 | -3.90544 | H | 0.05895 | 5.54465 | 1.39015 |
| N | -1.92529 | -1.91210 | -0.44791 | H | 1.75842 | 5.22083 | 1.76740 |
| C | -2.93760 | -2.23727 | 0.46641 | H | 1.39387 | 7.68551 | 1.37829 |
| C | -3.29376 | -3.73276 | 0.32678 | H | 2.47391 | 7.02666 | 0.11949 |
| C | -2.63631 | -4.14606 | -1.00034 | H | 0.76114 | 7.35337 | -0.25675 |
| C | -1.45261 | -3.15948 | -1.08994 | H | -1.58584 | -1.78516 | 2.67375 |
| O | -3.47429 | -1.46291 | 1.27051 | H | -0.01463 | -2.51439 | 2.31982 |
| P | -0.02269 | -0.10990 | 1.91731 | H | 0.89114 | -1.67100 | 4.54347 |
| C | 1.79848 | 0.11106 | 2.44950 | H | -0.67929 | -0.92610 | 4.89899 |
| C | 2.14779 | 0.94093 | 3.70205 | H | -1.77964 | -3.19166 | 4.80523 |
| C | 3.66714 | 0.98596 | 3.96803 | H | -0.21696 | -3.94237 | 4.44316 |
| C | 4.03860 | 1.82910 | 5.19970 | H | -0.75620 | -4.16515 | 6.89762 |
| C | 2.53632 | 1.32611 | -1.35662 | H | 0.69242 | -3.14439 | 6.68508 |
| C | 3.53124 | 2.45849 | -1.67980 | H | -0.88353 | -2.39195 | 7.04930 |
| C | 4.89410 | 1.91608 | -2.16133 | H | 2.21451 | -0.90953 | 2.56723 |
| C | 5.91423 | 3.02732 | -2.46142 | H | 2.32020 | 0.54362 | 1.57562 |
| C | 0.74288 | 3.11725 | 0.24384 | H | 1.77318 | 1.97702 | 3.58530 |
| C | 1.14277 | 4.53824 | -0.20603 | H | 1.63849 | 0.52914 | 4.59443 |
| C | 1.07889 | 5.55193 | 0.95634 | H | 4.04517 | -0.04827 | 4.09808 |
| C | 1.44687 | 6.98244 | 0.52760 | H | 4.18228 | 1.38868 | 3.07265 |
| C | -0.50106 | -1.67429 | 2.85467 | H | 5.13103 | 1.84425 | 5.36505 |
| C | -0.19827 | -1.76774 | 4.36238 | H | 3.70255 | 2.87627 | 5.08347 |
| C | -0.68986 | -3.09459 | 4.97906 | H | 3.56630 | 1.42852 | 6.11589 |
| C | -0.39366 | -3.20666 | 6.48416 | H | -0.59261 | 2.18257 | 2.52420 |
| C | -0.88689 | 1.20730 | 2.95382 | H | -0.48092 | 1.18161 | 3.98304 |
| C | -2.42211 | 1.10321 | 2.99548 | H | -2.81561 | 0.97210 | 1.97153 |
| C | -3.06968 | 2.33319 | 3.66330 | H | -2.72302 | 0.19053 | 3.54516 |
| C | -4.60219 | 2.23072 | 3.74354 | H | -2.65326 | 2.46851 | 4.68289 |
| C | 4.65227 | -4.46758 | -3.69492 | H | -2.78954 | 3.24473 | 3.09655 |
| H | -1.61532 | 0.87444 | 0.06244 | H | -5.04493 | 3.12695 | 4.21555 |
| H | 2.49639 | 0.61524 | -2.20513 | H | -5.04570 | 2.12322 | 2.73678 |
| H | 2.91502 | 0.72961 | -0.50453 | H | -4.91214 | 1.34973 | 4.33554 |
| H | 3.11960 | 3.12997 | -2.45890 | H | -1.12957 | -2.91016 | -2.11731 |
| H | 3.69619 | 3.08543 | -0.78201 | H | -0.57580 | -3.54653 | -0.53791 |
| H | 5.30498 | 1.23071 | -1.39306 | H | -2.85031 | -4.27541 | 1.18579 |
| H | 4.73745 | 1.29892 | -3.06859 | H | -4.38719 | -3.87316 | 0.38474 |
| H | 6.87726 | 2.61005 | -2.80714 | H | -3.33363 | -3.98165 | -1.84322 |
| H | 5.54271 | 3.70930 | -3.24889 | H | -2.31186 | -5.20118 | -1.03121 |
| H | 6.11772 | 3.63789 | -1.56194 | H | 1.77990 | -2.27132 | 0.93599 |
| H | 0.90160 | 3.36346 | -2.77347 | H | 3.62619 | -3.76618 | 0.30646 |
| H | 0.32055 | 1.79045 | -3.36745 | H | 0.85781 | -1.38092 | -2.98948 |
| H | -1.93172 | 2.22800 | -2.29839 | H | 2.72344 | -2.79881 | -3.85556 |
| H | -1.37891 | 3.82040 | -1.75723 | H | 5.99131 | -5.56037 | -1.80318 |
| H | -0.96649 | 4.49792 | -4.16892 | H | 5.63924 | -4.37474 | -0.51858 |
| H | -1.55393 | 2.91382 | -4.70203 | H | 4.53467 | -5.76445 | -0.78151 |

| | | | | | | | |
|-----------|----------|----------|----------|---|----------|----------|----------|
| H | 5.53959 | -5.10522 | -3.82614 | C | -2.57030 | 2.01093 | 0.96239 |
| H | 3.78573 | -4.97607 | -4.16594 | C | -3.19239 | 3.20986 | 1.70988 |
| H | 4.83218 | -3.52057 | -4.23862 | C | -4.65932 | 3.45240 | 1.29502 |
| H | -1.25397 | 0.14724 | -3.37699 | C | -5.29369 | 4.65828 | 2.00839 |
| C | -3.69777 | -0.15672 | -1.57641 | C | -1.26620 | -2.33015 | -2.20624 |
| C | -4.64271 | -0.96784 | -2.49265 | C | -2.37044 | -3.10839 | -2.94787 |
| H | -4.05129 | -0.20267 | -0.53278 | C | -1.81767 | -4.29989 | -3.75802 |
| H | -3.73549 | 0.91136 | -1.87380 | C | -2.91007 | -5.07608 | -4.51296 |
| C | -6.09925 | -0.47023 | -2.43578 | C | -2.66979 | 0.20738 | -2.47410 |
| H | -4.27239 | -0.92253 | -3.53627 | C | -1.79610 | 0.70378 | -3.64020 |
| H | -4.60977 | -2.03645 | -2.19898 | C | -2.55490 | 1.64975 | -4.59365 |
| C | -7.04862 | -1.27856 | -3.33621 | C | -1.68671 | 2.14028 | -5.76439 |
| H | -6.45654 | -0.51026 | -1.38753 | C | 3.76223 | -4.96491 | 3.69678 |
| H | -6.13131 | 0.59864 | -2.72930 | H | -0.09380 | 1.52606 | -1.16919 |
| H | -8.08511 | -0.89961 | -3.27665 | H | 0.16298 | 0.36589 | 3.23948 |
| H | -6.73374 | -1.23003 | -4.39548 | H | -1.34600 | -0.41122 | 2.77484 |
| H | -7.06466 | -2.34511 | -3.04347 | H | -1.19676 | 2.22477 | 4.40639 |
| | | | | H | -2.68028 | 1.34203 | 3.99637 |
| 6m | | | | H | -1.84761 | -0.65798 | 5.29447 |
| 129 | | | | H | -0.36988 | 0.22597 | 5.70673 |
| XYZ | | | | H | -2.02567 | 0.33573 | 7.60709 |
| C | 2.18794 | -1.66921 | 1.49892 | H | -1.74964 | 1.96990 | 6.94563 |
| N | 0.90708 | -1.60088 | 1.04284 | H | -3.23939 | 1.08044 | 6.53153 |
| C | 0.12740 | -2.66798 | 1.35875 | H | -0.63432 | 3.55685 | 2.61630 |
| C | 0.55072 | -3.78058 | 2.08454 | H | 0.96091 | 2.84106 | 2.31678 |
| C | 1.89345 | -3.85152 | 2.55276 | H | 0.85843 | 3.57163 | -0.08964 |
| C | 2.71324 | -2.73376 | 2.22994 | H | -0.72940 | 4.30994 | 0.17642 |
| Ru | 0.21614 | 0.23999 | -0.23705 | H | 0.28159 | 5.86548 | 1.91372 |
| C | 3.13639 | 1.19762 | -0.64667 | H | 1.87232 | 5.14393 | 1.61340 |
| C | 2.03687 | 1.16936 | 0.16775 | H | 1.62226 | 7.29809 | 0.32766 |
| N | 2.36592 | -4.92919 | 3.27095 | H | 1.77987 | 5.92557 | -0.80375 |
| C | 1.49321 | -6.06864 | 3.53611 | H | 0.17993 | 6.65516 | -0.50448 |
| P | -0.80004 | 1.46464 | 1.33407 | H | -3.20619 | 1.11447 | 1.09838 |
| C | -0.00349 | 3.09035 | 1.83480 | H | -2.56685 | 2.22166 | -0.12282 |
| C | 0.23357 | 4.07201 | 0.67304 | H | -3.15029 | 3.05835 | 2.80461 |
| C | 0.90295 | 5.38282 | 1.13138 | H | -2.60729 | 4.12632 | 1.50203 |
| C | 1.13494 | 6.37067 | -0.02425 | H | -4.70735 | 3.60208 | 0.19778 |
| N | 3.09040 | 0.49092 | -1.89851 | H | -5.25366 | 2.54054 | 1.50629 |
| C | 3.62022 | 0.91184 | -3.11438 | H | -6.34229 | 4.80780 | 1.69397 |
| C | 3.07337 | -0.02156 | -4.21048 | H | -5.28884 | 4.52226 | 3.10596 |
| C | 2.43971 | -1.19809 | -3.44994 | H | -4.74105 | 5.58995 | 1.78624 |
| C | 2.15194 | -0.61709 | -2.04127 | H | -0.50217 | -1.99071 | -2.93213 |
| O | 4.37305 | 1.87264 | -3.30353 | H | -0.73091 | -3.00145 | -1.50547 |
| P | -1.72394 | -0.79890 | -1.18486 | H | -3.12050 | -3.48456 | -2.22376 |
| C | -3.14825 | -1.52764 | -0.13016 | H | -2.91606 | -2.43068 | -3.63447 |
| C | -4.61027 | -1.40637 | -0.60589 | H | -1.06186 | -3.92882 | -4.47910 |
| C | -5.60433 | -2.06071 | 0.37658 | H | -1.27722 | -4.98589 | -3.07513 |
| C | -7.06993 | -1.92748 | -0.07067 | H | -2.48383 | -5.91940 | -5.08562 |
| C | -0.89710 | 0.57620 | 2.99508 | H | -3.66235 | -5.49081 | -3.81618 |
| C | -1.60147 | 1.21238 | 4.20994 | H | -3.44339 | -4.42174 | -5.22733 |
| C | -1.44810 | 0.35809 | 5.48668 | H | -2.90274 | -2.59931 | 0.01778 |
| C | -2.15367 | 0.96785 | 6.70984 | H | -3.05842 | -1.05894 | 0.86849 |

| | | | | | | | |
|---|----------|----------|----------|----|----------|----------|----------|
| H | -4.87620 | -0.33808 | -0.72804 | C | 1.08458 | -0.06255 | 3.09947 |
| H | -4.73352 | -1.87020 | -1.60354 | C | 1.08298 | -0.29455 | 4.47479 |
| H | -5.34766 | -3.13298 | 0.49432 | C | -0.01774 | -0.96163 | 5.08186 |
| H | -5.47908 | -1.60499 | 1.37953 | C | -1.04726 | -1.37095 | 4.19025 |
| H | -7.75759 | -2.40520 | 0.65026 | Ru | 0.06651 | -0.04608 | -0.06662 |
| H | -7.36484 | -0.86567 | -0.16229 | C | -2.33710 | -2.20555 | -0.69126 |
| H | -7.23290 | -2.40375 | -1.05536 | C | -1.17110 | -1.74647 | -0.15052 |
| H | -3.09483 | 1.07880 | -1.94071 | N | -0.08300 | -1.19073 | 6.44416 |
| H | -3.52510 | -0.37604 | -2.86453 | C | 1.06915 | -0.88100 | 7.28484 |
| H | -0.90992 | 1.22392 | -3.22776 | P | 1.71634 | -1.56722 | -0.63498 |
| H | -1.41653 | -0.16192 | -4.22094 | C | 1.25618 | -2.85140 | -1.92293 |
| H | -3.45637 | 1.13746 | -4.98715 | C | 0.81044 | -2.27855 | -3.28074 |
| H | -2.92437 | 2.52149 | -4.01703 | C | 0.59069 | -3.38154 | -4.33504 |
| H | -2.24739 | 2.82588 | -6.42523 | C | 0.09612 | -2.81933 | -5.67831 |
| H | -0.79451 | 2.68085 | -5.39820 | N | -3.25694 | -1.37157 | -1.44777 |
| H | -1.33354 | 1.29374 | -6.38274 | C | -3.28283 | -1.30221 | -2.82412 |
| H | 2.29296 | -1.35658 | -1.23805 | C | -4.45109 | -0.37602 | -3.22229 |
| H | 1.07621 | -0.21937 | -2.01188 | C | -5.34636 | -0.33644 | -1.96900 |
| H | 2.32599 | 0.55000 | -4.79408 | C | -4.37920 | -0.67216 | -0.80237 |
| H | 3.87758 | -0.31072 | -4.90770 | O | -2.50738 | -1.86676 | -3.60573 |
| H | 3.15910 | -2.03188 | -3.35827 | P | 1.45138 | 1.92365 | -0.10265 |
| H | 1.53002 | -1.59739 | -3.92983 | C | 3.11730 | 1.95425 | 0.84416 |
| H | -0.90686 | -2.61589 | 1.00462 | C | 4.34376 | 2.68721 | 0.26369 |
| H | -0.16481 | -4.58378 | 2.27883 | C | 5.57220 | 2.60676 | 1.19422 |
| H | 2.81108 | -0.80323 | 1.24036 | C | 6.81366 | 3.30750 | 0.61603 |
| H | 3.75984 | -2.68476 | 2.54212 | C | 2.23094 | -2.66373 | 0.81680 |
| H | 2.04838 | -6.82159 | 4.11515 | C | 3.26815 | -3.79335 | 0.65992 |
| H | 0.60369 | -5.77165 | 4.12632 | C | 3.39164 | -4.65650 | 1.93393 |
| H | 1.14107 | -6.54608 | 2.59927 | C | 4.42917 | -5.78467 | 1.80298 |
| H | 3.94424 | -5.89293 | 4.25904 | C | 3.37359 | -0.94120 | -1.30724 |
| H | 4.45829 | -4.94193 | 2.83421 | C | 4.25783 | -1.86595 | -2.17042 |
| H | 4.00612 | -4.11090 | 4.35862 | C | 5.58057 | -1.18785 | -2.58541 |
| H | 2.22499 | 1.72377 | 1.10588 | C | 6.46724 | -2.08696 | -3.46381 |
| C | 4.44090 | 1.91377 | -0.33126 | C | 0.63715 | 3.45091 | 0.66710 |
| C | 5.67659 | 0.99051 | -0.22654 | C | 1.41077 | 4.77994 | 0.74963 |
| H | 4.64757 | 2.66981 | -1.11149 | C | 0.59281 | 5.90073 | 1.42629 |
| H | 4.30035 | 2.44956 | 0.62753 | C | 1.35115 | 7.23653 | 1.50802 |
| C | 6.96699 | 1.75765 | 0.11752 | C | 1.98816 | 2.63050 | -1.77746 |
| H | 5.49354 | 0.21031 | 0.54189 | C | 0.84681 | 2.84807 | -2.78525 |
| H | 5.81644 | 0.46173 | -1.18912 | C | 1.34764 | 3.38940 | -4.14003 |
| C | 8.20506 | 0.85009 | 0.21236 | C | 0.21504 | 3.59425 | -5.16022 |
| H | 7.13670 | 2.53678 | -0.65174 | C | -1.16172 | -2.01136 | 6.98618 |
| H | 6.82916 | 2.29749 | 1.07669 | H | -0.11480 | 0.10695 | -1.66351 |
| H | 9.11522 | 1.42620 | 0.46098 | H | 1.27405 | -3.08851 | 1.18197 |
| H | 8.07561 | 0.07568 | 0.99226 | H | 2.55805 | -1.96493 | 1.61139 |
| H | 8.38985 | 0.32853 | -0.74532 | H | 2.99989 | -4.44947 | -0.19111 |
| | | | | H | 4.26232 | -3.36564 | 0.42412 |

7m

148

XYZ

| | | | | | | | |
|---|----------|----------|---------|---|---------|----------|---------|
| C | -0.94419 | -1.09310 | 2.82648 | H | 4.17109 | -6.46877 | 0.97330 |
| N | 0.09643 | -0.43465 | 2.24220 | H | 5.43791 | -5.37973 | 1.59796 |

| | | | | | | | |
|---|----------|----------|----------|---|----------|----------|---------------------|
| H | 2.11596 | -3.53754 | -2.05214 | H | 1.94119 | 0.04298 | 5.06191 |
| H | 0.42675 | -3.44059 | -1.48976 | H | -1.72753 | -1.41759 | 2.13125 |
| H | -0.13368 | -1.72470 | -3.13970 | H | -1.92855 | -1.91187 | 4.54547 |
| H | 1.56003 | -1.55394 | -3.66248 | H | 0.82181 | -1.10842 | 8.33293 |
| H | 1.52965 | -3.95557 | -4.48348 | H | 1.96947 | -1.46712 | 7.00473 |
| H | -0.15804 | -4.09886 | -3.94546 | H | 1.32678 | 0.19368 | 7.22505 |
| H | -0.05399 | -3.62257 | -6.42373 | H | -1.05948 | -2.06327 | 8.08078 |
| H | -0.86491 | -2.29565 | -5.53519 | H | -2.14973 | -1.56719 | 6.75993 |
| H | 0.82318 | -2.10061 | -6.10355 | H | -1.14988 | -3.04637 | 6.58524 |
| H | 3.95236 | -0.58565 | -0.43206 | H | -0.69858 | -2.59408 | 0.39862 |
| H | 3.12209 | -0.03948 | -1.89391 | C | -2.76076 | -3.67576 | -0.66348 |
| H | 4.48911 | -2.80309 | -1.63025 | C | -4.10726 | -4.00942 | 0.02146 |
| H | 3.70696 | -2.16499 | -3.08270 | H | -2.80767 | -4.04126 | -1.71215 |
| H | 5.35322 | -0.24798 | -3.12783 | H | -1.95955 | -4.25692 | -0.16586 |
| H | 6.14035 | -0.88877 | -1.67597 | C | -4.40478 | -5.52105 | 0.05741 |
| H | 7.40361 | -1.57559 | -3.75185 | H | -4.10226 | -3.61199 | 1.05793 |
| H | 6.74265 | -3.01742 | -2.93306 | H | -4.93567 | -3.49716 | -0.50841 |
| H | 5.94338 | -2.37741 | -4.39324 | C | -5.74265 | -5.86265 | 0.73525 |
| H | -0.31037 | 3.60895 | 0.11909 | H | -4.40226 | -5.91672 | -0.97809 |
| H | 0.33782 | 3.12655 | 1.68364 | H | -3.57939 | -6.04156 | 0.58415 |
| H | 2.35493 | 4.64108 | 1.31282 | H | -5.92547 | -6.95273 | 0.75112 |
| H | 1.70234 | 5.11654 | -0.26522 | H | -5.76333 | -5.50410 | 1.78183 |
| H | -0.35554 | 6.04383 | 0.87071 | H | -6.59101 | -5.38894 | 0.20638 |
| H | 0.30330 | 5.57427 | 2.44553 | C | -2.18560 | 1.89841 | -0.97337 |
| H | 0.74362 | 8.01952 | 1.99719 | C | -2.24053 | 1.64704 | 1.31084 |
| H | 2.28814 | 7.12982 | 2.08611 | C | -3.20716 | 2.84698 | -0.94459 |
| H | 1.62302 | 7.60399 | 0.50085 | H | -1.73860 | 1.58577 | -1.91898 |
| H | 2.88824 | 2.36719 | 1.84814 | C | -3.27301 | 2.57774 | 1.44320 |
| H | 3.38354 | 0.89322 | 1.00644 | H | -1.84116 | 1.15129 | 2.19952 |
| H | 4.60998 | 2.25064 | -0.71859 | C | -3.78737 | 3.23984 | 0.29515 |
| H | 4.10633 | 3.75175 | 0.07435 | H | -3.54731 | 3.26991 | -1.89324 |
| H | 5.31640 | 3.05422 | 2.17612 | H | -3.66300 | 2.78180 | 2.44378 |
| H | 5.80770 | 1.54217 | 1.39557 | N | -1.66401 | 1.29400 | 0.13137 |
| H | 7.67632 | 3.23592 | 1.30296 | N | -4.78128 | 4.19772 | 0.37537 |
| H | 7.11379 | 2.85582 | -0.34762 | C | -5.43926 | 4.44841 | 1.65341 |
| H | 6.61830 | 4.38069 | 0.43348 | H | -4.70792 | 4.77058 | 2.41896 |
| H | 2.71314 | 1.91552 | -2.21116 | H | -6.17346 | 5.25876 | 1.52826 |
| H | 2.54135 | 3.57709 | -1.62366 | H | -5.97086 | 3.55342 | 2.03958 |
| H | 0.32370 | 1.88504 | -2.93826 | C | -5.36694 | 4.73744 | -0.84796 |
| H | 0.09837 | 3.55349 | -2.36990 | H | -4.59581 | 5.22076 | -1.47732 |
| H | 1.88403 | 4.34724 | -3.98147 | H | -5.87085 | 3.95833 | -1.45763 |
| H | 2.09545 | 2.68499 | -4.55661 | H | -6.11168 | 5.50314 | -0.58266 |
| H | 0.59966 | 3.97993 | -6.12185 | | | | [7m-1] [‡] |
| H | -0.31100 | 2.64386 | -5.36580 | | | | 148 |
| H | -0.53427 | 4.31709 | -4.78552 | | | | XYZ |
| H | -4.84913 | -1.32163 | -0.04201 | | | | |
| H | -4.02435 | 0.23755 | -0.28513 | C | -2.16428 | -1.25326 | 1.68131 |
| H | -4.03629 | 0.62020 | -3.47122 | N | -0.83101 | -0.97851 | 1.70030 |
| H | -4.94956 | -0.75935 | -4.12790 | C | -0.26451 | -0.93991 | 2.94097 |
| H | -6.12891 | -1.11378 | -2.04315 | C | -0.96544 | -1.09702 | 4.13643 |
| H | -5.85276 | 0.63248 | -1.81544 | C | -2.37056 | -1.33637 | 4.11404 |
| H | 1.93677 | 0.44804 | 2.64323 | C | -2.95195 | -1.43429 | 2.82096 |

| | | | | | | | |
|----|----------|----------|----------|---|----------|----------|----------|
| Ru | 0.24593 | -0.05526 | -0.04478 | H | 3.07801 | -3.04597 | -4.52493 |
| C | -2.67983 | -1.27363 | -1.96636 | H | 1.42565 | -2.48278 | -4.82958 |
| C | -1.34687 | -1.19773 | -1.64549 | H | 2.99759 | -1.59334 | -6.58578 |
| N | -3.11661 | -1.46535 | 5.27724 | H | 2.32675 | -0.24488 | -5.62883 |
| C | -2.42992 | -1.57238 | 6.56073 | H | 3.99233 | -0.81040 | -5.32768 |
| P | 1.61224 | -1.91401 | -0.31810 | H | 3.30204 | -2.20387 | 1.42379 |
| C | 1.84811 | -2.57029 | -2.07899 | H | 3.77025 | -0.92775 | 0.29985 |
| C | 2.36635 | -1.55154 | -3.10855 | H | 4.08694 | -3.93619 | -0.33488 |
| C | 2.43703 | -2.14065 | -4.53216 | H | 4.59958 | -2.58962 | -1.36201 |
| C | 2.96730 | -1.14436 | -5.57629 | H | 6.15535 | -1.79379 | 0.46996 |
| N | -3.52279 | -0.10768 | -2.08260 | H | 5.65503 | -3.15884 | 1.48075 |
| C | -3.76518 | 0.51480 | -3.29938 | H | 7.83242 | -3.67169 | 0.31332 |
| C | -4.79114 | 1.63775 | -3.04275 | H | 6.55985 | -4.78502 | -0.25817 |
| C | -5.42118 | 1.27649 | -1.68456 | H | 7.06292 | -3.40910 | -1.27541 |
| C | -4.32746 | 0.43661 | -0.97493 | H | 0.90898 | 3.55280 | -0.28350 |
| O | -3.24102 | 0.22977 | -4.37846 | H | 0.73771 | 3.20046 | 1.43408 |
| P | 1.96740 | 1.41887 | 0.30460 | H | 3.08340 | 3.99934 | 1.87177 |
| C | 3.01362 | 1.14187 | 1.89769 | H | 3.33514 | 4.28496 | 0.14033 |
| C | 4.52098 | 1.46708 | 1.95044 | H | 1.46661 | 5.97867 | 0.14694 |
| C | 5.13147 | 1.21391 | 3.34532 | H | 1.20357 | 5.68830 | 1.87369 |
| C | 6.64003 | 1.50805 | 3.41056 | H | 2.61070 | 7.75721 | 1.52687 |
| C | 0.87072 | -3.45375 | 0.49900 | H | 3.56126 | 6.50877 | 2.37731 |
| C | 1.54848 | -4.83348 | 0.38850 | H | 3.82674 | 6.79993 | 0.63818 |
| C | 0.70036 | -5.95469 | 1.02664 | H | 2.47986 | 1.71920 | 2.68118 |
| C | 1.36728 | -7.33834 | 0.94497 | H | 2.86948 | 0.07912 | 2.16283 |
| C | 3.39406 | -1.96462 | 0.34449 | H | 5.06419 | 0.84925 | 1.20702 |
| C | 4.44340 | -2.88951 | -0.30718 | H | 4.70661 | 2.52000 | 1.66410 |
| C | 5.79954 | -2.84295 | 0.42782 | H | 4.59923 | 1.83623 | 4.09313 |
| C | 6.87308 | -3.72459 | -0.23258 | H | 4.94584 | 0.16060 | 3.63738 |
| C | 1.47540 | 3.22803 | 0.60946 | H | 7.04807 | 1.31789 | 4.42002 |
| C | 2.56121 | 4.27111 | 0.93356 | H | 7.20132 | 0.87548 | 2.69779 |
| C | 1.98358 | 5.69489 | 1.08568 | H | 6.85293 | 2.56322 | 3.15630 |
| C | 3.05151 | 6.74866 | 1.42539 | H | 3.74553 | 0.69447 | -1.23500 |
| C | 3.33337 | 1.69346 | -0.99385 | H | 4.16624 | 2.29365 | -0.57840 |
| C | 2.80900 | 2.34723 | -2.28431 | H | 1.91714 | 1.78680 | -2.63259 |
| C | 3.86045 | 2.40710 | -3.41035 | H | 2.46228 | 3.37819 | -2.06738 |
| C | 3.34082 | 3.10018 | -4.68135 | H | 4.76397 | 2.93541 | -3.04367 |
| C | -4.50108 | -1.91881 | 5.18925 | H | 4.18610 | 1.37700 | -3.65755 |
| H | -0.70294 | -0.26499 | -1.80594 | H | 4.11035 | 3.12572 | -5.47425 |
| H | -0.16109 | -3.50802 | 0.09890 | H | 2.45690 | 2.57506 | -5.08845 |
| H | 0.75043 | -3.18374 | 1.56527 | H | 3.03987 | 4.14421 | -4.47256 |
| H | 1.73831 | -5.09117 | -0.67218 | H | -4.75393 | -0.38370 | -0.36963 |
| H | 2.53769 | -4.81135 | 0.88664 | H | -3.70173 | 1.05713 | -0.30667 |
| H | 0.49919 | -5.70015 | 2.08671 | H | -4.24542 | 2.59993 | -3.00133 |
| H | -0.28897 | -5.98856 | 0.52794 | H | -5.50672 | 1.69687 | -3.87922 |
| H | 0.73724 | -8.12002 | 1.40691 | H | -6.32291 | 0.65675 | -1.84292 |
| H | 1.54968 | -7.63273 | -0.10545 | H | -5.71735 | 2.15373 | -1.08451 |
| H | 2.34327 | -7.34384 | 1.46554 | H | 0.81488 | -0.76044 | 2.95109 |
| H | 2.51399 | -3.45375 | -2.04892 | H | -0.40994 | -1.04334 | 5.07643 |
| H | 0.85911 | -2.94175 | -2.41024 | H | -2.60559 | -1.33561 | 0.68071 |
| H | 1.70568 | -0.66315 | -3.09727 | H | -4.01284 | -1.66441 | 2.68760 |
| H | 3.37342 | -1.19034 | -2.81352 | H | -3.17954 | -1.63343 | 7.36488 |

| | | | | | | | |
|----|----------|----------|----------|---|----------|----------|----------|
| H | -1.77435 | -2.46714 | 6.62596 | C | 4.55026 | -5.27607 | 1.42196 |
| H | -1.80834 | -0.67737 | 6.74971 | P | 0.01282 | 1.95354 | 0.63750 |
| H | -4.94256 | -1.92376 | 6.19792 | C | 0.55266 | 3.50341 | -0.28995 |
| H | -5.09950 | -1.23035 | 4.56382 | C | -0.40036 | 3.95916 | -1.40875 |
| H | -4.59373 | -2.94009 | 4.76159 | C | 0.12715 | 5.19366 | -2.16866 |
| H | -0.82136 | -2.15268 | -1.73396 | C | -0.82488 | 5.66050 | -3.28262 |
| C | -3.34074 | -2.57275 | -2.40421 | N | -0.09216 | -1.06911 | -2.54413 |
| C | -4.57679 | -3.02317 | -1.59119 | C | 0.80707 | -0.61370 | -3.38248 |
| H | -3.64521 | -2.45820 | -3.46728 | C | 0.71186 | -1.12863 | -4.80108 |
| H | -2.58306 | -3.37993 | -2.38191 | C | -0.71050 | -1.73742 | -4.79344 |
| C | -5.17997 | -4.34592 | -2.10232 | C | -0.99034 | -1.98192 | -3.28229 |
| H | -4.29613 | -3.13491 | -0.52340 | O | 1.74497 | 0.24665 | -3.03473 |
| H | -5.35570 | -2.23511 | -1.63253 | P | -2.05870 | -0.94133 | 0.24681 |
| C | -6.41413 | -4.79847 | -1.30404 | C | -2.23056 | -1.10905 | 2.13129 |
| H | -5.44987 | -4.23230 | -3.17135 | C | -3.47282 | -1.80810 | 2.71702 |
| H | -4.40469 | -5.13760 | -2.06587 | C | -3.40746 | -1.94909 | 4.25267 |
| H | -6.82301 | -5.74900 | -1.69225 | C | -4.64853 | -2.63491 | 4.84871 |
| H | -6.16584 | -4.95186 | -0.23694 | C | 1.19536 | 1.96542 | 2.13307 |
| H | -7.22070 | -4.04288 | -1.35223 | C | 1.87774 | 3.26728 | 2.60361 |
| C | -1.40985 | 2.38432 | -1.00012 | C | 2.76175 | 3.04727 | 3.84943 |
| C | -1.68241 | 2.03733 | 1.26210 | C | 3.46125 | 4.33127 | 4.32710 |
| C | -2.20159 | 3.53186 | -0.97095 | C | -1.60022 | 2.57393 | 1.40594 |
| H | -0.94066 | 2.05603 | -1.93240 | C | -1.67041 | 3.95816 | 2.08003 |
| C | -2.47706 | 3.17759 | 1.39263 | C | -3.09965 | 4.30904 | 2.54626 |
| H | -1.44724 | 1.42940 | 2.13974 | C | -3.19262 | 5.68405 | 3.22898 |
| C | -2.77036 | 3.98009 | 0.25583 | C | -2.20086 | -2.79934 | -0.17633 |
| H | -2.34226 | 4.08496 | -1.90286 | C | -3.55074 | -3.38314 | -0.63664 |
| H | -2.85099 | 3.43630 | 2.38652 | C | -3.46197 | -4.88903 | -0.96185 |
| N | -1.12760 | 1.61554 | 0.08968 | C | -4.79563 | -5.48122 | -1.44849 |
| N | -3.55463 | 5.11923 | 0.33464 | C | -3.76523 | -0.23610 | -0.16319 |
| C | -3.93417 | 5.63706 | 1.64574 | C | -3.96231 | 0.17412 | -1.63350 |
| H | -3.05585 | 5.92002 | 2.26384 | C | -5.27930 | 0.93882 | -1.87321 |
| H | -4.56542 | 6.52874 | 1.51124 | C | -5.47677 | 1.34979 | -3.34217 |
| H | -4.52430 | 4.88985 | 2.20894 | C | 3.96807 | -4.35427 | 3.69491 |
| C | -3.65754 | 6.00119 | -0.82480 | H | 2.93484 | 1.47562 | -0.15549 |
| H | -2.67784 | 6.42943 | -1.12484 | H | 1.98059 | 1.22634 | 1.88431 |
| H | -4.07756 | 5.46156 | -1.69392 | H | 0.61769 | 1.52316 | 2.97162 |
| H | -4.34017 | 6.83089 | -0.58547 | H | 2.50410 | 3.67479 | 1.78615 |
| | | | | H | 1.12555 | 4.04669 | 2.83177 |
| | | | | H | 2.13919 | 2.63673 | 4.67035 |
| | | | | H | 3.52110 | 2.27178 | 3.62392 |
| | | | | H | 4.08386 | 4.14545 | 5.22109 |
| C | 1.38541 | -1.56091 | 1.77381 | H | 4.11917 | 4.74432 | 3.54006 |
| N | 1.20769 | -1.49053 | 0.43023 | H | 2.72444 | 5.11374 | 4.58847 |
| C | 1.90949 | -2.40127 | -0.29246 | H | 0.70099 | 4.32444 | 0.43732 |
| C | 2.74885 | -3.37207 | 0.25329 | H | 1.53680 | 3.26147 | -0.72901 |
| C | 2.92135 | -3.45139 | 1.66322 | H | -0.54847 | 3.11992 | -2.11369 |
| C | 2.20220 | -2.48721 | 2.42283 | H | -1.40078 | 4.19640 | -0.99119 |
| Ru | -0.08380 | 0.06717 | -0.67471 | H | 0.29746 | 6.02578 | -1.45499 |
| C | 2.87701 | 1.15884 | -1.20646 | H | 1.11800 | 4.95425 | -2.60331 |
| C | 1.68230 | 0.63849 | -1.60215 | H | -0.42541 | 6.54233 | -3.81611 |
| N | 3.73109 | -4.40237 | 2.25590 | H | -0.98612 | 4.86036 | -4.02879 |

| | | | | | | | |
|---|----------|----------|----------|----|----------|----------|------------------------|
| H | -1.81485 | 5.93652 | -2.87295 | H | 3.01894 | -4.44431 | 4.25748 |
| H | -1.91013 | 1.80408 | 2.13714 | H | -0.95668 | 1.09184 | -1.57885 |
| H | -2.33715 | 2.52236 | 0.58147 | C | 4.15535 | 1.32132 | -2.00160 |
| H | -0.99260 | 3.99016 | 2.95520 | C | 5.34733 | 0.54875 | -1.38743 |
| H | -1.31871 | 4.74435 | 1.38433 | H | 3.99900 | 0.98995 | -3.04381 |
| H | -3.78214 | 4.28171 | 1.67317 | H | 4.43577 | 2.39731 | -2.05434 |
| H | -3.46072 | 3.52402 | 3.24107 | C | 6.67570 | 0.76559 | -2.13643 |
| H | -4.22652 | 5.90849 | 3.54807 | H | 5.47252 | 0.85385 | -0.32738 |
| H | -2.54764 | 5.73055 | 4.12637 | H | 5.10089 | -0.53197 | -1.36481 |
| H | -2.86991 | 6.49151 | 2.54566 | C | 7.85671 | 0.00084 | -1.51462 |
| H | -1.43526 | -2.98975 | -0.94636 | H | 6.55294 | 0.45957 | -3.19512 |
| H | -1.85421 | -3.34411 | 0.72453 | H | 6.90859 | 1.84957 | -2.15860 |
| H | -4.32503 | -3.22927 | 0.14039 | H | 8.79601 | 0.17718 | -2.07023 |
| H | -3.91102 | -2.84442 | -1.53554 | H | 8.02439 | 0.31066 | -0.46589 |
| H | -2.68167 | -5.04810 | -1.73319 | H | 7.66894 | -1.08946 | -1.51131 |
| H | -3.11693 | -5.43702 | -0.06198 | | | | [8az-10z] [‡] |
| H | -4.70152 | -6.55835 | -1.67677 | | | | 129 |
| H | -5.58667 | -5.36883 | -0.68377 | | | | XYZ |
| H | -5.14653 | -4.97347 | -2.36621 | | | | |
| H | -1.31783 | -1.65080 | 2.44829 | C | 1.13371 | 1.10483 | 2.30039 |
| H | -2.14413 | -0.09457 | 2.56405 | N | 1.44825 | 0.19057 | 1.34732 |
| H | -4.38726 | -1.24384 | 2.44841 | C | 2.65572 | -0.41899 | 1.49879 |
| H | -3.58807 | -2.81563 | 2.27115 | C | 3.53965 | -0.14678 | 2.54492 |
| H | -2.49850 | -2.52178 | 4.52679 | C | 3.20660 | 0.80812 | 3.54291 |
| H | -3.28420 | -0.94485 | 4.70585 | C | 1.94312 | 1.44395 | 3.38386 |
| H | -4.57400 | -2.72478 | 5.94756 | Ru | 0.07435 | -0.18027 | -0.53049 |
| H | -5.56825 | -2.06458 | 4.62075 | C | 2.56441 | -0.20505 | -2.56907 |
| H | -4.77872 | -3.65322 | 4.43700 | C | 1.51779 | -0.24405 | -1.73805 |
| H | -3.86113 | 0.66282 | 0.47839 | N | 4.04627 | 1.09563 | 4.60190 |
| H | -4.56266 | -0.93510 | 0.15335 | C | 5.37673 | 0.49634 | 4.65263 |
| H | -3.09791 | 0.79005 | -1.94970 | P | -0.42042 | 2.04054 | -0.79780 |
| H | -3.94925 | -0.72743 | -2.28015 | C | -0.74882 | 2.51703 | -2.58614 |
| H | -6.13681 | 0.31770 | -1.54315 | C | -2.06596 | 1.99184 | -3.18377 |
| H | -5.29294 | 1.84344 | -1.23196 | C | -2.20302 | 2.32021 | -4.68460 |
| H | -6.41986 | 1.90818 | -3.48433 | C | -3.52486 | 1.81932 | -5.29007 |
| H | -4.64818 | 1.99429 | -3.68954 | N | 0.82059 | -2.22973 | -1.30557 |
| H | -5.50957 | 0.46428 | -4.00445 | C | 1.77118 | -3.13506 | -0.89404 |
| H | -0.77472 | -3.03295 | -2.99695 | C | 1.54466 | -4.48636 | -1.62005 |
| H | -2.03896 | -1.77575 | -3.00886 | C | 0.66942 | -4.11905 | -2.82677 |
| H | 0.85428 | -0.32241 | -5.54141 | C | -0.04446 | -2.82834 | -2.34377 |
| H | 1.49931 | -1.88582 | -4.99033 | O | 2.68352 | -2.96583 | -0.06270 |
| H | -0.79741 | -2.65626 | -5.39769 | P | -1.73918 | -1.04802 | 0.88024 |
| H | -1.43260 | -1.00250 | -5.19155 | C | -2.02351 | -0.29985 | 2.59208 |
| H | 1.77636 | -2.33502 | -1.37663 | C | -3.00256 | -0.95542 | 3.58638 |
| H | 3.26986 | -4.05389 | -0.42395 | C | -3.16283 | -0.12866 | 4.88014 |
| H | 0.83696 | -0.81461 | 2.35521 | C | -4.11940 | -0.77705 | 5.89508 |
| H | 2.27948 | -2.44423 | 3.51222 | C | 1.00244 | 3.20180 | -0.32467 |
| H | 5.11063 | -5.96893 | 2.06786 | C | 1.27066 | 4.47967 | -1.14604 |
| H | 3.92155 | -5.88240 | 0.74183 | C | 2.44507 | 5.29971 | -0.57181 |
| H | 5.27841 | -4.70997 | 0.80452 | C | 2.75721 | 6.56138 | -1.39430 |
| H | 4.61079 | -5.19991 | 3.98298 | C | -1.90122 | 2.80054 | 0.08969 |
| H | 4.46731 | -3.41448 | 4.01091 | C | -2.24906 | 4.28443 | -0.13787 |

| | | | | | | | |
|---|----------|----------|----------|---|----------|----------|------------|
| C | -3.52432 | 4.71702 | 0.61629 | H | -2.16716 | 0.01395 | 5.34605 |
| C | -3.87560 | 6.19942 | 0.40528 | H | -3.52820 | 0.88541 | 4.62038 |
| C | -1.36725 | -2.85512 | 1.27503 | H | -4.21654 | -0.16306 | 6.80858 |
| C | -2.51775 | -3.84202 | 1.55818 | H | -5.13129 | -0.90318 | 5.46695 |
| C | -1.99869 | -5.25634 | 1.89271 | H | -3.76026 | -1.77743 | 6.20038 |
| C | -3.12914 | -6.26824 | 2.14487 | H | -3.84098 | -0.00878 | 0.24918 |
| C | -3.50644 | -1.06577 | 0.23126 | H | -4.15358 | -1.61388 | 0.94322 |
| C | -3.68609 | -1.63423 | -1.18742 | H | -3.01814 | -1.09000 | -1.88162 |
| C | -5.14459 | -1.55231 | -1.68083 | H | -3.35509 | -2.69204 | -1.21444 |
| C | -5.33247 | -2.12430 | -3.09598 | H | -5.80508 | -2.09210 | -0.97222 |
| C | 3.70208 | 2.16498 | 5.53225 | H | -5.47576 | -0.49428 | -1.66194 |
| H | 2.91702 | 0.83280 | -2.71451 | H | -6.38448 | -2.05148 | -3.42614 |
| H | 1.90072 | 2.55816 | -0.34316 | H | -4.71103 | -1.58016 | -3.83116 |
| H | 0.84688 | 3.46867 | 0.73917 | H | -5.04031 | -3.19013 | -3.13861 |
| H | 1.50258 | 4.20986 | -2.19474 | H | -1.03933 | -3.06423 | -1.90923 |
| H | 0.36919 | 5.12189 | -1.18440 | H | -0.22065 | -2.10130 | -3.15429 |
| H | 2.21312 | 5.58512 | 0.47416 | H | 2.51228 | -4.95429 | -1.86725 |
| H | 3.34575 | 4.65606 | -0.52037 | H | 1.02116 | -5.16769 | -0.91946 |
| H | 3.60017 | 7.12852 | -0.95993 | H | -0.04457 | -4.90770 | -3.12368 |
| H | 3.02827 | 6.30310 | -2.43484 | H | 1.30254 | -3.89893 | -3.70638 |
| H | 1.88388 | 7.23883 | -1.43650 | H | 2.88411 | -1.19813 | 0.76050 |
| H | -0.71024 | 3.61877 | -2.68267 | H | 4.48446 | -0.69580 | 2.57345 |
| H | 0.10608 | 2.10392 | -3.15475 | H | 0.16425 | 1.59919 | 2.17848 |
| H | -2.11716 | 0.89615 | -3.03767 | H | 1.58844 | 2.20033 | 4.08899 |
| H | -2.93017 | 2.42585 | -2.64018 | H | 5.88629 | 0.82757 | 5.57022 |
| H | -2.11967 | 3.41608 | -4.83283 | H | 5.31587 | -0.60840 | 4.67759 |
| H | -1.35020 | 1.87061 | -5.23102 | H | 6.00174 | 0.78617 | 3.78288 |
| H | -3.59364 | 2.05879 | -6.36664 | H | 4.47736 | 2.22970 | 6.31071 |
| H | -3.62137 | 0.72275 | -5.18383 | H | 3.63019 | 3.15345 | 5.03196 |
| H | -4.39608 | 2.28013 | -4.78786 | H | 2.73573 | 1.96382 | 6.03412 |
| H | -1.73006 | 2.61876 | 1.16948 | H | -0.91394 | -0.35280 | -1.79114 |
| H | -2.76314 | 2.16176 | -0.18690 | C | 3.38080 | -1.28134 | -3.25259 |
| H | -1.40483 | 4.92270 | 0.18897 | C | 4.77475 | -1.48754 | -2.61245 |
| H | -2.38696 | 4.48096 | -1.21944 | H | 2.82403 | -2.23415 | -3.22614 |
| H | -4.37257 | 4.08342 | 0.28807 | H | 3.51051 | -1.01779 | -4.32395 |
| H | -3.39324 | 4.51635 | 1.69876 | C | 5.64329 | -2.50506 | -3.37602 |
| H | -4.79175 | 6.47981 | 0.95548 | H | 5.30533 | -0.51414 | -2.56401 |
| H | -3.05921 | 6.85802 | 0.75586 | H | 4.62696 | -1.82519 | -1.56976 |
| H | -4.04600 | 6.42145 | -0.66457 | C | 7.02295 | -2.72177 | -2.73150 |
| H | -0.76296 | -3.21590 | 0.42322 | H | 5.10636 | -3.47359 | -3.42949 |
| H | -0.66509 | -2.82393 | 2.13206 | H | 5.77244 | -2.16776 | -4.42496 |
| H | -3.15043 | -3.48481 | 2.39281 | H | 7.62489 | -3.45768 | -3.29548 |
| H | -3.18368 | -3.90677 | 0.67518 | H | 7.59808 | -1.77746 | -2.69279 |
| H | -1.35757 | -5.61343 | 1.06219 | H | 6.92212 | -3.09260 | -1.69478 |
| H | -1.34078 | -5.20226 | 2.78303 | | | | 10z |
| H | -2.72861 | -7.27056 | 2.38096 | | | | 129 |
| H | -3.76676 | -5.95410 | 2.99238 | | | | XYZ |
| H | -3.78162 | -6.36871 | 1.25745 | | | | |
| H | -1.01949 | -0.23969 | 3.05326 | C | 1.27784 | -2.00203 | 1.60366 |
| H | -2.33428 | 0.74851 | 2.40632 | N | 1.39809 | -1.28455 | 0.45538 |
| H | -3.99934 | -1.08903 | 3.12194 | C | 2.58382 | -1.42263 | -0.20431 |
| H | -2.64246 | -1.96763 | 3.85297 | C | 3.62245 | -2.24774 | 0.22940 |

| | | | | | | | |
|----|----------|----------|----------|---|----------|----------|----------|
| C | 3.49676 | -2.99395 | 1.43278 | H | -2.13172 | 3.02365 | -0.75623 |
| C | 2.26399 | -2.83568 | 2.12747 | H | -3.24184 | 3.24926 | 0.60870 |
| Ru | -0.21135 | 0.06113 | -0.39950 | H | -2.28753 | 5.56944 | 0.99774 |
| C | 2.19829 | 2.06628 | 0.05267 | H | -1.22038 | 5.34943 | -0.39789 |
| C | 1.24249 | 1.50270 | -0.73973 | H | -3.26950 | 6.66341 | -1.05511 |
| N | 4.50152 | -3.82207 | 1.89785 | H | -3.25189 | 5.09916 | -1.91518 |
| C | 5.79563 | -3.83598 | 1.22118 | H | -4.32340 | 5.33086 | -0.50876 |
| P | -0.99936 | 1.17151 | 1.33731 | H | -2.70754 | -0.37489 | 2.12641 |
| C | -1.14294 | 3.04154 | 1.17585 | H | -3.38644 | 0.84927 | 1.04362 |
| C | -2.24316 | 3.53386 | 0.21928 | H | -2.67839 | 1.28562 | 4.03200 |
| C | -2.20824 | 5.06234 | 0.01477 | H | -3.33244 | 2.54303 | 2.96656 |
| C | -3.32287 | 5.56834 | -0.91634 | H | -5.40592 | 1.15359 | 2.59658 |
| N | 1.28562 | 1.89458 | -2.15277 | H | -4.75075 | -0.11242 | 3.64717 |
| C | 1.81193 | 1.13154 | -3.16335 | H | -6.37456 | 1.33814 | 4.91893 |
| C | 1.45131 | 1.79319 | -4.50320 | H | -4.73745 | 1.51391 | 5.60743 |
| C | 0.95757 | 3.20006 | -4.11477 | H | -5.40103 | 2.78698 | 4.54861 |
| C | 0.49304 | 3.03064 | -2.64753 | H | -0.39003 | -3.54320 | -1.56037 |
| O | 2.44844 | 0.06630 | -3.03181 | H | -1.91912 | -3.47647 | -2.46858 |
| P | -1.76938 | -1.74195 | -0.67728 | H | -1.07540 | -1.41599 | -3.69766 |
| C | -2.08120 | -3.05785 | 0.65412 | H | 0.41751 | -1.44339 | -2.74616 |
| C | -2.85764 | -4.33884 | 0.28835 | H | 1.01414 | -3.68723 | -3.67462 |
| C | -2.95922 | -5.33061 | 1.46676 | H | -0.48392 | -3.71840 | -4.62347 |
| C | -3.72928 | -6.61309 | 1.10867 | H | 1.50826 | -2.97714 | -6.02830 |
| C | 0.01678 | 0.95024 | 2.92745 | H | 0.27788 | -1.68935 | -5.93054 |
| C | 0.21021 | 2.13317 | 3.89939 | H | 1.75150 | -1.58654 | -4.92202 |
| C | 1.02960 | 1.73236 | 5.14391 | H | -1.07512 | -3.33234 | 1.02762 |
| C | 1.24517 | 2.89828 | 6.12372 | H | -2.58791 | -2.54228 | 1.49450 |
| C | -2.73162 | 0.71416 | 1.92515 | H | -3.88099 | -4.08333 | -0.05010 |
| C | -3.32150 | 1.44975 | 3.14511 | H | -2.36613 | -4.84634 | -0.56451 |
| C | -4.75493 | 0.98304 | 3.47726 | H | -1.93815 | -5.59413 | 1.80907 |
| C | -5.35052 | 1.69330 | 4.70455 | H | -3.45013 | -4.82907 | 2.32511 |
| C | -1.10362 | -2.85169 | -2.05204 | H | -3.78236 | -7.30675 | 1.96717 |
| C | -0.37185 | -2.09372 | -3.17675 | H | -4.76570 | -6.38381 | 0.79827 |
| C | 0.28583 | -3.03889 | -4.20250 | H | -3.24307 | -7.14995 | 0.27292 |
| C | 0.99894 | -2.28212 | -5.33567 | H | -4.05401 | -0.93642 | -0.38692 |
| C | -3.54328 | -1.42798 | -1.23908 | H | -4.04954 | -2.40058 | -1.39659 |
| C | -3.68809 | -0.55427 | -2.49818 | H | -3.07346 | 0.35937 | -2.37826 |
| C | -5.15215 | -0.16979 | -2.79234 | H | -3.27710 | -1.09441 | -3.37432 |
| C | -5.30651 | 0.67912 | -4.06537 | H | -5.76517 | -1.08942 | -2.88505 |
| C | 4.37635 | -4.44276 | 3.21262 | H | -5.56277 | 0.38504 | -1.92452 |
| H | 2.18911 | 1.79136 | 1.11886 | H | -6.36312 | 0.94532 | -4.24992 |
| H | 1.00622 | 0.59328 | 2.58914 | H | -4.73090 | 1.62033 | -3.98956 |
| H | -0.44738 | 0.09852 | 3.46557 | H | -4.93777 | 0.13508 | -4.95503 |
| H | 0.72778 | 2.96197 | 3.37872 | H | -0.58544 | 2.78668 | -2.56761 |
| H | -0.76764 | 2.53534 | 4.22906 | H | 0.68738 | 3.92466 | -2.02769 |
| H | 0.51579 | 0.89918 | 5.66490 | H | 2.31769 | 1.78537 | -5.18550 |
| H | 2.01087 | 1.33218 | 4.81940 | H | 0.65632 | 1.18559 | -4.97826 |
| H | 1.83136 | 2.58200 | 7.00540 | H | 0.14994 | 3.58029 | -4.76345 |
| H | 1.78929 | 3.73101 | 5.64077 | H | 1.79341 | 3.92154 | -4.16230 |
| H | 0.28073 | 3.29826 | 6.48858 | H | 2.68356 | -0.84042 | -1.12987 |
| H | -1.29962 | 3.47942 | 2.18019 | H | 4.53208 | -2.29006 | -0.37476 |
| H | -0.15201 | 3.37469 | 0.81713 | H | 0.32545 | -1.88514 | 2.12941 |

| | | | | | | | |
|----|----------|----------|----------|---|----------|----------|----------|
| H | 2.06629 | -3.35371 | 3.06937 | C | 1.03743 | 1.93566 | 2.21566 |
| H | 6.45285 | -4.56621 | 1.71735 | C | 1.82865 | 3.22941 | 2.50349 |
| H | 5.68698 | -4.14221 | 0.16360 | C | 2.82625 | 3.05353 | 3.66760 |
| H | 6.29486 | -2.84502 | 1.24328 | C | 3.64375 | 4.32386 | 3.95718 |
| H | 5.26081 | -5.07020 | 3.40069 | C | -1.82079 | 2.41150 | 1.78330 |
| H | 4.30128 | -3.69448 | 4.02943 | C | -1.81254 | 3.73932 | 2.56607 |
| H | 3.48381 | -5.09555 | 3.26178 | C | -3.15775 | 4.01777 | 3.27004 |
| H | -1.26713 | 1.01096 | -1.21008 | C | -3.16055 | 5.33534 | 4.06356 |
| C | 3.32656 | 2.99127 | -0.35423 | C | -2.31771 | -2.53440 | -0.79761 |
| C | 4.72305 | 2.34014 | -0.20363 | C | -3.56553 | -2.96509 | -1.59693 |
| H | 3.19251 | 3.31114 | -1.40534 | C | -3.46613 | -4.42497 | -2.08812 |
| H | 3.30482 | 3.91339 | 0.26775 | C | -4.68528 | -4.86696 | -2.91537 |
| C | 5.88439 | 3.29045 | -0.55100 | C | -3.46733 | 0.18835 | -1.04513 |
| H | 4.84637 | 1.97489 | 0.83719 | C | -3.00452 | 0.52957 | -2.47079 |
| H | 4.76439 | 1.44362 | -0.85267 | C | -3.97110 | 1.47570 | -3.21040 |
| C | 7.26786 | 2.63366 | -0.40766 | C | -3.52830 | 1.78164 | -4.65125 |
| H | 5.75640 | 3.65795 | -1.58923 | C | 2.36682 | -5.14641 | 4.40902 |
| H | 5.83092 | 4.18766 | 0.09897 | H | 2.64587 | 1.79332 | -0.24384 |
| H | 8.08173 | 3.33673 | -0.66302 | H | 1.74314 | 1.12381 | 1.95569 |
| H | 7.43882 | 2.28509 | 0.62834 | H | 0.51158 | 1.59898 | 3.13159 |
| H | 7.36167 | 1.75534 | -1.07328 | H | 2.38683 | 3.53809 | 1.59771 |
| | | | | H | 1.14115 | 4.06471 | 2.74125 |
| | | | | H | 2.27245 | 2.75114 | 4.57925 |
| | | | | H | 3.51164 | 2.21484 | 3.43319 |
| | | | | H | 4.34892 | 4.16888 | 4.79370 |
| C | 0.27414 | -2.74278 | 1.57923 | H | 4.23438 | 4.62869 | 3.07334 |
| N | 0.87345 | -2.08902 | 0.54159 | H | 2.98583 | 5.17137 | 4.22614 |
| C | 2.21601 | -2.31199 | 0.41755 | H | 0.31042 | 4.30888 | 0.54139 |
| C | 2.95890 | -3.12492 | 1.26977 | H | 1.00752 | 3.26712 | -0.72338 |
| C | 2.33315 | -3.78394 | 2.36535 | H | -1.27995 | 3.03575 | -1.78472 |
| C | 0.93584 | -3.55825 | 2.49760 | H | -1.96313 | 4.12198 | -0.56028 |
| Ru | -0.02557 | -0.12847 | -0.08048 | H | -0.38325 | 5.95640 | -1.31523 |
| C | 2.75278 | 1.20215 | -1.16463 | H | 0.26093 | 4.87525 | -2.56080 |
| C | 1.73038 | 0.33204 | -1.44005 | H | -1.46899 | 6.42441 | -3.54426 |
| N | 3.03360 | -4.59764 | 3.23269 | H | -2.04508 | 4.73787 | -3.63672 |
| C | 4.48406 | -4.71411 | 3.10674 | H | -2.68819 | 5.83199 | -2.38353 |
| P | -0.27205 | 1.89974 | 0.83278 | H | -2.02157 | 1.57064 | 2.47431 |
| C | 0.08371 | 3.47456 | -0.15017 | H | -2.65239 | 2.41346 | 1.05207 |
| C | -1.03564 | 3.88893 | -1.12210 | H | -1.00793 | 3.72354 | 3.32707 |
| C | -0.65343 | 5.11205 | -1.98115 | H | -1.58174 | 4.58370 | 1.88694 |
| C | -1.77348 | 5.55158 | -2.93876 | H | -3.96703 | 4.03808 | 2.51276 |
| N | 1.82511 | -0.50672 | -2.61851 | H | -3.39478 | 3.17425 | 3.94899 |
| C | 2.82747 | -1.42227 | -2.90127 | H | -4.13443 | 5.50865 | 4.55589 |
| C | 2.40030 | -2.22125 | -4.14449 | H | -2.38346 | 5.32989 | 4.85048 |
| C | 1.24901 | -1.40022 | -4.74815 | H | -2.95984 | 6.20006 | 3.40395 |
| C | 0.67070 | -0.65014 | -3.52762 | H | -1.42331 | -2.61271 | -1.44429 |
| O | 3.86722 | -1.61074 | -2.25302 | H | -2.14749 | -3.25339 | 0.02863 |
| P | -2.22048 | -0.79892 | -0.01976 | H | -4.48069 | -2.85349 | -0.98614 |
| C | -3.28161 | -1.02948 | 1.55623 | H | -3.69942 | -2.30319 | -2.47425 |
| C | -4.63703 | -1.76484 | 1.52918 | H | -2.54398 | -4.54394 | -2.69175 |
| C | -5.35752 | -1.72739 | 2.89447 | H | -3.34671 | -5.09654 | -1.21406 |
| C | -6.70171 | -2.47528 | 2.89085 | H | -4.58719 | -5.91467 | -3.25267 |

| | | | | | | | |
|---|----------|----------|----------|----|----------|----------|----------|
| H | -5.61808 | -4.79055 | -2.32597 | | | | 129 |
| H | -4.80837 | -4.23550 | -3.81502 | | | | XYZ |
| H | -2.61332 | -1.52164 | 2.29126 | C | -0.48884 | -2.56903 | -2.25494 |
| H | -3.43180 | -0.00203 | 1.94282 | N | -0.85527 | -1.74162 | -1.22866 |
| H | -5.30324 | -1.31986 | 0.76362 | C | -2.20102 | -1.67648 | -0.97934 |
| H | -4.48697 | -2.82240 | 1.23533 | C | -3.17134 | -2.36055 | -1.70955 |
| H | -4.69282 | -2.16138 | 3.66852 | C | -2.78728 | -3.21868 | -2.77665 |
| H | -5.52043 | -0.67132 | 3.18942 | C | -1.38762 | -3.29478 | -3.03445 |
| H | -7.19378 | -2.42909 | 3.87923 | Ru | 0.30516 | -0.12623 | -0.54786 |
| H | -7.39837 | -2.04165 | 2.14931 | C | -2.91484 | 1.55635 | 1.67042 |
| H | -6.56538 | -3.54245 | 2.63407 | C | -2.14765 | 0.45634 | 1.83831 |
| H | -3.64823 | 1.12614 | -0.48300 | N | -3.71261 | -3.94758 | -3.50525 |
| H | -4.43292 | -0.35343 | -1.07447 | C | -5.13762 | -3.69770 | -3.30721 |
| H | -1.99355 | 0.97966 | -2.41171 | P | 0.93424 | 2.04030 | -0.66608 |
| H | -2.88743 | -0.40064 | -3.06287 | C | 0.77459 | 3.34524 | 0.70688 |
| H | -4.98719 | 1.03180 | -3.22320 | C | 1.88794 | 3.31114 | 1.76933 |
| H | -4.05802 | 2.42285 | -2.64082 | C | 1.68464 | 4.37122 | 2.87147 |
| H | -4.23429 | 2.46480 | -5.15731 | C | 2.80712 | 4.37973 | 3.92294 |
| H | -2.52974 | 2.25728 | -4.66938 | N | -2.53241 | -0.72556 | 2.52528 |
| H | -3.46572 | 0.85710 | -5.25542 | C | -3.64731 | -1.51069 | 2.22267 |
| H | -0.13740 | -1.21813 | -3.02363 | C | -3.46042 | -2.86687 | 2.92267 |
| H | 0.26375 | 0.34308 | -3.78515 | C | -2.28676 | -2.65071 | 3.89487 |
| H | 3.26084 | -2.37498 | -4.81635 | C | -1.50081 | -1.48114 | 3.25949 |
| H | 2.06532 | -3.22209 | -3.80668 | O | -4.58523 | -1.19402 | 1.48521 |
| H | 0.48451 | -2.01083 | -5.25791 | P | 2.19752 | -1.10028 | -0.00672 |
| H | 1.64423 | -0.67352 | -5.48098 | C | 3.56845 | -1.01334 | -1.32061 |
| H | 2.72691 | -1.79314 | -0.39726 | C | 4.85389 | -1.85561 | -1.19449 |
| H | 4.02853 | -3.22839 | 1.07192 | C | 5.86197 | -1.56316 | -2.32694 |
| H | -0.80235 | -2.58699 | 1.67710 | C | 7.13237 | -2.42625 | -2.24352 |
| H | 0.35396 | -4.01891 | 3.30001 | C | -0.38294 | 2.61932 | -1.91947 |
| H | 4.85507 | -5.42279 | 3.86259 | C | -1.04504 | 4.00657 | -1.77937 |
| H | 4.76738 | -5.10187 | 2.10999 | C | -2.08721 | 4.27145 | -2.88596 |
| H | 4.99845 | -3.74270 | 3.25722 | C | -2.76392 | 5.64698 | -2.75969 |
| H | 3.08113 | -5.76460 | 4.97348 | C | 2.53998 | 2.60182 | -1.48865 |
| H | 1.98551 | -4.35220 | 5.08389 | C | 2.68504 | 4.06561 | -1.94716 |
| H | 1.51395 | -5.79145 | 4.12168 | C | 4.03972 | 4.33927 | -2.63484 |
| H | 0.42842 | 0.77133 | -1.42071 | C | 4.19421 | 5.79510 | -3.10630 |
| C | 4.02294 | 1.47269 | -1.93651 | C | 2.01887 | -2.97807 | 0.26116 |
| C | 5.30552 | 1.09078 | -1.15916 | C | 3.01509 | -3.73899 | 1.16090 |
| H | 4.01231 | 0.94090 | -2.90386 | C | 2.71704 | -5.25265 | 1.21213 |
| H | 4.06910 | 2.56081 | -2.16796 | C | 3.68092 | -6.02714 | 2.12707 |
| C | 6.59875 | 1.43709 | -1.91973 | C | 3.17611 | -0.55484 | 1.51470 |
| H | 5.30740 | 1.60861 | -0.17708 | C | 2.37215 | -0.54899 | 2.82586 |
| H | 5.26780 | 0.00547 | -0.95653 | C | 3.19983 | -0.08231 | 4.04020 |
| C | 7.87274 | 1.06425 | -1.14271 | C | 2.40008 | -0.08926 | 5.35409 |
| H | 6.59465 | 0.91070 | -2.89503 | C | -3.28136 | -4.67207 | -4.69575 |
| H | 6.61223 | 2.52137 | -2.15455 | H | -2.46599 | 2.35367 | 1.05932 |
| H | 8.78623 | 1.31635 | -1.71202 | H | -1.17920 | 1.84405 | -1.89420 |
| H | 7.92239 | 1.59933 | -0.17554 | H | 0.08635 | 2.52206 | -2.91782 |
| H | 7.90104 | -0.01950 | -0.92452 | H | -1.54043 | 4.09169 | -0.79230 |
| | | | | H | -0.27591 | 4.80297 | -1.80853 |
| | | | | H | -1.59590 | 4.18784 | -3.87618 |

| | | | | | | | |
|---|----------|----------|----------|---|----------|----------|----------|
| H | -2.85645 | 3.47402 | -2.85758 | H | -3.22066 | -3.61128 | 2.13842 |
| H | -3.50071 | 5.81112 | -3.56667 | H | -1.65583 | -3.54459 | 4.03191 |
| H | -3.29657 | 5.74345 | -1.79530 | H | -2.66525 | -2.34962 | 4.88819 |
| H | -2.02102 | 6.46472 | -2.81247 | H | -2.51033 | -1.00946 | -0.16913 |
| H | 0.71897 | 4.35873 | 0.26266 | H | -4.21445 | -2.22387 | -1.41576 |
| H | -0.20061 | 3.15365 | 1.19499 | H | 0.58535 | -2.62408 | -2.44873 |
| H | 1.92792 | 2.30469 | 2.22951 | H | -0.98981 | -3.91355 | -3.84285 |
| H | 2.87548 | 3.47689 | 1.29217 | H | -5.71473 | -4.38143 | -3.94856 |
| H | 1.61071 | 5.37307 | 2.40225 | H | -5.43023 | -3.89085 | -2.25825 |
| H | 0.70986 | 4.19425 | 3.36826 | H | -5.42625 | -2.65508 | -3.55747 |
| H | 2.63190 | 5.14930 | 4.69651 | H | -4.14237 | -5.21017 | -5.12105 |
| H | 2.88382 | 3.40253 | 4.43521 | H | -2.86751 | -4.00133 | -5.47859 |
| H | 3.78889 | 4.58960 | 3.45846 | H | -2.50809 | -5.42196 | -4.44282 |
| H | 2.66843 | 1.91749 | -2.34976 | H | -1.11498 | 0.39818 | 1.39813 |
| H | 3.35461 | 2.35072 | -0.77964 | C | -4.29355 | 1.83583 | 2.20821 |
| H | 1.86966 | 4.32263 | -2.65226 | C | -5.34960 | 2.00994 | 1.09079 |
| H | 2.57651 | 4.75097 | -1.08325 | H | -4.61311 | 1.02580 | 2.88673 |
| H | 4.86090 | 4.08571 | -1.93463 | H | -4.25578 | 2.77109 | 2.80830 |
| H | 4.15204 | 3.65441 | -3.49903 | C | -6.74547 | 2.36844 | 1.63375 |
| H | 5.17129 | 5.96073 | -3.59509 | H | -5.01532 | 2.79982 | 0.38630 |
| H | 3.40586 | 6.06533 | -3.83348 | H | -5.39813 | 1.06442 | 0.52099 |
| H | 4.11999 | 6.50084 | -2.25799 | C | -7.79282 | 2.55010 | 0.52214 |
| H | 0.99284 | -3.11328 | 0.65004 | H | -7.07772 | 1.57137 | 2.32821 |
| H | 2.01588 | -3.42930 | -0.75166 | H | -6.68050 | 3.29672 | 2.23755 |
| H | 4.05382 | -3.59000 | 0.81161 | H | -8.78662 | 2.79953 | 0.93661 |
| H | 2.97776 | -3.33377 | 2.19095 | H | -7.50437 | 3.36356 | -0.16983 |
| H | 1.67407 | -5.40636 | 1.55515 | H | -7.90013 | 1.62667 | -0.07654 |
| H | 2.76402 | -5.66821 | 0.18530 | | | | |
| H | 3.44136 | -7.10574 | 2.14747 | | | | |
| H | 4.72772 | -5.92277 | 1.78571 | | | | |
| H | 3.63215 | -5.65322 | 3.16686 | | | | |
| H | 3.05732 | -1.24782 | -2.27405 | | | | |
| H | 3.82787 | 0.06090 | -1.38476 | | | | |
| H | 5.34776 | -1.66916 | -0.22003 | | | | |
| H | 4.60231 | -2.93424 | -1.21582 | | | | |
| H | 5.36556 | -1.72610 | -3.30467 | | | | |
| H | 6.13797 | -0.49000 | -2.29991 | | | | |
| H | 7.83290 | -2.19629 | -3.06665 | | | | |
| H | 7.66865 | -2.25900 | -1.29071 | | | | |
| H | 6.88789 | -3.50338 | -2.30240 | | | | |
| H | 3.52927 | 0.47180 | 1.29331 | | | | |
| H | 4.07888 | -1.18892 | 1.62316 | | | | |
| H | 1.48426 | 0.09974 | 2.69187 | | | | |
| H | 1.97586 | -1.56443 | 3.03105 | | | | |
| H | 4.09293 | -0.73057 | 4.14708 | | | | |
| H | 3.58600 | 0.93873 | 3.84613 | | | | |
| H | 3.01521 | 0.25113 | 6.20680 | | | | |
| H | 1.51946 | 0.57681 | 5.28911 | | | | |
| H | 2.03246 | -1.10519 | 5.59228 | | | | |
| H | -0.72078 | -1.82480 | 2.54861 | | | | |
| H | -1.01349 | -0.83265 | 4.00790 | | | | |
| H | -4.40052 | -3.18844 | 3.40095 | | | | |

Table S10. Cartesian coordinates (\AA) of the optimized structures involved in catalytic system $1_{\text{catONIOM}}\{\text{BP86/LANL2DZ(Ru)/6-31G*}(H, C, N, O \& P)\text{:HF/STO-3G}\}$ level.

| | 1_c | | | | | | | |
|----|----------|----------|----------|---|---------|----------|----------|--|
| | 147 | | | | | | | |
| | XYZ | | | | | | | |
| Ru | -0.00002 | -0.00003 | 0.53246 | C | 2.46178 | -1.57107 | -2.61064 | |
| P | -1.24323 | 1.98436 | 0.02572 | C | 2.23921 | -4.01393 | -1.97578 | |
| P | -1.48472 | -1.82867 | 0.39644 | H | 0.64097 | -2.61560 | -2.24512 | |
| C | 0.17136 | 3.14746 | 0.39190 | C | 2.52275 | -1.95586 | -4.10632 | |
| H | 0.29435 | 3.99352 | -0.30204 | H | 3.47542 | -1.51316 | -2.22208 | |
| H | 0.08371 | 3.54818 | 1.41429 | H | 2.01028 | -0.58697 | -2.50535 | |
| P | 1.48471 | 1.82858 | 0.39655 | C | 2.29243 | -4.40975 | -3.47059 | |
| P | 1.24324 | -1.98435 | 0.02571 | H | 3.24833 | -4.04666 | -1.57434 | |
| C | -0.17133 | -3.14751 | 0.39182 | H | 1.64853 | -4.75006 | -1.43527 | |
| H | -0.29427 | -3.99361 | -0.30209 | C | 3.09138 | -3.37841 | -4.29510 | |
| H | -0.08372 | -3.54817 | 1.41423 | H | 3.13884 | -1.23905 | -4.64569 | |
| C | -2.61283 | -2.26434 | -1.15579 | H | 1.52171 | -1.90902 | -4.53070 | |
| C | -2.77009 | -3.76393 | -1.51785 | H | 2.74598 | -5.39393 | -3.57173 | |
| C | -4.00649 | -1.59981 | -1.07907 | H | 1.27885 | -4.47682 | -3.86131 | |
| H | -2.07461 | -1.79429 | -1.97713 | C | 3.06713 | -3.65011 | -5.34847 | |
| C | -3.55931 | -3.94111 | -2.83667 | C | 4.13260 | -3.39482 | -3.97863 | |
| H | -3.28789 | -4.29653 | -0.72558 | C | 2.71034 | -2.52456 | 1.17162 | |
| H | -1.79841 | -4.23217 | -1.64210 | C | 2.75936 | -4.03235 | 1.53167 | |
| C | -4.79502 | -1.77161 | -2.39704 | H | 4.09435 | -2.06898 | 0.65319 | |
| H | -4.58565 | -2.03608 | -0.26992 | H | 1.80710 | -4.35739 | 1.94033 | |
| H | -3.89765 | -0.54126 | -0.86913 | C | 5.20394 | -2.35098 | 1.69128 | |
| C | -4.94125 | -3.26095 | -2.76793 | H | 4.33980 | -2.58831 | -0.26915 | |
| H | -3.67898 | -5.00238 | -3.04598 | H | 4.07696 | -1.00668 | 0.43584 | |
| H | -2.98790 | -3.51055 | -3.65681 | C | 5.24490 | -3.84355 | 2.07677 | |
| H | -5.77829 | -1.31677 | -2.29425 | H | 3.89335 | -5.38246 | 2.79034 | |
| H | -4.27642 | -1.24977 | -3.19871 | H | 3.62112 | -3.80276 | 3.50349 | |
| H | -5.44951 | -3.35768 | -3.72513 | H | 6.16637 | -2.04672 | 1.28459 | |
| H | -5.55411 | -3.76141 | -2.02069 | H | 5.02245 | -1.75356 | 2.58223 | |
| C | -2.48649 | -2.29901 | 1.99482 | H | 5.99310 | -4.00601 | 2.84981 | |
| C | -3.40812 | -1.16524 | 2.48711 | H | 5.53763 | -4.43328 | 1.21011 | |
| C | -3.24574 | -3.64821 | 1.99202 | H | 2.50332 | -1.98031 | 2.08980 | |
| H | -1.68211 | -2.38033 | 2.72343 | C | 2.61285 | 2.26428 | -1.15569 | |
| C | -3.96213 | -1.47835 | 3.89531 | H | 2.77006 | 3.76387 | -1.51776 | |
| H | -4.24238 | -1.02607 | 1.80449 | C | 4.00654 | 1.59982 | -1.07897 | |
| H | -2.83593 | -0.24105 | 2.51737 | H | 2.07466 | 1.79419 | -1.97703 | |
| C | -3.79379 | -3.96948 | 3.40208 | C | 3.55925 | 3.94108 | -2.83659 | |
| H | -4.08065 | -3.61286 | 1.29736 | H | 3.28785 | 4.29649 | -0.72550 | |
| H | -2.58848 | -4.45464 | 1.67314 | H | 1.79836 | 4.23209 | -1.64201 | |
| C | -4.70076 | -2.83366 | 3.92082 | C | 4.79506 | 1.77165 | -2.39695 | |
| H | -4.63889 | -0.68590 | 4.20898 | H | 4.58568 | 2.03611 | -0.26983 | |
| H | -3.13865 | -1.50358 | 4.60614 | H | 3.89776 | 0.54126 | -0.86904 | |
| H | -4.35122 | -4.90395 | 3.37443 | C | 4.94123 | 3.26098 | -2.76785 | |
| H | -2.96074 | -4.10731 | 4.08865 | H | 3.67887 | 5.00235 | -3.04591 | |
| H | -5.02912 | -3.05782 | 4.93375 | H | 2.98785 | 3.51048 | -3.65672 | |
| H | -5.59045 | -2.77152 | 3.29685 | H | 5.77835 | 1.31684 | -2.29416 | |
| C | 1.63783 | -2.59874 | -1.80648 | H | 4.27648 | 1.24977 | -3.19861 | |
| | | | | H | 5.44947 | 3.35772 | -3.72506 | |

| | | | | | | | |
|---|----------|---------|----------|----|----------|----------|----------------------|
| H | 5.55407 | 3.76148 | -2.02062 | | | | |
| C | 2.48652 | 2.29890 | 1.99490 | | | | 2_c |
| C | 3.40819 | 1.16513 | 2.48712 | | | | 160 |
| C | 3.24577 | 3.64810 | 1.99207 | | | | XYZ |
| H | 1.68218 | 2.38021 | 2.72355 | Ru | 0.02360 | 0.05065 | 0.09523 |
| C | 3.96227 | 1.47822 | 3.89530 | P | 1.09349 | -2.00115 | 0.42126 |
| H | 4.24242 | 1.02599 | 1.80446 | N | -0.04945 | 0.14555 | -3.40138 |
| H | 2.83601 | 0.24094 | 2.51739 | C | 0.07760 | -1.01550 | -4.11445 |
| C | 3.79389 | 3.96936 | 3.40211 | C | -0.07162 | -0.66315 | -5.61041 |
| H | 4.08065 | 3.61276 | 1.29737 | C | -0.01692 | 0.87783 | -5.64789 |
| H | 2.58848 | 4.45452 | 1.67323 | C | -0.44095 | 1.29690 | -4.21307 |
| C | 4.70089 | 2.83354 | 3.92080 | O | 0.24699 | -2.15467 | -3.65027 |
| H | 4.63905 | 0.68577 | 4.20892 | P | 1.67718 | 1.68175 | -0.09195 |
| H | 3.13883 | 1.50344 | 4.60618 | H | -1.53567 | 1.47700 | -4.15533 |
| H | 4.35131 | 4.90383 | 3.37444 | H | 0.06365 | 2.22155 | -3.87884 |
| H | 2.96087 | 4.10717 | 4.08872 | H | 0.71367 | -1.16258 | -6.20155 |
| H | 5.02929 | 3.05770 | 4.93372 | H | -1.04397 | -1.05990 | -5.96053 |
| H | 5.59055 | 2.77142 | 3.29679 | H | -0.66563 | 1.32775 | -6.41826 |
| C | -2.71034 | 2.52449 | 1.17170 | H | 1.01725 | 1.21545 | -5.83994 |
| C | -2.75936 | 4.03226 | 1.53185 | H | -0.06812 | 0.13564 | -2.34418 |
| C | -4.09435 | 2.06895 | 0.65325 | C | -0.28663 | -3.06817 | -0.28240 |
| H | -2.50330 | 1.98016 | 2.08983 | H | -0.11762 | -3.17134 | -1.36661 |
| C | -3.86415 | 4.31591 | 2.57544 | H | -0.47734 | -4.05907 | 0.15696 |
| H | -2.95341 | 4.62927 | 0.64548 | P | -1.58895 | -1.69774 | -0.12439 |
| H | -1.80710 | 4.35726 | 1.94053 | C | -2.72457 | -2.16894 | 1.38949 |
| C | -5.20393 | 2.35087 | 1.69139 | C | -4.07305 | -1.41156 | 1.35902 |
| H | -4.33982 | 2.58838 | -0.26903 | C | -2.97123 | -3.67743 | 1.64194 |
| H | -4.07697 | 1.00668 | 0.43580 | H | -2.16247 | -1.78466 | 2.23649 |
| C | -5.24489 | 3.84340 | 2.07699 | C | -4.86282 | -1.62243 | 2.67034 |
| H | -3.89333 | 5.38227 | 2.79065 | H | -4.68054 | -1.75980 | 0.52782 |
| H | -3.62108 | 3.80251 | 3.50368 | H | -3.89665 | -0.34905 | 1.21540 |
| H | -6.16636 | 2.04663 | 1.28468 | C | -3.76338 | -3.89469 | 2.95251 |
| H | -5.02242 | 1.75337 | 2.58229 | H | -3.52704 | -4.11684 | 0.81880 |
| H | -5.99308 | 4.00580 | 2.85007 | H | -2.02698 | -4.20887 | 1.71688 |
| H | -5.53764 | 4.43320 | 1.21039 | C | -5.09858 | -3.12234 | 2.94248 |
| C | -1.63788 | 2.59886 | -1.80638 | H | -5.81712 | -1.10310 | 2.60834 |
| C | -2.46196 | 1.57133 | -2.61057 | H | -4.30756 | -1.18735 | 3.49891 |
| C | -2.23914 | 4.01411 | -1.97553 | H | -3.95225 | -4.95764 | 3.08955 |
| H | -0.64104 | 2.61566 | -2.24510 | H | -3.16138 | -3.56001 | 3.79505 |
| C | -2.52297 | 1.95626 | -4.10622 | H | -5.60642 | -3.25063 | 3.89615 |
| H | -3.47558 | 1.51348 | -2.22197 | H | -5.74684 | -3.53170 | 2.17002 |
| H | -2.01055 | 0.58718 | -2.50539 | C | -2.56001 | -1.98780 | -1.77106 |
| C | -2.29240 | 4.41007 | -3.47030 | C | -3.35401 | -3.31256 | -1.86893 |
| H | -3.24824 | 4.04690 | -1.57402 | C | -3.45954 | -0.79704 | -2.16870 |
| H | -1.64837 | 4.75014 | -1.43497 | H | -1.74844 | -2.03986 | -2.49219 |
| C | -3.09148 | 3.37887 | -4.29486 | C | -3.91046 | -3.51035 | -3.29755 |
| H | -3.13915 | 1.23955 | -4.64562 | H | -4.18740 | -3.30779 | -1.17116 |
| H | -1.52195 | 1.90936 | -4.53066 | H | -2.71569 | -4.15588 | -1.61425 |
| H | -2.74588 | 5.39430 | -3.57132 | C | -4.03226 | -0.98653 | -3.59171 |
| H | -1.27884 | 4.47709 | -3.86107 | H | -4.28618 | -0.69440 | -1.47023 |
| H | -3.06726 | 3.65066 | -5.34821 | H | -2.87846 | 0.12074 | -2.13138 |
| H | -4.13268 | 3.39534 | -3.97833 | C | -4.79842 | -2.32035 | -3.71797 |

| | | | | | | | |
|---|----------|----------|----------|---|----------|----------|----------|
| H | -4.48543 | -4.43337 | -3.34153 | H | 4.30015 | 0.45764 | -1.42755 |
| H | -3.08120 | -3.60787 | -3.99541 | H | 2.82818 | -0.21230 | -2.12034 |
| H | -4.69443 | -0.15732 | -3.83349 | C | 4.97783 | 2.06523 | -3.65370 |
| H | -3.21645 | -0.97258 | -4.31098 | H | 4.84721 | 4.19376 | -3.25323 |
| H | -5.13717 | -2.45598 | -4.74308 | H | 3.38526 | 3.50249 | -3.93376 |
| H | -5.68292 | -2.28976 | -3.08435 | H | 4.68593 | -0.07837 | -3.79661 |
| C | 0.96141 | -2.41971 | 2.34427 | H | 3.28833 | 0.86658 | -4.27460 |
| C | 1.06916 | -3.89462 | 2.81150 | H | 5.33742 | 2.18245 | -4.67397 |
| C | 1.89465 | -1.52935 | 3.18945 | H | 5.84988 | 1.95158 | -3.01241 |
| H | -0.05193 | -2.08476 | 2.54051 | C | 2.81849 | 2.07287 | 1.44360 |
| C | 0.70664 | -4.01410 | 4.31047 | C | 4.08867 | 1.18949 | 1.44628 |
| H | 2.07819 | -4.26895 | 2.67567 | C | 3.20307 | 3.55254 | 1.69444 |
| H | 0.40630 | -4.53339 | 2.23292 | H | 2.19626 | 1.75382 | 2.27601 |
| C | 1.56223 | -1.64843 | 4.69392 | C | 4.86796 | 1.33122 | 2.77305 |
| H | 2.93473 | -1.80678 | 3.03306 | H | 4.74319 | 1.47589 | 0.62691 |
| H | 1.76595 | -0.49777 | 2.87047 | H | 3.81641 | 0.14728 | 1.29856 |
| C | 1.61670 | -3.11477 | 5.17343 | C | 3.98192 | 3.69965 | 3.02286 |
| H | 0.80273 | -5.05039 | 4.62920 | H | 3.81772 | 3.93235 | 0.88357 |
| H | -0.33175 | -3.72340 | 4.45690 | H | 2.31280 | 4.17329 | 1.74623 |
| H | 2.26032 | -1.04690 | 5.27303 | C | 5.23772 | 2.80395 | 3.04555 |
| H | 0.56524 | -1.24973 | 4.87062 | H | 5.77068 | 0.72481 | 2.73271 |
| H | 1.31344 | -3.17462 | 6.21678 | H | 4.25775 | 0.95447 | 3.59137 |
| H | 2.64111 | -3.47719 | 5.11119 | H | 4.26799 | 4.74041 | 3.16209 |
| C | 2.77088 | -2.64130 | -0.31484 | H | 3.33122 | 3.42735 | 3.85164 |
| C | 3.58021 | -3.64791 | 0.53773 | H | 5.73404 | 2.88897 | 4.01007 |
| C | 2.56281 | -3.23134 | -1.73066 | H | 5.93885 | 3.14636 | 2.28679 |
| H | 3.37369 | -1.74200 | -0.41076 | C | -2.45676 | 2.93970 | -0.76039 |
| C | 4.94464 | -3.95095 | -0.12497 | C | -3.85250 | 2.56745 | -0.20723 |
| H | 3.02569 | -4.57739 | 0.64206 | C | -2.36355 | 4.47251 | -0.96441 |
| H | 3.75807 | -3.25340 | 1.53377 | H | -2.35388 | 2.47547 | -1.73932 |
| C | 3.91885 | -3.52228 | -2.41031 | C | -4.97530 | 3.05843 | -1.14873 |
| H | 2.00920 | -4.16420 | -1.65382 | H | -3.99508 | 3.01659 | 0.77248 |
| H | 1.97334 | -2.55986 | -2.35188 | H | -3.93088 | 1.49065 | -0.08755 |
| C | 4.77147 | -4.48759 | -1.56078 | C | -3.47965 | 4.96589 | -1.91402 |
| H | 5.48610 | -4.67665 | 0.47883 | H | -2.45979 | 4.98797 | -0.01348 |
| H | 5.53976 | -3.04005 | -0.14932 | H | -1.39953 | 4.74387 | -1.38546 |
| H | 3.74490 | -3.95198 | -3.39460 | C | -4.87788 | 4.57920 | -1.38908 |
| H | 4.46162 | -2.59011 | -2.55271 | H | -5.94423 | 2.81342 | -0.71831 |
| H | 5.74705 | -4.62810 | -2.02170 | H | -4.89984 | 2.53655 | -2.10063 |
| H | 4.28499 | -5.46041 | -1.52444 | H | -3.41163 | 6.04659 | -2.02210 |
| P | -1.00549 | 2.14152 | 0.25472 | H | -3.33122 | 4.52996 | -2.90011 |
| C | 0.50006 | 3.15873 | -0.26284 | H | -5.63885 | 4.89062 | -2.10164 |
| H | 0.43824 | 3.42556 | -1.33099 | H | -5.07034 | 5.10492 | -0.45577 |
| H | 0.70858 | 4.07594 | 0.31051 | C | -1.14905 | 2.66737 | 2.14136 |
| C | 2.70122 | 1.90422 | -1.72849 | C | -1.52194 | 4.13553 | 2.46539 |
| C | 3.60537 | 3.15807 | -1.80706 | C | -2.05840 | 1.71001 | 2.93800 |
| C | 3.49541 | 0.64531 | -2.13429 | C | -1.39439 | 4.41079 | 3.98232 |
| H | 1.90865 | 2.02321 | -2.46204 | H | -2.54639 | 4.33773 | 2.16307 |
| C | 4.19360 | 3.32387 | -3.22729 | H | -0.87916 | 4.82668 | 1.92460 |
| H | 4.42773 | 3.07265 | -1.10168 | C | -1.94128 | 1.97081 | 4.45605 |
| H | 3.04146 | 4.05138 | -1.54632 | H | -3.09593 | 1.83600 | 2.63700 |
| C | 4.09666 | 0.80234 | -3.54935 | H | -1.76096 | 0.68737 | 2.71396 |

| | | | | | | | |
|----|----------|--|----------|---|----------|----------|----------|
| C | -2.26948 | 3.43918 | 4.80192 | H | 2.82611 | 0.91851 | -2.32654 |
| H | -1.68541 | 5.43808 | 4.19373 | C | 5.48149 | 1.43966 | -2.81163 |
| H | -0.35393 | 4.29925 | 4.28145 | H | 5.51473 | 0.00455 | -1.19701 |
| H | -2.61452 | 1.30771 | 4.99591 | H | 4.71966 | 1.51344 | -0.80677 |
| H | -0.92853 | 1.74182 | 4.78175 | C | 4.30895 | -0.21394 | -4.33284 |
| H | -2.11702 | 3.61327 | 5.86518 | H | 4.33723 | -1.69243 | -2.76751 |
| H | -3.31862 | 3.63408 | 4.58758 | H | 2.73512 | -1.33709 | -3.38195 |
| H | -0.12953 | 2.49775 | 2.47977 | C | 5.65476 | 0.45057 | -3.98127 |
| | | | | H | 6.44780 | 1.85329 | -2.52949 |
| | | [2 _c -3 _c] [‡] | | H | 4.85312 | 2.26842 | -3.13192 |
| | | 160 | | H | 4.45510 | -0.95580 | -5.11546 |
| | | XYZ | | H | 3.62326 | 0.53782 | -4.71845 |
| Ru | 0.07525 | 0.01052 | -0.32708 | H | 6.05104 | 0.97162 | -4.85029 |
| P | 1.23291 | 1.30611 | 1.19028 | H | 6.37547 | -0.31626 | -3.70337 |
| N | -0.16452 | -0.19706 | -2.72700 | C | 0.94388 | 1.18473 | 3.14100 |
| C | -0.24946 | 0.66705 | -3.80664 | C | 2.18117 | 1.29437 | 4.07236 |
| C | -0.29714 | -0.16697 | -5.10580 | C | -0.16750 | 2.13774 | 3.64062 |
| C | -0.59885 | -1.59754 | -4.63269 | H | 0.57049 | 0.17022 | 3.25056 |
| C | -0.09332 | -1.60608 | -3.16099 | C | 1.80597 | 1.01671 | 5.54730 |
| O | -0.24249 | 1.90401 | -3.74545 | H | 2.62492 | 2.28249 | 4.01430 |
| P | -2.10688 | 0.95233 | -0.20555 | H | 2.94698 | 0.58383 | 3.77635 |
| H | 0.93389 | -2.00857 | -3.08934 | C | -0.53922 | 1.87794 | 5.11887 |
| H | -0.72162 | -2.23169 | -2.50718 | H | 0.14966 | 3.17270 | 3.53708 |
| H | -1.03584 | 0.25496 | -5.80667 | H | -1.05913 | 2.01307 | 3.03467 |
| H | 0.69536 | -0.08711 | -5.59082 | C | 0.69741 | 1.97100 | 6.03474 |
| H | -0.11751 | -2.38157 | -5.24297 | H | 2.68960 | 1.12665 | 6.17303 |
| H | -1.68827 | -1.78309 | -4.65163 | H | 1.46396 | -0.01150 | 5.64706 |
| H | 0.46755 | 0.58040 | -1.88681 | H | -1.29145 | 2.59709 | 5.43734 |
| C | 2.90572 | 0.46356 | 1.03007 | H | -0.97890 | 0.88657 | 5.21058 |
| H | 3.78418 | 1.11949 | 0.94632 | H | 0.42021 | 1.72728 | 7.05834 |
| H | 3.07283 | -0.21908 | 1.87714 | H | 1.07298 | 2.99241 | 6.03262 |
| P | 2.42016 | -0.58112 | -0.45392 | C | 1.54749 | 3.20602 | 0.86135 |
| C | 3.17115 | -2.29389 | 0.06264 | C | 2.57598 | 3.92035 | 1.77149 |
| C | 2.66584 | -3.45871 | -0.81858 | C | 1.93600 | 3.41739 | -0.61968 |
| C | 4.70974 | -2.36921 | 0.21452 | H | 0.58113 | 3.67609 | 1.02655 |
| H | 2.74832 | -2.44140 | 1.05393 | C | 2.69364 | 5.42225 | 1.41520 |
| C | 3.08805 | -4.82396 | -0.22958 | H | 3.55402 | 3.45360 | 1.67350 |
| H | 3.06596 | -3.37314 | -1.82505 | H | 2.28216 | 3.84724 | 2.81286 |
| H | 1.58247 | -3.41537 | -0.89609 | C | 2.01826 | 4.91599 | -0.97786 |
| C | 5.13758 | -3.73014 | 0.81141 | H | 2.90884 | 2.96882 | -0.80209 |
| H | 5.19058 | -2.24885 | -0.75234 | H | 1.21976 | 2.90555 | -1.26080 |
| H | 5.06689 | -1.56829 | 0.85857 | C | 3.03594 | 5.64037 | -0.07248 |
| C | 4.61838 | -4.90445 | -0.04505 | H | 3.45486 | 5.88222 | 2.04261 |
| H | 2.75375 | -5.62521 | -0.88568 | H | 1.74888 | 5.91367 | 1.63995 |
| H | 2.60163 | -4.96725 | 0.73338 | H | 2.30667 | 5.02548 | -2.02122 |
| H | 6.22285 | -3.77481 | 0.87909 | H | 1.03903 | 5.37538 | -0.86110 |
| H | 4.74461 | -3.81955 | 1.82242 | H | 3.04491 | 6.70546 | -0.29494 |
| H | 4.88511 | -5.84934 | 0.42403 | H | 4.03455 | 5.25705 | -0.27329 |
| H | 5.10008 | -4.87790 | -1.02061 | P | -1.44732 | -1.58273 | 0.85349 |
| C | 3.46864 | 0.12743 | -1.94764 | C | -2.72579 | -0.21001 | 1.14519 |
| C | 4.83600 | 0.76182 | -1.58046 | H | -3.79513 | -0.47098 | 1.17840 |
| C | 3.68020 | -0.89096 | -3.09421 | H | -2.46543 | 0.26121 | 2.10831 |

| | | | | | | | |
|---|----------|----------|----------|----|----------|----------|----------------------|
| C | -3.22517 | 0.58949 | -1.75254 | C | -2.31456 | -2.89636 | 3.38666 |
| C | -4.67024 | 0.11026 | -1.45986 | C | 0.13615 | -3.06332 | 2.77942 |
| C | -3.27078 | 1.77624 | -2.74467 | C | -1.96914 | -3.12969 | 4.87529 |
| H | -2.69523 | -0.22146 | -2.24483 | H | -2.51305 | -3.86108 | 2.92960 |
| C | -5.39295 | -0.29308 | -2.76637 | H | -3.22099 | -2.29947 | 3.31272 |
| H | -5.23852 | 0.89678 | -0.97028 | C | 0.49153 | -3.33625 | 4.25885 |
| H | -4.66640 | -0.74689 | -0.79554 | H | -0.00682 | -4.01158 | 2.26694 |
| C | -3.97338 | 1.36669 | -4.05799 | H | 0.96642 | -2.55458 | 2.29763 |
| H | -3.82700 | 2.60035 | -2.30821 | C | -0.68873 | -3.97937 | 5.01717 |
| H | -2.26239 | 2.11877 | -2.96818 | H | -2.80066 | -3.63038 | 5.36722 |
| C | -5.40536 | 0.86012 | -3.78999 | H | -1.82669 | -2.17084 | 5.36988 |
| H | -6.41233 | -0.59704 | -2.53592 | H | 1.36153 | -3.98781 | 4.31018 |
| H | -4.88793 | -1.15333 | -3.20151 | H | 0.75916 | -2.39828 | 4.74096 |
| H | -4.00331 | 2.21969 | -4.73267 | H | -0.43356 | -4.09112 | 6.06890 |
| H | -3.39865 | 0.58412 | -4.54791 | H | -0.87374 | -4.97524 | 4.61910 |
| H | -5.86315 | 0.52337 | -4.71786 | H | -0.94781 | -1.26839 | 3.19413 |
| H | -6.01237 | 1.67726 | -3.40480 | | | | 3_c |
| C | -2.57989 | 2.68832 | 0.50244 | | | | 160 |
| C | -2.05957 | 3.87474 | -0.34261 | | | | |
| C | -4.07882 | 2.89560 | 0.83090 | | | | XYZ |
| H | -2.04236 | 2.71475 | 1.44567 | Ru | 0.09839 | 0.04336 | -0.45873 |
| C | -2.24497 | 5.20283 | 0.42595 | P | 1.62342 | 0.95298 | 1.13888 |
| H | -2.60222 | 3.94200 | -1.27880 | N | -0.53344 | -0.57735 | -2.41856 |
| H | -1.01252 | 3.72769 | -0.58941 | C | -0.31713 | 0.23091 | -3.49156 |
| C | -4.28706 | 4.22410 | 1.59455 | C | -0.66641 | -0.52552 | -4.79597 |
| H | -4.66261 | 2.92329 | -0.08536 | C | -1.46813 | -1.74047 | -4.30494 |
| H | -4.45601 | 2.07335 | 1.43521 | C | -0.93337 | -1.92124 | -2.86060 |
| C | -3.72608 | 5.42380 | 0.80147 | O | 0.09944 | 1.41599 | -3.48112 |
| H | -1.89456 | 6.03083 | -0.18686 | P | -1.75737 | 1.49948 | -0.28188 |
| H | -1.64132 | 5.18882 | 1.33142 | H | -0.07230 | -2.62360 | -2.85703 |
| H | -5.34809 | 4.37222 | 1.78603 | H | -1.68552 | -2.35647 | -2.18603 |
| H | -3.78780 | 4.16435 | 2.55983 | H | -1.20330 | 0.13620 | -5.49566 |
| H | -3.82792 | 6.33306 | 1.39040 | H | 0.27786 | -0.82369 | -5.29302 |
| H | -4.30993 | 5.55741 | -0.10719 | H | -1.34385 | -2.64957 | -4.92050 |
| C | -2.44460 | -2.93887 | -0.11914 | H | -2.54726 | -1.49871 | -4.27735 |
| C | -1.60054 | -4.21843 | -0.33356 | H | 0.73989 | 1.10721 | -1.46928 |
| C | -3.85269 | -3.33771 | 0.39006 | C | 3.00954 | -0.27525 | 0.79407 |
| H | -2.57810 | -2.47299 | -1.09346 | H | 4.00168 | 0.16086 | 0.60677 |
| C | -2.28052 | -5.16543 | -1.34814 | H | 3.11129 | -0.98473 | 1.62924 |
| H | -1.47790 | -4.74269 | 0.61147 | P | 2.15572 | -1.16696 | -0.63302 |
| H | -0.60919 | -3.95743 | -0.69446 | C | 2.43514 | -2.99690 | -0.05901 |
| C | -4.55014 | -4.25469 | -0.64147 | C | 1.52826 | -4.01005 | -0.79357 |
| H | -3.78125 | -3.87466 | 1.32927 | C | 3.89899 | -3.50043 | -0.05508 |
| H | -4.47107 | -2.46250 | 0.56445 | H | 2.10377 | -2.97048 | 0.97730 |
| C | -3.71566 | -5.52489 | -0.90930 | C | 1.62441 | -5.41123 | -0.14759 |
| H | -1.68864 | -6.07250 | -1.45259 | H | 1.81442 | -4.08338 | -1.83926 |
| H | -2.31080 | -4.68213 | -2.32264 | H | 0.49762 | -3.66754 | -0.76297 |
| H | -5.53523 | -4.53218 | -0.27162 | C | 4.00006 | -4.89591 | 0.60269 |
| H | -4.69262 | -3.71009 | -1.57271 | H | 4.27217 | -3.57018 | -1.07319 |
| H | -4.19621 | -6.12728 | -1.67735 | H | 4.53974 | -2.80402 | 0.48169 |
| H | -3.67560 | -6.12506 | -0.00224 | C | 3.08290 | -5.91386 | -0.10707 |
| C | -1.13975 | -2.19748 | 2.66341 | H | 1.00833 | -6.11305 | -0.70611 |

| | | | | | | | |
|---|----------|----------|----------|---|----------|----------|----------|
| H | 1.23105 | -5.36831 | 0.86633 | H | 3.81563 | 4.19569 | -2.04406 |
| H | 5.03147 | -5.24134 | 0.56851 | H | 2.60352 | 4.88575 | -0.98176 |
| H | 3.71595 | -4.82248 | 1.65079 | H | 4.83646 | 5.68038 | -0.28154 |
| H | 3.12970 | -6.87281 | 0.40497 | H | 5.42387 | 4.03017 | -0.17742 |
| H | 3.43849 | -6.06956 | -1.12376 | P | -1.76161 | -1.07686 | 0.96427 |
| C | 3.20556 | -0.80615 | -2.22004 | C | -2.56416 | 0.62460 | 1.18249 |
| C | 4.73612 | -0.65649 | -2.02474 | H | -3.65790 | 0.67709 | 1.28917 |
| C | 2.92247 | -1.82096 | -3.35227 | H | -2.12062 | 1.06391 | 2.09093 |
| H | 2.80962 | 0.15554 | -2.53844 | C | -3.05497 | 1.42647 | -1.71821 |
| C | 5.41044 | -0.20591 | -3.34121 | C | -4.54802 | 1.53994 | -1.31815 |
| H | 5.17516 | -1.59904 | -1.70974 | C | -2.73722 | 2.44456 | -2.83903 |
| H | 4.95893 | 0.07738 | -1.25626 | H | -2.88971 | 0.43289 | -2.12717 |
| C | 3.59103 | -1.37444 | -4.67154 | C | -5.45865 | 1.29626 | -2.54429 |
| H | 3.30398 | -2.80255 | -3.08182 | H | -4.75968 | 2.52618 | -0.91441 |
| H | 1.85239 | -1.91018 | -3.50736 | H | -4.80303 | 0.81558 | -0.55154 |
| C | 5.11150 | -1.18653 | -4.49341 | C | -3.63637 | 2.19480 | -4.06978 |
| H | 6.48539 | -0.12915 | -3.18895 | H | -2.92367 | 3.45355 | -2.48314 |
| H | 5.04645 | 0.78439 | -3.60763 | H | -1.68772 | 2.35691 | -3.12381 |
| H | 3.39827 | -2.11543 | -5.44476 | C | -5.13165 | 2.26914 | -3.69581 |
| H | 3.14579 | -0.43680 | -4.99781 | H | -6.50045 | 1.40646 | -2.24883 |
| H | 5.55036 | -0.81451 | -5.41688 | H | -5.32513 | 0.27290 | -2.88969 |
| H | 5.57296 | -2.14844 | -4.27742 | H | -3.41214 | 2.93208 | -4.83781 |
| C | 1.43504 | 0.84016 | 3.08437 | H | -3.41673 | 1.21435 | -4.48604 |
| C | 2.72127 | 0.63028 | 3.92682 | H | -5.74633 | 2.03216 | -4.56185 |
| C | 0.60395 | 2.01987 | 3.64661 | H | -5.37832 | 3.28399 | -3.38941 |
| H | 0.84146 | -0.06052 | 3.21294 | C | -1.59669 | 3.30879 | 0.36048 |
| C | 2.38434 | 0.44168 | 5.42452 | C | -0.80995 | 4.23536 | -0.59663 |
| H | 3.39454 | 1.47432 | 3.83148 | C | -2.91892 | 3.99533 | 0.78347 |
| H | 3.25890 | -0.24819 | 3.58204 | H | -0.99511 | 3.19119 | 1.25897 |
| C | 0.28341 | 1.83587 | 5.14732 | C | -0.50891 | 5.58904 | 0.08672 |
| H | 1.14090 | 2.95573 | 3.51703 | H | -1.38779 | 4.42591 | -1.49421 |
| H | -0.32858 | 2.10857 | 3.09625 | H | 0.11320 | 3.75488 | -0.90744 |
| C | 1.56835 | 1.62913 | 5.97409 | C | -2.63356 | 5.35047 | 1.47069 |
| H | 3.30796 | 0.33472 | 5.98984 | H | -3.54066 | 4.17251 | -0.09001 |
| H | 1.81563 | -0.47637 | 5.55612 | H | -3.48182 | 3.35934 | 1.46347 |
| H | -0.25667 | 2.70735 | 5.51198 | C | -1.80811 | 6.27906 | 0.55491 |
| H | -0.36778 | 0.97337 | 5.27468 | H | 0.02052 | 6.23762 | -0.60816 |
| H | 1.31273 | 1.45176 | 7.01666 | H | 0.14181 | 5.43074 | 0.94446 |
| H | 2.17314 | 2.53303 | 5.93520 | H | -3.57381 | 5.83140 | 1.73340 |
| C | 2.41936 | 2.69846 | 0.78524 | H | -2.08764 | 5.17658 | 2.39612 |
| C | 3.53685 | 3.15336 | 1.75820 | H | -1.56970 | 7.19984 | 1.08344 |
| C | 2.95094 | 2.77060 | -0.66738 | H | -2.40514 | 6.54776 | -0.31437 |
| H | 1.59409 | 3.39957 | 0.87857 | C | -3.17663 | -2.13922 | 0.15670 |
| C | 4.05176 | 4.56893 | 1.40418 | C | -2.80253 | -3.64121 | 0.11050 |
| H | 4.36902 | 2.45303 | 1.72487 | C | -4.61981 | -1.98933 | 0.70239 |
| H | 3.17211 | 3.18114 | 2.77851 | H | -3.18919 | -1.77209 | -0.86640 |
| C | 3.43935 | 4.19075 | -1.02330 | C | -3.78820 | -4.43011 | -0.78058 |
| H | 3.78579 | 2.08427 | -0.77925 | H | -2.82704 | -4.05840 | 1.11440 |
| H | 2.17244 | 2.45668 | -1.35723 | H | -1.79299 | -3.76714 | -0.27174 |
| C | 4.54332 | 4.65765 | -0.05370 | C | -5.61158 | -2.75189 | -0.20685 |
| H | 4.85646 | 4.83674 | 2.08629 | H | -4.69734 | -2.39067 | 1.70659 |
| H | 3.24712 | 5.28604 | 1.55515 | H | -4.91557 | -0.94630 | 0.74681 |

| | | | | | | | |
|---|----------|----------|----------|---|----------|----------|----------|
| C | -5.24444 | -4.24726 | -0.30481 | H | 0.44040 | 5.48092 | -2.88694 |
| H | -3.52488 | -5.48579 | -0.76674 | C | 1.13444 | 8.13963 | -2.34280 |
| H | -3.69678 | -4.08446 | -1.80822 | H | -0.10398 | 7.01466 | -0.94895 |
| H | -6.61953 | -2.64460 | 0.18903 | H | 1.61103 | 7.07095 | -0.50814 |
| H | -5.60268 | -2.31006 | -1.20124 | H | 0.97615 | 9.11203 | -1.84294 |
| H | -5.92283 | -4.74952 | -0.99120 | H | 2.16111 | 8.13648 | -2.75414 |
| H | -5.36625 | -4.71164 | 0.67200 | H | 0.43324 | 8.08337 | -3.19598 |
| C | -1.55225 | -1.64628 | 2.80296 | C | 2.63230 | 0.60569 | 0.69588 |
| C | -2.84229 | -1.95241 | 3.59939 | H | 2.41167 | 1.62841 | 0.34787 |
| C | -0.56179 | -2.82912 | 2.92844 | H | 3.35566 | 0.68855 | 1.52167 |
| C | -2.51310 | -2.22137 | 5.08559 | P | 3.39020 | -0.13306 | -0.88619 |
| H | -3.33028 | -2.83417 | 3.19546 | C | 4.53837 | -1.57951 | -0.34419 |
| H | -3.54116 | -1.12197 | 3.52737 | C | 4.94813 | -2.41056 | -1.58759 |
| C | -0.23963 | -3.13835 | 4.40829 | C | 5.80115 | -1.26135 | 0.49390 |
| H | -0.98161 | -3.71791 | 2.46428 | H | 3.89616 | -2.21988 | 0.25509 |
| H | 0.35949 | -2.59431 | 2.40157 | C | 5.68076 | -3.70900 | -1.17948 |
| C | -1.52188 | -3.39529 | 5.22714 | H | 5.60290 | -1.82696 | -2.22901 |
| H | -3.43098 | -2.44594 | 5.62511 | H | 4.06684 | -2.66118 | -2.17312 |
| H | -2.08362 | -1.32622 | 5.53109 | C | 6.52641 | -2.55696 | 0.92420 |
| H | 0.41424 | -4.00631 | 4.46387 | H | 6.49161 | -0.66508 | -0.09589 |
| H | 0.29865 | -2.29800 | 4.84114 | H | 5.54444 | -0.68121 | 1.37734 |
| H | -1.26665 | -3.54013 | 6.27478 | C | 6.91458 | -3.40762 | -0.30322 |
| H | -1.99668 | -4.31002 | 4.87758 | H | 5.98638 | -4.25213 | -2.07159 |
| H | -1.08937 | -0.78291 | 3.27360 | H | 4.99721 | -4.35020 | -0.62675 |
| | | | | H | 7.41830 | -2.30376 | 1.49405 |

[3_c-4_c][‡]

176

XYZ

| | | | | | | | |
|----|----------|----------|----------|---|---------|----------|----------|
| Ru | -0.86007 | 0.45505 | -0.21389 | C | 4.48723 | 1.36920 | -1.40746 |
| C | 1.09775 | 3.11063 | -1.65124 | C | 5.33475 | 2.09568 | -0.33127 |
| C | 1.24421 | 2.03227 | -2.21542 | C | 5.37459 | 1.02938 | -2.63017 |
| P | 0.93943 | 0.05192 | 1.38903 | H | 3.74396 | 2.08515 | -1.74873 |
| N | -1.88580 | 1.65322 | -1.60664 | C | 5.97536 | 3.37592 | -0.91626 |
| C | -2.25103 | 2.94415 | -1.34146 | H | 6.12527 | 1.45033 | 0.03878 |
| C | -2.62574 | 3.65913 | -2.66097 | H | 4.71655 | 2.37204 | 0.51841 |
| C | -2.80580 | 2.51066 | -3.66263 | C | 6.01927 | 2.30307 | -3.22185 |
| C | -1.88947 | 1.41603 | -3.06153 | H | 6.16640 | 0.34307 | -2.34005 |
| O | -2.28113 | 3.51968 | -0.22815 | H | 4.78053 | 0.53672 | -3.39736 |
| P | -2.75526 | -0.17841 | 0.79758 | C | 6.83864 | 3.05943 | -2.15541 |
| H | -0.86040 | 1.51303 | -3.46904 | H | 6.58627 | 3.85785 | -0.15535 |
| H | -2.23856 | 0.40306 | -3.30144 | H | 5.18973 | 4.07578 | -1.19422 |
| H | -3.51056 | 4.30117 | -2.51563 | H | 6.66125 | 2.03393 | -4.05837 |
| H | -1.78278 | 4.32073 | -2.94472 | H | 5.23807 | 2.95555 | -3.60683 |
| H | -2.53482 | 2.76537 | -4.70290 | H | 7.23197 | 3.98220 | -2.57697 |
| H | -3.85670 | 2.16482 | -3.66262 | H | 7.68914 | 2.44998 | -1.85565 |
| H | -0.94712 | 1.85699 | 0.53854 | C | 1.39622 | -1.70636 | 2.11895 |
| C | 0.90181 | 4.42668 | -1.03547 | C | 2.75470 | -1.87340 | 2.84811 |
| C | 1.13262 | 5.59522 | -2.03032 | C | 0.27307 | -2.27581 | 3.01878 |
| H | -0.12751 | 4.46980 | -0.62457 | H | 1.44546 | -2.32672 | 1.22663 |
| H | 1.59027 | 4.54434 | -0.17416 | C | 3.02347 | -3.36201 | 3.16758 |
| C | 0.91988 | 6.96898 | -1.36909 | H | 2.76119 | -1.32699 | 3.78234 |
| H | 2.15727 | 5.52941 | -2.44567 | H | 3.56762 | -1.48654 | 2.24700 |

| | | | | | | | |
|---|----------|----------|----------|---|----------|----------|----------------------|
| C | 0.52689 | -3.75439 | 3.39288 | C | -2.92546 | 1.20188 | 4.86259 |
| H | 0.19510 | -1.69040 | 3.93140 | H | -3.96614 | 1.75884 | 3.07006 |
| H | -0.68172 | -2.20384 | 2.51111 | H | -2.23191 | 1.88730 | 2.91297 |
| C | 1.90586 | -3.94560 | 4.05550 | C | -4.09163 | -1.06394 | 4.81615 |
| H | 3.98212 | -3.45518 | 3.67382 | H | -5.10751 | -0.52436 | 2.99064 |
| H | 3.08664 | -3.93142 | 2.24243 | H | -4.15258 | -1.98977 | 2.86185 |
| H | -0.25781 | -4.09731 | 4.06432 | C | -4.06350 | 0.34184 | 5.45363 |
| H | 0.47486 | -4.36595 | 2.49472 | H | -2.97034 | 2.20587 | 5.27958 |
| H | 2.08579 | -5.00360 | 4.23443 | H | -1.96636 | 0.77338 | 5.14616 |
| H | 1.91585 | -3.44465 | 5.02150 | H | -4.94619 | -1.62262 | 5.19306 |
| C | 0.80578 | 1.28458 | 2.90755 | H | -3.19468 | -1.60891 | 5.10457 |
| C | 1.68935 | 0.99679 | 4.14709 | H | -3.94178 | 0.25387 | 6.53137 |
| C | 1.02852 | 2.74608 | 2.44627 | H | -5.01617 | 0.83596 | 5.27310 |
| H | -0.22973 | 1.19529 | 3.21915 | C | -2.67288 | -2.17831 | -2.61795 |
| C | 1.41177 | 2.01063 | 5.28336 | C | -1.85749 | -2.33379 | -3.92555 |
| H | 2.74297 | 1.04326 | 3.88122 | C | -3.75309 | -3.28781 | -2.55106 |
| H | 1.48878 | 0.00564 | 4.53805 | H | -3.20717 | -1.23361 | -2.67334 |
| C | 0.71668 | 3.74729 | 3.57879 | C | -2.77801 | -2.24403 | -5.16343 |
| H | 2.06312 | 2.88472 | 2.14453 | H | -1.35445 | -3.29783 | -3.93225 |
| H | 0.38924 | 2.94908 | 1.59242 | H | -1.09166 | -1.56408 | -3.98809 |
| C | 1.58980 | 3.46879 | 4.81826 | C | -4.69444 | -3.17803 | -3.77354 |
| H | 2.07909 | 1.80085 | 6.11720 | H | -3.29994 | -4.27255 | -2.55529 |
| H | 0.39359 | 1.87194 | 5.64092 | H | -4.34428 | -3.20558 | -1.64448 |
| H | 0.89167 | 4.76008 | 3.22196 | C | -3.90949 | -3.29109 | -5.09722 |
| H | -0.33437 | 3.67535 | 3.84980 | H | -2.18877 | -2.39355 | -6.06584 |
| H | 1.32431 | 4.14719 | 5.62641 | H | -3.20963 | -1.24667 | -5.21709 |
| H | 2.63525 | 3.64591 | 4.57299 | H | -5.44517 | -3.96408 | -3.72175 |
| P | -1.50596 | -1.90521 | -1.08289 | H | -5.21766 | -2.22442 | -3.74187 |
| C | -2.70990 | -2.01127 | 0.38239 | H | -4.58552 | -3.15744 | -5.93907 |
| H | -3.67314 | -2.51375 | 0.21022 | H | -3.48271 | -4.28913 | -5.17722 |
| H | -2.20463 | -2.54522 | 1.20118 | C | -0.45231 | -3.50717 | -0.82696 |
| C | -4.37624 | 0.47904 | -0.05672 | C | -1.19462 | -4.85612 | -0.97322 |
| C | -5.59342 | -0.48085 | -0.07476 | C | 0.82688 | -3.51023 | -1.69909 |
| C | -4.81942 | 1.85748 | 0.48713 | C | -0.27854 | -6.03061 | -0.56221 |
| H | -4.04789 | 0.62735 | -1.08161 | H | -1.49053 | -5.00616 | -2.00671 |
| C | -6.73021 | 0.10287 | -0.94687 | H | -2.09536 | -4.86539 | -0.36351 |
| H | -5.96747 | -0.63946 | 0.93326 | C | 1.74734 | -4.69626 | -1.32896 |
| H | -5.32308 | -1.45209 | -0.47635 | H | 0.56109 | -3.58521 | -2.75030 |
| C | -5.93591 | 2.45348 | -0.39830 | H | 1.36908 | -2.57560 | -1.56844 |
| H | -5.21275 | 1.74650 | 1.49283 | C | 1.00578 | -6.04658 | -1.41622 |
| H | -3.96894 | 2.53817 | 0.51351 | H | -0.81584 | -6.96889 | -0.68433 |
| C | -7.15292 | 1.50763 | -0.47010 | H | -0.01666 | -5.93933 | 0.48985 |
| H | -7.58530 | -0.57023 | -0.92363 | H | 2.60754 | -4.70893 | -1.99414 |
| H | -6.39105 | 0.16142 | -1.97935 | H | 2.12073 | -4.55803 | -0.31642 |
| H | -6.24202 | 3.41685 | 0.00409 | H | 1.66220 | -6.84797 | -1.08374 |
| H | -5.55097 | 2.62690 | -1.40072 | H | 0.74421 | -6.24849 | -2.45311 |
| H | -7.90386 | 1.91307 | -1.14516 | H | -0.13809 | -3.42575 | 0.21019 |
| H | -7.60876 | 1.43030 | 0.51521 | H | 1.39603 | 1.09010 | -2.71273 |
| C | -2.98276 | -0.14860 | 2.71693 | | | | 4_c |
| C | -3.03015 | 1.27412 | 3.32211 | | | | 176 |
| C | -4.16338 | -0.98271 | 3.27351 | | | | XYZ |
| H | -2.06733 | -0.61428 | 3.07100 | | | | |

| | | | | | | | |
|----|----------|----------|----------|---|----------|----------|----------|
| Ru | -0.80807 | -0.52740 | -0.29139 | C | 4.11913 | -2.04656 | -0.05541 |
| C | 0.54387 | -2.13736 | -0.92941 | C | 5.26042 | -2.16815 | -1.09413 |
| C | 0.71068 | -1.90943 | 0.31550 | C | 4.45193 | -2.89785 | 1.19593 |
| P | 0.94104 | 1.05331 | -1.01540 | H | 3.22882 | -2.48102 | -0.50107 |
| N | -2.09451 | -2.28974 | -0.40679 | C | 5.49215 | -3.64497 | -1.48790 |
| C | -2.56944 | -2.66732 | -1.62582 | H | 6.18611 | -1.77510 | -0.68259 |
| C | -3.04606 | -4.13740 | -1.57686 | H | 5.02591 | -1.59093 | -1.98618 |
| C | -3.08441 | -4.46001 | -0.07619 | C | 4.70144 | -4.37569 | 0.81836 |
| C | -2.07034 | -3.44236 | 0.50900 | H | 5.33644 | -2.50954 | 1.69424 |
| O | -2.61351 | -1.97318 | -2.67366 | H | 3.63051 | -2.84328 | 1.90692 |
| P | -2.84033 | 0.79436 | -0.29752 | C | 5.80950 | -4.50690 | -0.24781 |
| H | -1.04861 | -3.87555 | 0.56145 | H | 6.31229 | -3.70858 | -2.20051 |
| H | -2.33904 | -3.14819 | 1.53443 | H | 4.60212 | -4.03193 | -1.97982 |
| H | -4.00537 | -4.25858 | -2.10746 | H | 4.97858 | -4.93811 | 1.70786 |
| H | -2.29918 | -4.75375 | -2.11643 | H | 3.77984 | -4.80813 | 0.43465 |
| H | -2.82668 | -5.50519 | 0.17201 | H | 5.91844 | -5.54921 | -0.54053 |
| H | -4.09336 | -4.25899 | 0.33011 | H | 6.75910 | -4.18754 | 0.17769 |
| H | -1.10684 | -0.65817 | -1.85818 | C | 1.39568 | 2.69169 | -0.04544 |
| C | 0.70274 | -2.91454 | -2.18591 | C | 2.70850 | 3.42679 | -0.41899 |
| C | 1.03039 | -4.40932 | -1.94484 | C | 0.23940 | 3.71964 | -0.03846 |
| H | -0.22101 | -2.82416 | -2.78765 | H | 1.52406 | 2.33290 | 0.97280 |
| H | 1.51055 | -2.47164 | -2.80854 | C | 3.00545 | 4.56062 | 0.58889 |
| C | 1.22822 | -5.18631 | -3.26002 | H | 2.63923 | 3.86667 | -1.40563 |
| H | 1.94033 | -4.49613 | -1.32048 | H | 3.54380 | 2.74071 | -0.43303 |
| H | 0.20966 | -4.86845 | -1.36084 | C | 0.51403 | 4.89198 | 0.93169 |
| C | 1.54009 | -6.67533 | -3.03513 | H | 0.09040 | 4.11870 | -1.03841 |
| H | 0.31727 | -5.08621 | -3.88288 | H | -0.68490 | 3.23665 | 0.25269 |
| H | 2.04884 | -4.71908 | -3.84127 | C | 1.85472 | 5.58649 | 0.61986 |
| H | 1.67798 | -7.20798 | -3.99323 | H | 3.93349 | 5.05603 | 0.31090 |
| H | 2.46475 | -6.80549 | -2.44231 | H | 3.14539 | 4.14077 | 1.58302 |
| H | 0.72072 | -7.17698 | -2.48756 | H | -0.29990 | 5.61154 | 0.86838 |
| C | 2.67847 | 0.26779 | -1.16309 | H | 0.53556 | 4.51619 | 1.95237 |
| H | 2.51430 | -0.65798 | -1.73201 | H | 2.05622 | 6.35154 | 1.36671 |
| H | 3.32251 | 0.91045 | -1.77905 | H | 1.78905 | 6.08250 | -0.34652 |
| P | 3.52790 | -0.28641 | 0.45508 | C | 0.63061 | 1.56972 | -2.87803 |
| C | 5.08020 | 0.84953 | 0.65764 | C | 1.44068 | 2.76963 | -3.43029 |
| C | 6.00590 | 0.30221 | 1.77289 | C | 0.81256 | 0.35192 | -3.81729 |
| C | 5.93447 | 1.22519 | -0.58087 | H | -0.41860 | 1.84725 | -2.89970 |
| H | 4.65815 | 1.77415 | 1.04478 | C | 1.04256 | 3.09777 | -4.88921 |
| C | 7.08676 | 1.33715 | 2.15880 | H | 2.50627 | 2.55477 | -3.39507 |
| H | 6.49980 | -0.60572 | 1.43679 | H | 1.26178 | 3.65769 | -2.83488 |
| H | 5.41939 | 0.04764 | 2.65334 | C | 0.39357 | 0.68298 | -5.26564 |
| C | 7.01307 | 2.26865 | -0.20735 | H | 1.85476 | 0.04346 | -3.82208 |
| H | 6.42707 | 0.34561 | -0.98292 | H | 0.21356 | -0.47550 | -3.45348 |
| H | 5.31277 | 1.63385 | -1.37287 | C | 1.19443 | 1.87813 | -5.81802 |
| C | 7.92100 | 1.75632 | 0.93028 | H | 1.65787 | 3.92042 | -5.24862 |
| H | 7.73943 | 0.91751 | 2.92180 | H | 0.00810 | 3.43473 | -4.90771 |
| H | 6.60805 | 2.21571 | 2.58705 | H | 0.55160 | -0.19192 | -5.89263 |
| H | 7.61579 | 2.49938 | -1.08363 | H | -0.66927 | 0.91369 | -5.29208 |
| H | 6.52869 | 3.19148 | 0.10617 | H | 0.85003 | 2.13189 | -6.81840 |
| H | 8.63239 | 2.52991 | 1.21216 | H | 2.24603 | 1.60799 | -5.89274 |
| H | 8.49328 | 0.90122 | 0.57568 | P | -1.34976 | 0.21583 | 2.08430 |

| | | | | | | | |
|---|----------|----------|----------|----|----------|----------|----------------------|
| C | -2.60939 | 1.47453 | 1.45142 | H | -4.01130 | -3.16823 | 6.07878 |
| H | -3.51390 | 1.62740 | 2.05566 | H | -2.86185 | -1.90360 | 6.47518 |
| H | -2.10701 | 2.45060 | 1.38395 | C | -0.16435 | 1.28777 | 3.17009 |
| C | -4.47764 | -0.24713 | -0.20730 | C | -0.75657 | 1.87360 | 4.47356 |
| C | -5.57266 | 0.27155 | 0.75878 | C | 1.16391 | 0.55171 | 3.47295 |
| C | -5.08835 | -0.49969 | -1.60619 | C | 0.24752 | 2.84336 | 5.13719 |
| H | -4.11454 | -1.20198 | 0.16396 | H | -0.96992 | 1.07446 | 5.17674 |
| C | -6.73843 | -0.74152 | 0.84672 | H | -1.68830 | 2.39718 | 4.27014 |
| H | -5.96050 | 1.22844 | 0.41985 | C | 2.17363 | 1.49614 | 4.16451 |
| H | -5.17602 | 0.41721 | 1.75797 | H | 0.97628 | -0.29990 | 4.12137 |
| C | -6.23990 | -1.52466 | -1.51617 | H | 1.60281 | 0.17167 | 2.55269 |
| H | -5.49032 | 0.42568 | -2.00757 | C | 1.58238 | 2.13146 | 5.44039 |
| H | -4.31395 | -0.87501 | -2.27581 | H | -0.18174 | 3.23335 | 6.05789 |
| C | -7.33634 | -1.04751 | -0.54149 | H | 0.42710 | 3.68973 | 4.47733 |
| H | -7.50931 | -0.34559 | 1.50523 | H | 3.07492 | 0.93988 | 4.41318 |
| H | -6.37317 | -1.66503 | 1.29178 | H | 2.46052 | 2.28466 | 3.47186 |
| H | -6.66633 | -1.67620 | -2.50553 | H | 2.29149 | 2.84055 | 5.86233 |
| H | -5.84765 | -2.48179 | -1.18017 | H | 1.41381 | 1.35636 | 6.18546 |
| H | -8.11013 | -1.80663 | -0.44764 | H | 0.06655 | 2.12709 | 2.51995 |
| H | -7.80710 | -0.14930 | -0.93680 | H | 1.15825 | -2.15408 | 1.27115 |
| C | -3.15454 | 2.38271 | -1.34747 | | | | |
| C | -3.27945 | 2.11229 | -2.86637 | | | | [4c-5c] [‡] |
| C | -4.33298 | 3.27008 | -0.87769 | | | | 176 |
| H | -2.24341 | 2.95643 | -1.20162 | | | | XYZ |
| C | -3.25756 | 3.44687 | -3.64537 | Ru | 0.75492 | 0.60267 | -0.03657 |
| H | -4.21178 | 1.60386 | -3.08376 | C | -0.49524 | 2.34096 | -0.65311 |
| H | -2.47627 | 1.46350 | -3.20444 | C | -0.77869 | 1.90416 | 0.53571 |
| C | -4.33690 | 4.60976 | -1.65000 | P | -0.96713 | -0.86092 | -1.11805 |
| H | -5.27619 | 2.76022 | -1.05481 | N | 2.02448 | 2.32197 | 0.38779 |
| H | -4.26291 | 3.47107 | 0.18923 | C | 2.49396 | 3.03254 | -0.67997 |
| C | -4.39386 | 4.38070 | -3.17567 | C | 2.92735 | 4.44644 | -0.22613 |
| H | -3.36185 | 3.24852 | -4.71003 | C | 2.88604 | 4.36919 | 1.30608 |
| H | -2.29932 | 3.94110 | -3.49757 | C | 1.87219 | 3.22259 | 1.54352 |
| H | -5.18907 | 5.20865 | -1.33473 | O | 2.55187 | 2.65684 | -1.87782 |
| H | -3.43678 | 5.16896 | -1.40154 | P | 2.86837 | -0.60916 | -0.55943 |
| H | -4.32661 | 5.33584 | -3.69245 | H | 0.83222 | 3.61438 | 1.58598 |
| H | -5.35275 | 3.93658 | -3.43562 | H | 2.05355 | 2.70456 | 2.49329 |
| C | -2.39626 | -0.93778 | 3.23862 | H | 3.90536 | 4.71654 | -0.65879 |
| C | -1.49444 | -1.94663 | 3.99113 | H | 2.18760 | 5.16919 | -0.62521 |
| C | -3.38103 | -0.27369 | 4.23434 | H | 2.58587 | 5.30945 | 1.80226 |
| H | -2.99743 | -1.49734 | 2.52706 | H | 3.87763 | 4.08090 | 1.70251 |
| C | -2.34464 | -3.02579 | 4.69869 | H | 0.62843 | 1.52919 | -1.40957 |
| H | -0.90090 | -1.42359 | 4.73711 | C | -0.67099 | 3.42132 | -1.68008 |
| H | -0.80683 | -2.42411 | 3.29699 | C | -1.15018 | 4.75609 | -1.06664 |
| C | -4.25210 | -1.35618 | 4.91313 | H | 0.28950 | 3.57312 | -2.20841 |
| H | -2.84550 | 0.26844 | 5.00539 | H | -1.39691 | 3.09914 | -2.45754 |
| H | -4.02973 | 0.43546 | 3.72955 | C | -1.34895 | 5.85289 | -2.12975 |
| C | -3.37951 | -2.39227 | 5.65185 | H | -2.09714 | 4.59733 | -0.51615 |
| H | -1.69036 | -3.69369 | 5.25513 | H | -0.40946 | 5.09349 | -0.31595 |
| H | -2.86061 | -3.62364 | 3.95046 | C | -1.80762 | 7.19275 | -1.53012 |
| H | -4.93514 | -0.88081 | 5.61430 | H | -0.40053 | 5.99856 | -2.68392 |
| H | -4.85500 | -1.85961 | 4.15996 | H | -2.09083 | 5.50814 | -2.87823 |

| | | | | | | | |
|---|----------|----------|----------|---|----------|----------|----------|
| H | -1.93991 | 7.96053 | -2.31349 | H | -3.83394 | -5.12134 | -0.54043 |
| H | -2.77194 | 7.08545 | -0.99922 | H | -2.89050 | -4.57575 | 0.83335 |
| H | -1.06899 | 7.57900 | -0.80345 | H | 0.43013 | -5.71684 | -0.63942 |
| C | -2.72141 | -0.10028 | -1.11964 | H | -0.26778 | -4.96670 | 0.78336 |
| H | -2.56806 | 0.90238 | -1.54453 | H | -1.86111 | -6.61463 | -0.11005 |
| H | -3.36906 | -0.64847 | -1.81655 | H | -1.78951 | -5.87774 | -1.70100 |
| P | -3.56244 | 0.21859 | 0.56676 | C | -0.67141 | -1.00852 | -3.05514 |
| C | -5.06874 | -0.99062 | 0.65460 | C | -1.62886 | -1.94856 | -3.83344 |
| C | -5.99426 | -0.61097 | 1.83768 | C | -0.67166 | 0.38793 | -3.72707 |
| C | -5.93100 | -1.25504 | -0.60694 | H | 0.33034 | -1.42039 | -3.14397 |
| H | -4.60714 | -1.93672 | 0.92861 | C | -1.27814 | -2.01422 | -5.33865 |
| C | -7.02683 | -1.72619 | 2.11753 | H | -2.65693 | -1.61072 | -3.72874 |
| H | -6.52917 | 0.30825 | 1.61388 | H | -1.57271 | -2.95719 | -3.44303 |
| H | -5.40196 | -0.43431 | 2.73321 | C | -0.31638 | 0.31592 | -5.22841 |
| C | -6.96113 | -2.37750 | -0.34107 | H | -1.65533 | 0.83928 | -3.62861 |
| H | -6.46507 | -0.35571 | -0.89654 | H | 0.04072 | 1.03686 | -3.23046 |
| H | -5.30934 | -1.54373 | -1.45005 | C | -1.27585 | -0.61852 | -5.98888 |
| C | -7.86678 | -2.03635 | 0.86082 | H | -1.99529 | -2.66049 | -5.84106 |
| H | -7.68115 | -1.42301 | 2.93249 | H | -0.29563 | -2.46671 | -5.45719 |
| H | -6.50655 | -2.62755 | 2.43577 | H | -0.35812 | 1.31764 | -5.65071 |
| H | -7.57081 | -2.53063 | -1.22945 | H | 0.70372 | -0.04291 | -5.34547 |
| H | -6.43548 | -3.30968 | -0.14296 | H | -0.97655 | -0.69623 | -7.03197 |
| H | -8.54179 | -2.86575 | 1.06192 | H | -2.28231 | -0.20527 | -5.96633 |
| H | -8.47882 | -1.17068 | 0.61494 | P | 1.45257 | -0.72734 | 1.89956 |
| C | -4.22789 | 2.00145 | 0.26368 | C | 2.70308 | -1.76206 | 0.94115 |
| C | -5.38271 | 2.19466 | -0.74896 | H | 3.61846 | -2.07457 | 1.46265 |
| C | -4.58261 | 2.69070 | 1.60566 | H | 2.19137 | -2.67952 | 0.61382 |
| H | -3.36029 | 2.51975 | -0.13559 | C | 4.51065 | 0.37244 | -0.22023 |
| C | -5.67519 | 3.69632 | -0.97051 | C | 5.65212 | -0.39806 | 0.49086 |
| H | -6.28851 | 1.72132 | -0.37999 | C | 5.05956 | 1.05117 | -1.49813 |
| H | -5.13467 | 1.73199 | -1.70202 | H | 4.16727 | 1.16119 | 0.44492 |
| C | -4.89875 | 4.18995 | 1.40245 | C | 6.81200 | 0.56243 | 0.84403 |
| H | -5.44466 | 2.21030 | 2.06092 | H | 6.03447 | -1.19016 | -0.14638 |
| H | -3.75244 | 2.59039 | 2.30139 | H | 5.30311 | -0.86013 | 1.40765 |
| C | -6.01907 | 4.39605 | 0.36122 | C | 6.21151 | 2.01799 | -1.14719 |
| H | -6.50149 | 3.80836 | -1.66992 | H | 5.44212 | 0.29957 | -2.18231 |
| H | -4.80410 | 4.17270 | -1.41581 | H | 4.25387 | 1.60336 | -1.98267 |
| H | -5.19356 | 4.63229 | 2.35203 | C | 7.35039 | 1.28790 | -0.40580 |
| H | -3.99989 | 4.70461 | 1.07009 | H | 7.61210 | -0.00036 | 1.32125 |
| H | -6.17333 | 5.45957 | 0.19073 | H | 6.45829 | 1.29877 | 1.56305 |
| H | -6.95153 | 3.99015 | 0.74918 | H | 6.59530 | 2.46910 | -2.05984 |
| C | -1.32896 | -2.69477 | -0.54457 | H | 5.83006 | 2.82213 | -0.52195 |
| C | -2.69340 | -3.32300 | -0.92551 | H | 8.12224 | 1.99724 | -0.11436 |
| C | -0.19150 | -3.66532 | -0.94591 | H | 7.81047 | 0.56154 | -1.07317 |
| H | -1.32814 | -2.61668 | 0.53777 | C | 3.17318 | -1.85449 | -2.00507 |
| C | -2.87418 | -4.70070 | -0.24739 | C | 3.20913 | -1.17788 | -3.39672 |
| H | -2.78001 | -3.45832 | -1.99630 | C | 4.39519 | -2.79144 | -1.84884 |
| H | -3.50337 | -2.67702 | -0.61836 | H | 2.28558 | -2.48146 | -1.97937 |
| C | -0.36458 | -5.05727 | -0.29651 | C | 3.19544 | -2.24554 | -4.51428 |
| H | -0.16562 | -3.78526 | -2.02540 | H | 4.10763 | -0.57970 | -3.50179 |
| H | 0.76706 | -3.25747 | -0.64873 | H | 2.36341 | -0.50561 | -3.51177 |
| C | -1.73864 | -5.66914 | -0.63415 | C | 4.39372 | -3.86860 | -2.95809 |

| | | | | | | | |
|----|----------|----------|----------|---|----------|----------|----------|
| H | 5.31522 | -2.21831 | -1.92209 | N | 2.27915 | 2.04408 | -0.99549 |
| H | 4.38579 | -3.27696 | -0.87530 | C | 2.20554 | 1.72144 | -2.28186 |
| C | 4.37752 | -3.22665 | -4.36180 | C | 2.75410 | 2.78947 | -3.21819 |
| H | 3.24644 | -1.75703 | -5.48513 | C | 3.36211 | 3.80005 | -2.21423 |
| H | 2.26003 | -2.80039 | -4.47710 | C | 2.67476 | 3.44847 | -0.85563 |
| H | 5.27268 | -4.50133 | -2.85187 | O | 1.60259 | 0.62881 | -2.59967 |
| H | 3.51855 | -4.50489 | -2.84054 | P | 3.04330 | -0.85015 | 0.24825 |
| H | 4.31392 | -4.00373 | -5.12072 | H | 1.77723 | 4.07939 | -0.69364 |
| H | 5.31120 | -2.69092 | -4.52153 | H | 3.35325 | 3.60323 | 0.00261 |
| C | 2.50152 | 0.13015 | 3.28909 | H | 3.47552 | 2.38070 | -3.94727 |
| C | 1.59493 | 0.79981 | 4.35125 | H | 1.91544 | 3.22329 | -3.79680 |
| C | 3.58726 | -0.71869 | 3.99959 | H | 3.19033 | 4.85103 | -2.50251 |
| H | 3.01874 | 0.91640 | 2.74661 | H | 4.45298 | 3.65022 | -2.13386 |
| C | 2.42317 | 1.68815 | 5.30685 | H | -0.19839 | 2.46736 | -2.67970 |
| H | 1.09230 | 0.03682 | 4.93952 | C | -1.71576 | 3.81646 | -1.81158 |
| H | 0.82797 | 1.39998 | 3.86787 | C | -0.99833 | 5.14402 | -2.15500 |
| C | 4.43217 | 0.17491 | 4.93720 | H | -2.50362 | 3.65099 | -2.57962 |
| H | 3.13662 | -1.50931 | 4.58947 | H | -2.23741 | 3.93267 | -0.84102 |
| H | 4.24802 | -1.18941 | 3.27919 | C | -1.95101 | 6.34895 | -2.27041 |
| C | 3.54876 | 0.88104 | 5.98637 | H | -0.23223 | 5.35010 | -1.37981 |
| H | 1.76710 | 2.11534 | 6.06245 | H | -0.44490 | 5.02298 | -3.10951 |
| H | 2.85765 | 2.51389 | 4.74776 | C | -1.22683 | 7.66338 | -2.60731 |
| H | 5.18287 | -0.43501 | 5.43588 | H | -2.71479 | 6.13709 | -3.04583 |
| H | 4.95847 | 0.92122 | 4.34541 | H | -2.50716 | 6.46639 | -1.31851 |
| H | 4.15978 | 1.54137 | 6.59810 | H | -1.93434 | 8.50877 | -2.68582 |
| H | 3.11116 | 0.13580 | 6.64801 | H | -0.48292 | 7.91983 | -1.82996 |
| C | 0.31178 | -2.03573 | 2.74706 | H | -0.68782 | 7.58673 | -3.57023 |
| C | 0.93846 | -2.88824 | 3.87625 | C | -2.49755 | -0.65704 | -1.28598 |
| C | -1.01783 | -1.40332 | 3.22699 | H | -2.36379 | 0.30366 | -1.80801 |
| C | -0.04596 | -3.98758 | 4.33692 | H | -3.01157 | -1.34631 | -1.97145 |
| H | 1.17514 | -2.26415 | 4.73232 | P | -3.53551 | -0.25324 | 0.25497 |
| H | 1.86279 | -3.35027 | 3.53577 | C | -4.87311 | -1.64132 | 0.34651 |
| C | -2.00460 | -2.48725 | 3.71764 | C | -5.93391 | -1.29845 | 1.42250 |
| H | -0.82618 | -0.71056 | 4.04131 | C | -5.58823 | -2.12024 | -0.94353 |
| H | -1.47591 | -0.83350 | 2.42090 | H | -4.31368 | -2.49149 | 0.72875 |
| C | -1.37777 | -3.37257 | 4.81521 | C | -6.83787 | -2.51460 | 1.72613 |
| H | 0.40597 | -4.56359 | 5.14194 | H | -6.55916 | -0.47751 | 1.08064 |
| H | -0.23684 | -4.67306 | 3.51358 | H | -5.44566 | -0.97489 | 2.33938 |
| H | -2.90498 | -2.00976 | 4.09840 | C | -6.48368 | -3.34686 | -0.65139 |
| H | -2.30025 | -3.11378 | 2.87889 | H | -6.20867 | -1.32868 | -1.35097 |
| H | -2.07122 | -4.16381 | 5.09241 | H | -4.86704 | -2.38837 | -1.71075 |
| H | -1.19640 | -2.77174 | 5.70426 | C | -7.52333 | -3.03440 | 0.44520 |
| H | 0.07833 | -2.72003 | 1.93732 | H | -7.59128 | -2.23672 | 2.46061 |
| H | -1.37872 | 2.12754 | 1.41459 | H | -6.23679 | -3.31045 | 2.16180 |
| | | | | H | -6.99212 | -3.65267 | -1.56374 |
| | | | | H | -5.86156 | -4.18033 | -0.33097 |
| | | | | H | -8.10228 | -3.92753 | 0.67138 |
| | | | | H | -8.21733 | -2.28083 | 0.07786 |
| Ru | 0.92902 | 0.39225 | -0.46090 | C | -4.36713 | 1.38898 | -0.30180 |
| C | -0.76976 | 2.63080 | -1.75210 | C | -5.45061 | 1.32649 | -1.40553 |
| C | -0.54761 | 1.83343 | -0.67601 | C | -4.90792 | 2.16664 | 0.92489 |
| P | -0.71672 | -1.25521 | -0.97941 | H | -3.53348 | 1.96192 | -0.69847 |

| | | | | | | | |
|---|----------|----------|----------|---|----------|----------|----------|
| C | -5.91042 | 2.74459 | -1.81371 | C | 5.58958 | 0.34330 | 1.24866 |
| H | -6.31768 | 0.77765 | -1.04796 | C | 5.38884 | -0.09570 | -1.25241 |
| H | -5.06914 | 0.80603 | -2.28154 | H | 4.18261 | 1.23984 | -0.10272 |
| C | -5.38993 | 3.58124 | 0.53028 | C | 6.71487 | 1.36614 | 0.96716 |
| H | -5.73645 | 1.62781 | 1.37811 | H | 6.03880 | -0.62287 | 1.45756 |
| H | -4.12817 | 2.25201 | 1.67844 | H | 5.05746 | 0.65519 | 2.14303 |
| C | -6.44421 | 3.52586 | -0.59498 | C | 6.51819 | 0.92275 | -1.52519 |
| H | -6.68612 | 2.67193 | -2.57369 | H | 5.83111 | -1.08484 | -1.17358 |
| H | -5.07350 | 3.28455 | -2.25112 | H | 4.70205 | -0.10801 | -2.09618 |
| H | -5.80776 | 4.08070 | 1.40231 | C | 7.48254 | 1.02210 | -0.32558 |
| H | -4.53878 | 4.16960 | 0.19467 | H | 7.40138 | 1.38780 | 1.81126 |
| H | -6.71804 | 4.53564 | -0.89389 | H | 6.28085 | 2.35973 | 0.87413 |
| H | -7.34495 | 3.04091 | -0.22297 | H | 7.06571 | 0.62528 | -2.41722 |
| C | -1.15103 | -2.80192 | 0.12808 | H | 6.08356 | 1.90037 | -1.71978 |
| C | -2.08673 | -3.88782 | -0.46137 | H | 8.23673 | 1.78195 | -0.51918 |
| C | 0.09908 | -3.49192 | 0.71186 | H | 8.00047 | 0.07351 | -0.19702 |
| H | -1.68373 | -2.33901 | 0.95626 | C | 3.59598 | -2.70604 | 0.16001 |
| C | -2.49982 | -4.90336 | 0.62923 | C | 3.66162 | -3.23118 | -1.29497 |
| H | -1.58091 | -4.43606 | -1.24646 | C | 4.88839 | -3.07367 | 0.92768 |
| H | -2.97485 | -3.44407 | -0.89723 | H | 2.78369 | -3.23254 | 0.65080 |
| C | -0.27026 | -4.54099 | 1.78550 | C | 3.89872 | -4.75842 | -1.31997 |
| H | 0.65654 | -3.97859 | -0.08492 | H | 4.46421 | -2.74065 | -1.83838 |
| H | 0.74761 | -2.74729 | 1.15771 | H | 2.73377 | -3.00071 | -1.81290 |
| C | -1.25964 | -5.58932 | 1.23764 | C | 5.11030 | -4.60372 | 0.91221 |
| H | -3.15938 | -5.65221 | 0.19539 | H | 5.75020 | -2.59544 | 0.47193 |
| H | -3.05421 | -4.39668 | 1.41630 | H | 4.82633 | -2.73014 | 1.95811 |
| H | 0.63331 | -5.03371 | 2.13940 | C | 5.16813 | -5.14441 | -0.53194 |
| H | -0.71958 | -4.03579 | 2.63796 | H | 3.98731 | -5.09525 | -2.35078 |
| H | -1.56079 | -6.26474 | 2.03568 | H | 3.03854 | -5.26386 | -0.88521 |
| H | -0.76713 | -6.18651 | 0.47270 | H | 6.03579 | -4.84080 | 1.43314 |
| C | -0.15636 | -1.79312 | -2.77481 | H | 4.29949 | -5.09176 | 1.44965 |
| C | -0.38726 | -3.25825 | -3.21596 | H | 5.27748 | -6.22676 | -0.51598 |
| C | -0.73975 | -0.83166 | -3.83949 | H | 6.04286 | -4.73562 | -1.03407 |
| H | 0.91582 | -1.62495 | -2.75478 | C | 1.72878 | 2.08312 | 2.57979 |
| C | 0.25650 | -3.51977 | -4.59825 | C | 0.82089 | 3.29721 | 2.27132 |
| H | -1.45136 | -3.47288 | -3.27832 | C | 2.09997 | 2.07190 | 4.08333 |
| H | 0.05101 | -3.94743 | -2.49933 | H | 2.64914 | 2.21485 | 2.01396 |
| C | -0.09036 | -1.08275 | -5.21757 | C | 1.51018 | 4.61994 | 2.67690 |
| H | -1.81372 | -0.97499 | -3.92765 | H | -0.11614 | 3.21141 | 2.81385 |
| H | -0.55517 | 0.19667 | -3.54286 | H | 0.58436 | 3.31828 | 1.21175 |
| C | -0.27829 | -2.54608 | -5.66764 | C | 2.81245 | 3.38571 | 4.47820 |
| H | 0.05968 | -4.54720 | -4.89885 | H | 1.20229 | 1.97406 | 4.68741 |
| H | 1.33563 | -3.40589 | -4.51592 | H | 2.74662 | 1.22980 | 4.31857 |
| H | -0.53039 | -0.41194 | -5.95263 | C | 1.92957 | 4.61075 | 4.16194 |
| H | 0.97098 | -0.85176 | -5.15729 | H | 0.83326 | 5.45112 | 2.49080 |
| H | 0.23716 | -2.71666 | -6.61060 | H | 2.39070 | 4.77323 | 2.05713 |
| H | -1.33603 | -2.74087 | -5.83470 | H | 3.05112 | 3.36411 | 5.53981 |
| P | 1.03154 | 0.42477 | 1.85247 | H | 3.75176 | 3.46496 | 3.93425 |
| C | 2.53116 | -0.70901 | 2.06626 | H | 2.46883 | 5.52513 | 4.40059 |
| H | 3.29082 | -0.35160 | 2.77807 | H | 1.04084 | 4.58334 | 4.78954 |
| H | 2.21403 | -1.70731 | 2.40559 | C | -0.29624 | -0.29310 | 3.07642 |
| C | 4.61964 | 0.25676 | 0.04410 | C | 0.24052 | -0.90267 | 4.39698 |

| | | | | | | | |
|----|----------|----------|----------|---|----------|----------|----------|
| C | -1.41919 | 0.72674 | 3.37961 | C | -2.52046 | -0.52641 | -1.18572 |
| C | -0.90361 | -1.56217 | 5.20154 | H | -2.40677 | 0.43046 | -1.71725 |
| H | 0.70035 | -0.13470 | 5.01114 | H | -3.05694 | -1.21848 | -1.85361 |
| H | 1.00022 | -1.65225 | 4.19341 | P | -3.55757 | -0.03423 | 0.33098 |
| C | -2.56335 | 0.06860 | 4.18209 | C | -4.66308 | -1.57329 | 0.69464 |
| H | -1.02229 | 1.55641 | 3.95782 | C | -5.38816 | -1.39723 | 2.05335 |
| H | -1.81634 | 1.12612 | 2.44970 | C | -5.68403 | -2.05299 | -0.36576 |
| C | -2.04113 | -0.56114 | 5.48982 | H | -3.94447 | -2.37523 | 0.83556 |
| H | -0.50784 | -1.95330 | 6.13677 | C | -6.06108 | -2.71395 | 2.50365 |
| H | -1.30025 | -2.40483 | 4.63884 | H | -6.14853 | -0.62474 | 1.97594 |
| H | -3.32203 | 0.81483 | 4.40861 | H | -4.68106 | -1.07576 | 2.81394 |
| H | -3.03319 | -0.69903 | 3.57099 | C | -6.34601 | -3.38269 | 0.06410 |
| H | -2.85311 | -1.06616 | 6.00887 | H | -6.46554 | -1.30860 | -0.48882 |
| H | -1.67225 | 0.22389 | 6.14716 | H | -5.20551 | -2.18627 | -1.33348 |
| H | -0.74332 | -1.10357 | 2.50735 | C | -7.04210 | -3.23851 | 1.43394 |
| H | -1.17829 | 2.03596 | 0.21078 | H | -6.59048 | -2.55360 | 3.44085 |
| | | | | H | -5.29521 | -3.46494 | 2.68801 |
| | | | | H | -7.07186 | -3.68954 | -0.68653 |
| | | | | H | -5.58971 | -4.16272 | 0.12306 |
| | | | | H | -7.45020 | -4.19817 | 1.74476 |
| | | | | H | -7.87586 | -2.54528 | 1.34065 |
| Ru | 0.90433 | 0.52866 | -0.41328 | C | -4.63627 | 1.32940 | -0.50239 |
| C | -1.31584 | 2.70462 | 0.31578 | C | -5.28005 | 1.04658 | -1.88459 |
| C | -0.54137 | 2.01399 | -0.55395 | C | -5.71193 | 1.87030 | 0.47120 |
| P | -0.72328 | -1.10161 | -0.98411 | H | -3.91023 | 2.12354 | -0.65275 |
| N | 2.14804 | 2.30376 | -0.88137 | C | -5.93917 | 2.32532 | -2.45144 |
| C | 1.95975 | 2.10585 | -2.18115 | H | -6.03938 | 0.27519 | -1.80553 |
| C | 2.34393 | 3.29617 | -3.04989 | H | -4.53258 | 0.69527 | -2.59060 |
| C | 3.00087 | 4.23807 | -2.01020 | C | -6.38788 | 3.14332 | -0.08610 |
| C | 2.48132 | 3.71031 | -0.63397 | H | -6.47807 | 1.11621 | 0.63585 |
| O | 1.38504 | 1.01246 | -2.54895 | H | -5.26144 | 2.09438 | 1.43599 |
| P | 3.08387 | -0.71927 | -0.04446 | C | -6.99773 | 2.88832 | -1.48027 |
| H | -1.41753 | 2.35072 | 1.35059 | H | -6.40166 | 2.10234 | -3.41112 |
| H | 1.57569 | 4.26206 | -0.30920 | H | -5.17348 | 3.07851 | -2.62580 |
| H | 3.23929 | 3.81833 | 0.16238 | H | -7.16387 | 3.47611 | 0.60060 |
| H | 3.00539 | 3.01145 | -3.88679 | H | -5.65082 | 3.94033 | -0.15607 |
| H | 1.42538 | 3.72702 | -3.49382 | H | -7.41016 | 3.81323 | -1.87838 |
| H | 2.74840 | 5.30037 | -2.16835 | H | -7.81787 | 2.17825 | -1.39089 |
| H | 4.10027 | 4.14651 | -2.05538 | C | -1.06533 | -2.75072 | 0.00128 |
| H | -0.50737 | 2.41145 | -1.59012 | C | -2.04518 | -3.78356 | -0.61334 |
| C | -2.02410 | 4.03267 | 0.06056 | C | 0.22966 | -3.48483 | 0.40906 |
| C | -2.00174 | 4.56985 | -1.38023 | H | -1.52639 | -2.37535 | 0.91289 |
| H | -3.07677 | 3.97274 | 0.40971 | C | -2.36534 | -4.90444 | 0.40284 |
| H | -1.56400 | 4.79792 | 0.72575 | H | -1.60394 | -4.24762 | -1.48659 |
| C | -2.73658 | 5.91461 | -1.53918 | H | -2.96773 | -3.30999 | -0.93097 |
| H | -0.95093 | 4.69020 | -1.71268 | C | -0.04908 | -4.63496 | 1.40349 |
| H | -2.44984 | 3.82178 | -2.06547 | H | 0.71751 | -3.88939 | -0.47449 |
| C | -2.70216 | 6.45641 | -2.97815 | H | 0.91521 | -2.78277 | 0.86783 |
| H | -3.79014 | 5.79932 | -1.21374 | C | -1.07878 | -5.63449 | 0.83925 |
| H | -2.28658 | 6.66001 | -0.85256 | H | -3.05639 | -5.61412 | -0.04747 |
| H | -3.23379 | 7.42164 | -3.06161 | H | -2.85512 | -4.48213 | 1.27763 |
| H | -1.66233 | 6.61548 | -3.32037 | H | 0.88110 | -5.15107 | 1.63329 |
| | | | | | | | |

| | | | | | | | |
|---|----------|----------|----------|---|----------|----------|----------|
| H | -0.42755 | -4.21797 | 2.33441 | H | 3.94541 | -4.57796 | -3.22338 |
| H | -1.31305 | -6.38622 | 1.59008 | H | 3.10812 | -4.95428 | -1.72881 |
| H | -0.64977 | -6.15088 | -0.01727 | H | 6.25437 | -4.71610 | 0.41356 |
| C | -0.24647 | -1.48537 | -2.84751 | H | 4.53088 | -5.02676 | 0.51890 |
| C | -0.47829 | -2.91675 | -3.38884 | H | 5.39023 | -5.88163 | -1.63434 |
| C | -0.89234 | -0.45958 | -3.81201 | H | 6.08064 | -4.31468 | -2.01604 |
| H | 0.82279 | -1.29991 | -2.86612 | C | 2.03437 | 1.85676 | 2.73985 |
| C | 0.10506 | -3.06556 | -4.81402 | C | 1.12425 | 3.10618 | 2.72079 |
| H | -1.54162 | -3.14132 | -3.42102 | C | 2.58997 | 1.64637 | 4.17041 |
| H | -0.00124 | -3.65179 | -2.74676 | H | 2.87888 | 2.06001 | 2.08381 |
| C | -0.30226 | -0.59646 | -5.23246 | C | 1.89609 | 4.35907 | 3.19373 |
| H | -1.96683 | -0.61543 | -3.86396 | H | 0.27069 | 2.95400 | 3.37551 |
| H | -0.70708 | 0.54767 | -3.45068 | H | 0.74031 | 3.26647 | 1.71821 |
| C | -0.49055 | -2.02472 | -5.78303 | C | 3.38909 | 2.88718 | 4.63060 |
| H | -0.09256 | -4.07111 | -5.18075 | H | 1.76972 | 1.49183 | 4.86586 |
| H | 1.18532 | -2.94108 | -4.77239 | H | 3.23197 | 0.77044 | 4.21957 |
| H | -0.78398 | 0.12008 | -5.89464 | C | 2.51074 | 4.15486 | 4.59427 |
| H | 0.75750 | -0.35269 | -5.20196 | H | 1.22194 | 5.21285 | 3.20884 |
| H | -0.01585 | -2.11553 | -6.75788 | H | 2.68924 | 4.58436 | 2.48438 |
| H | -1.55203 | -2.22418 | -5.91754 | H | 3.76354 | 2.72345 | 5.63928 |
| P | 1.22582 | 0.30674 | 1.88803 | H | 4.25144 | 3.02338 | 3.98076 |
| C | 2.73995 | -0.82980 | 1.81014 | H | 3.10522 | 5.02358 | 4.86959 |
| H | 3.56306 | -0.57424 | 2.49461 | H | 1.71387 | 4.05904 | 5.32926 |
| H | 2.44651 | -1.86770 | 2.03021 | C | 0.06472 | -0.60074 | 3.15951 |
| C | 4.60200 | 0.46662 | -0.24657 | C | 0.77079 | -1.30706 | 4.34620 |
| C | 5.67565 | 0.44489 | 0.86962 | C | -1.06634 | 0.31766 | 3.67935 |
| C | 5.26110 | 0.30728 | -1.63804 | C | -0.24353 | -2.09968 | 5.20238 |
| H | 4.12473 | 1.44208 | -0.23107 | H | 1.26287 | -0.57958 | 4.98294 |
| C | 6.73486 | 1.54467 | 0.62394 | H | 1.53403 | -1.99136 | 3.98672 |
| H | 6.17418 | -0.51884 | 0.91150 | C | -2.07366 | -0.47340 | 4.54351 |
| H | 5.21899 | 0.61771 | 1.84012 | H | -0.64662 | 1.12030 | 4.27977 |
| C | 6.32241 | 1.40412 | -1.87814 | H | -1.59131 | 0.76838 | 2.84071 |
| H | 5.74507 | -0.66208 | -1.71886 | C | -1.37430 | -1.18693 | 5.71810 |
| H | 4.50144 | 0.36287 | -2.41494 | H | 0.27553 | -2.55936 | 6.04113 |
| C | 7.39009 | 1.40042 | -0.76494 | H | -0.67236 | -2.90242 | 4.60595 |
| H | 7.49600 | 1.49172 | 1.39991 | H | -2.83596 | 0.20461 | 4.92143 |
| H | 6.26071 | 2.52135 | 0.69829 | H | -2.57377 | -1.21386 | 3.92342 |
| H | 6.79498 | 1.24527 | -2.84532 | H | -2.09764 | -1.77558 | 6.27846 |
| H | 5.83600 | 2.37638 | -1.90792 | H | -0.95871 | -0.44601 | 6.39829 |
| H | 8.09494 | 2.21345 | -0.92559 | H | -0.39999 | -1.37628 | 2.55608 |
| H | 7.95177 | 0.46900 | -0.80472 | [6 _c -7a _c] [‡] | | | |
| C | 3.67404 | -2.52818 | -0.41552 | 176 | | | |
| C | 3.65134 | -2.86774 | -1.92562 | XYZ | | | |
| C | 5.02804 | -2.94144 | 0.20969 | Ru | 0.66318 | -0.30214 | -0.54907 |
| H | 2.91214 | -3.13963 | 0.05807 | C | -1.22155 | -1.82187 | -2.62708 |
| C | 3.92276 | -4.37209 | -2.15522 | C | -0.56803 | -1.13800 | -1.68326 |
| H | 4.40250 | -2.28903 | -2.45540 | P | -1.04710 | -0.40591 | 1.22391 |
| H | 2.68491 | -2.60671 | -2.34892 | N | 1.94929 | -0.86238 | -2.23058 |
| C | 5.28767 | -4.44976 | -0.00910 | C | 2.47287 | -2.12222 | -2.19527 |
| H | 5.84076 | -2.38181 | -0.24382 | C | 2.93586 | -2.54132 | -3.61087 |
| H | 5.03376 | -2.72669 | 1.27619 | C | 2.85118 | -1.24020 | -4.42068 |
| C | 5.25429 | -4.80944 | -1.50936 | | | | |

| | | | | | | | |
|---|----------|----------|----------|---|----------|----------|----------|
| C | 1.76849 | -0.45749 | -3.64056 | C | -6.03193 | -2.09147 | -3.59555 |
| O | 2.55989 | -2.88148 | -1.19782 | H | -6.26009 | -0.27273 | -2.46120 |
| P | 2.87198 | -0.06255 | 0.77372 | H | -4.84205 | -0.28598 | -3.49411 |
| H | -1.84120 | -1.16567 | -3.26028 | C | -6.85117 | -3.01094 | -2.66574 |
| H | 0.75359 | -0.74027 | -3.98998 | H | -6.62217 | -4.06717 | -0.78594 |
| H | 1.86000 | 0.62764 | -3.77241 | H | -5.19251 | -4.09773 | -1.80235 |
| H | 3.93070 | -3.01623 | -3.57728 | H | -6.66278 | -1.72895 | -4.40485 |
| H | 2.22404 | -3.30525 | -3.98341 | H | -5.22138 | -2.66215 | -4.04437 |
| H | 2.58878 | -1.38042 | -5.48464 | H | -7.20228 | -3.87914 | -3.21975 |
| H | 3.81486 | -0.69826 | -4.37770 | H | -7.72925 | -2.47446 | -2.31088 |
| H | 0.37009 | -1.96073 | -0.70342 | C | -1.44724 | 1.09572 | 2.41122 |
| C | -1.15796 | -3.28143 | -3.06382 | C | -2.83151 | 1.12520 | 3.11033 |
| C | -0.60457 | -4.29723 | -2.04966 | C | -0.33682 | 1.30143 | 3.47073 |
| H | -2.17479 | -3.59777 | -3.37639 | H | -1.42769 | 1.95193 | 1.74389 |
| H | -0.54627 | -3.33250 | -3.99177 | C | -3.03246 | 2.45234 | 3.87798 |
| C | -0.53218 | -5.72216 | -2.63261 | H | -2.93249 | 0.30830 | 3.81418 |
| H | 0.40383 | -3.99101 | -1.71137 | H | -3.62756 | 1.02059 | 2.38495 |
| H | -1.25295 | -4.30550 | -1.15118 | C | -0.53133 | 2.61327 | 4.26466 |
| C | 0.00409 | -6.75214 | -1.62447 | H | -0.32998 | 0.46982 | 4.16997 |
| H | -1.53717 | -6.03320 | -2.98520 | H | 0.63533 | 1.32143 | 2.99144 |
| H | 0.11852 | -5.71401 | -3.53050 | C | -1.92267 | 2.66839 | 4.92626 |
| H | 0.06186 | -7.76215 | -2.06945 | H | -4.00429 | 2.43966 | 4.36716 |
| H | 1.01598 | -6.47484 | -1.27743 | H | -3.03323 | 3.28326 | 3.17554 |
| H | -0.64861 | -6.81551 | -0.73362 | H | 0.24434 | 2.69458 | 5.02355 |
| C | -2.76758 | -0.87118 | 0.57371 | H | -0.41930 | 3.46242 | 3.59385 |
| H | -2.58210 | -1.85614 | 0.11650 | H | -2.05920 | 3.62809 | 5.42019 |
| H | -3.46737 | -1.02571 | 1.40682 | H | -1.99112 | 1.89544 | 5.68921 |
| P | -3.53976 | 0.07922 | -0.88604 | C | -0.73250 | -1.91265 | 2.44617 |
| C | -4.72915 | 1.37569 | -0.09806 | C | -1.75145 | -2.07821 | 3.60382 |
| C | -5.18658 | 2.38179 | -1.18540 | C | -0.61784 | -3.24942 | 1.67051 |
| C | -5.96284 | 0.89112 | 0.70211 | H | 0.23654 | -1.70103 | 2.89144 |
| H | -4.09234 | 1.93414 | 0.58395 | C | -1.39426 | -3.26954 | 4.52340 |
| C | -5.94948 | 3.57462 | -0.56483 | H | -2.75123 | -2.23159 | 3.20526 |
| H | -5.83463 | 1.88718 | -1.90430 | H | -1.77587 | -1.18770 | 4.21973 |
| H | -4.32269 | 2.75151 | -1.73352 | C | -0.25900 | -4.43429 | 2.59419 |
| C | -6.71062 | 2.08039 | 1.34736 | H | -1.56433 | -3.47001 | 1.18476 |
| H | -6.65179 | 0.37689 | 0.03795 | H | 0.13524 | -3.16476 | 0.89457 |
| H | -5.67066 | 0.18560 | 1.47677 | C | -1.28175 | -4.58770 | 3.73556 |
| C | -7.15261 | 3.10002 | 0.27685 | H | -2.15401 | -3.35899 | 5.29745 |
| H | -6.29236 | 4.24037 | -1.35444 | H | -0.44770 | -3.06639 | 5.02043 |
| H | -5.27310 | 4.14406 | 0.06933 | H | -0.22178 | -5.34553 | 2.00122 |
| H | -7.58046 | 1.71486 | 1.88974 | H | 0.73111 | -4.28252 | 3.01766 |
| H | -6.05998 | 2.57145 | 2.06836 | H | -0.98233 | -5.39346 | 4.40246 |
| H | -7.63042 | 3.95383 | 0.75303 | H | -2.25410 | -4.84815 | 3.32220 |
| H | -7.88960 | 2.63695 | -0.37646 | P | 1.41627 | 2.03634 | -0.49173 |
| C | -4.57596 | -1.37072 | -1.62726 | C | 2.67138 | 1.82230 | 0.89800 |
| C | -5.42946 | -2.25844 | -0.68503 | H | 3.57137 | 2.45275 | 0.88372 |
| C | -5.44145 | -0.89319 | -2.81883 | H | 2.14271 | 2.03656 | 1.83981 |
| H | -3.79769 | -2.01013 | -2.03669 | C | 4.52731 | -0.30214 | -0.20476 |
| C | -6.00907 | -3.46729 | -1.45588 | C | 5.67124 | 0.69734 | 0.10492 |
| H | -6.25299 | -1.69168 | -0.26212 | C | 5.06622 | -1.74906 | -0.09585 |
| H | -4.82957 | -2.62634 | 0.14295 | H | 4.21138 | -0.14703 | -1.23411 |

| | | | | | | | |
|---|----------|----------|----------|----|----------|----------|-----------------------|
| C | 6.84435 | 0.49155 | -0.88161 | H | 1.94898 | 4.80028 | 0.80449 |
| H | 6.03725 | 0.55389 | 1.11712 | C | -1.92861 | 4.67927 | -0.01581 |
| H | 5.33262 | 1.72449 | 0.02675 | H | -0.79103 | 3.92166 | -1.68307 |
| C | 6.23505 | -1.96621 | -1.08149 | H | -1.49830 | 2.66352 | -0.69600 |
| H | 5.42807 | -1.93317 | 0.91147 | C | -1.23102 | 6.04838 | 0.12612 |
| H | 4.25896 | -2.44660 | -0.32258 | H | 0.59762 | 6.88179 | 0.94340 |
| C | 7.37485 | -0.95597 | -0.83518 | H | -0.10984 | 5.61270 | 1.92634 |
| H | 7.64422 | 1.18884 | -0.63963 | H | -2.82397 | 4.78569 | -0.62380 |
| H | 6.50695 | 0.72034 | -1.89062 | H | -2.24168 | 4.33381 | 0.96708 |
| H | 6.61291 | -2.98094 | -0.97549 | H | -1.89064 | 6.74628 | 0.63749 |
| H | 5.87140 | -1.85930 | -2.10107 | H | -1.02951 | 6.45516 | -0.86292 |
| H | 8.15609 | -1.08465 | -1.58144 | H | 0.07862 | 3.20846 | 1.14873 |
| H | 7.82118 | -1.14364 | 0.13959 | | | | |
| C | 3.13120 | -0.57040 | 2.61551 | | | | 7a_c |
| C | 3.17040 | -2.10388 | 2.82063 | | | | 176 |
| C | 4.33033 | 0.08485 | 3.34243 | | | | XYZ |
| H | 2.22724 | -0.20609 | 3.09773 | Ru | -0.82205 | -0.58362 | -0.23173 |
| C | 3.12336 | -2.44751 | 4.32686 | C | 1.02762 | -3.12048 | 0.08077 |
| H | 4.08125 | -2.51585 | 2.39924 | C | 0.35901 | -1.97970 | -0.10753 |
| H | 2.33805 | -2.57407 | 2.30438 | P | 0.89012 | 0.81289 | -1.22277 |
| C | 4.28932 | -0.24406 | 4.85249 | N | -2.25561 | -2.26882 | -0.34538 |
| H | 5.26355 | -0.28963 | 2.93131 | C | -2.64840 | -2.63998 | -1.60229 |
| H | 4.31948 | 1.16431 | 3.20723 | C | -3.24712 | -4.06290 | -1.57216 |
| C | 4.28008 | -1.76897 | 5.09145 | C | -3.45705 | -4.34245 | -0.07756 |
| H | 3.18106 | -3.52633 | 4.45547 | C | -2.42308 | -3.39606 | 0.58754 |
| H | 2.17396 | -2.11955 | 4.74552 | O | -2.53876 | -1.97350 | -2.65809 |
| H | 5.15123 | 0.20165 | 5.34505 | P | -2.96500 | 0.88296 | -0.04151 |
| H | 3.39770 | 0.19778 | 5.29337 | H | 1.43340 | -3.27447 | 1.09366 |
| H | 4.19001 | -1.97382 | 6.15621 | H | -1.45551 | -3.91488 | 0.75167 |
| H | 5.22663 | -2.18955 | 4.75762 | H | -2.77688 | -3.04730 | 1.57111 |
| C | 2.45139 | 2.65578 | -2.01009 | H | -4.15633 | -4.12512 | -2.19326 |
| C | 1.53846 | 3.21901 | -3.12731 | H | -2.50120 | -4.74905 | -2.02100 |
| C | 3.59925 | 3.65847 | -1.72682 | H | -3.30999 | -5.39823 | 0.21205 |
| H | 2.90701 | 1.74050 | -2.37670 | H | -4.48094 | -4.05423 | 0.22538 |
| C | 2.34247 | 3.48920 | -4.41914 | H | -1.17789 | -0.80592 | -1.78883 |
| H | 1.09252 | 4.15430 | -2.80028 | C | 1.15884 | -4.30156 | -0.87890 |
| H | 0.72908 | 2.52449 | -3.33918 | C | 0.94065 | -3.98415 | -2.36847 |
| C | 4.41641 | 3.91369 | -3.01461 | H | 2.15898 | -4.76271 | -0.74731 |
| H | 3.20705 | 4.60532 | -1.37110 | H | 0.43412 | -5.08682 | -0.56955 |
| H | 4.26774 | 3.27717 | -0.96264 | C | 0.98029 | -5.24316 | -3.25503 |
| C | 3.52204 | 4.44679 | -4.15255 | H | -0.02736 | -3.46554 | -2.50483 |
| H | 1.68227 | 3.91600 | -5.17131 | H | 1.72360 | -3.27508 | -2.70569 |
| H | 2.72220 | 2.54951 | -4.81372 | C | 0.79245 | -4.93027 | -4.74911 |
| H | 5.20951 | 4.62760 | -2.80120 | H | 1.94283 | -5.77334 | -3.10327 |
| H | 4.88878 | 2.98557 | -3.33023 | H | 0.18890 | -5.94564 | -2.92328 |
| H | 4.11195 | 4.56821 | -5.05852 | H | 0.80793 | -5.85080 | -5.36032 |
| H | 3.13803 | 5.42785 | -3.87924 | H | -0.17101 | -4.41953 | -4.92912 |
| C | 0.32906 | 3.50388 | 0.13414 | H | 1.59549 | -4.26721 | -5.12176 |
| C | 1.02722 | 4.88158 | 0.23231 | C | 2.62149 | 0.03527 | -1.30280 |
| C | -0.99523 | 3.62759 | -0.65795 | H | 2.43612 | -0.99992 | -1.62876 |
| C | 0.09581 | 5.91718 | 0.90206 | H | 3.22894 | 0.52231 | -2.07939 |
| H | 1.28317 | 5.24445 | -0.75836 | P | 3.53286 | -0.13834 | 0.36060 |

| | | | | | | | |
|---|----------|----------|----------|---|----------|----------|----------|
| C | 4.96650 | 1.15247 | 0.29841 | C | 0.90172 | 2.21041 | -3.89517 |
| C | 5.91691 | 0.95496 | 1.50598 | C | 0.83381 | -0.31848 | -3.87448 |
| C | 5.80948 | 1.31846 | -0.99245 | H | -0.66604 | 0.98630 | -3.09661 |
| H | 4.45269 | 2.09650 | 0.46424 | C | 0.33298 | 2.20877 | -5.33419 |
| C | 6.89274 | 2.14461 | 1.65030 | H | 1.98795 | 2.23116 | -3.94450 |
| H | 6.49557 | 0.04356 | 1.37814 | H | 0.57139 | 3.12082 | -3.40453 |
| H | 5.34029 | 0.84808 | 2.42240 | C | 0.25436 | -0.32534 | -5.30519 |
| C | 6.77668 | 2.51828 | -0.86396 | H | 1.91745 | -0.38268 | -3.93513 |
| H | 6.39326 | 0.42363 | -1.18166 | H | 0.46873 | -1.18932 | -3.33969 |
| H | 5.17109 | 1.47263 | -1.85814 | C | 0.70353 | 0.92045 | -6.09520 |
| C | 7.70675 | 2.35970 | 0.35714 | H | 0.70932 | 3.07914 | -5.86847 |
| H | 7.56759 | 1.96561 | 2.48505 | H | -0.75049 | 2.29915 | -5.28757 |
| H | 6.32868 | 3.04764 | 1.87586 | H | 0.57906 | -1.22677 | -5.82047 |
| H | 7.37206 | 2.60537 | -1.77076 | H | -0.83185 | -0.35374 | -5.25063 |
| H | 6.20204 | 3.43693 | -0.76278 | H | 0.23801 | 0.92828 | -7.07855 |
| H | 8.33707 | 3.24080 | 0.45886 | H | 1.78117 | 0.88721 | -6.24449 |
| H | 8.36326 | 1.50611 | 0.19973 | P | -1.12650 | 0.21025 | 2.14153 |
| C | 4.26355 | -1.90511 | 0.16086 | C | -2.57251 | 1.36269 | 1.74620 |
| C | 5.39877 | -2.12824 | -0.86693 | H | -3.40719 | 1.32695 | 2.46177 |
| C | 4.67897 | -2.48400 | 1.53655 | H | -2.20928 | 2.40257 | 1.73531 |
| H | 3.40415 | -2.47953 | -0.17384 | C | -4.53756 | -0.23372 | 0.01298 |
| C | 5.73489 | -3.63165 | -0.99472 | C | -5.56734 | 0.06885 | 1.12944 |
| H | 6.29728 | -1.60314 | -0.55397 | C | -5.22381 | -0.30186 | -1.37261 |
| H | 5.11221 | -1.73945 | -1.84191 | H | -4.09872 | -1.21070 | 0.19842 |
| C | 5.03459 | -3.98410 | 1.42643 | C | -6.70214 | -0.98167 | 1.11747 |
| H | 5.53833 | -1.94642 | 1.93020 | H | -6.00148 | 1.05646 | 1.00150 |
| H | 3.86579 | -2.35984 | 2.24843 | H | -5.08995 | 0.04717 | 2.10536 |
| C | 6.13424 | -4.22801 | 0.37143 | C | -6.36052 | -1.34765 | -1.37178 |
| H | 6.54697 | -3.76551 | -1.70686 | H | -5.64640 | 0.66393 | -1.63552 |
| H | 4.86880 | -4.16360 | -1.38310 | H | -4.48683 | -0.57100 | -2.12735 |
| H | 5.36563 | -4.35380 | 2.39502 | C | -7.39035 | -1.05698 | -0.26070 |
| H | 4.14271 | -4.54329 | 1.15162 | H | -7.43217 | -0.73116 | 1.88482 |
| H | 6.31707 | -5.29576 | 0.26926 | H | -6.28839 | -1.95683 | 1.36644 |
| H | 7.06318 | -3.76941 | 0.70551 | H | -6.85259 | -1.34534 | -2.34212 |
| C | 1.37611 | 2.56616 | -0.52137 | H | -5.93806 | -2.33839 | -1.22270 |
| C | 2.48798 | 3.36770 | -1.24470 | H | -8.15198 | -1.83379 | -0.24810 |
| C | 0.14428 | 3.47810 | -0.32971 | H | -7.89104 | -0.11263 | -0.46635 |
| H | 1.75905 | 2.31920 | 0.46699 | C | -3.43303 | 2.60582 | -0.78505 |
| C | 2.87337 | 4.62223 | -0.42771 | C | -3.43040 | 2.61146 | -2.33276 |
| H | 2.14817 | 3.69968 | -2.21724 | C | -4.74099 | 3.23184 | -0.24294 |
| H | 3.36813 | 2.75605 | -1.40239 | H | -2.61987 | 3.24957 | -0.46250 |
| C | 0.49414 | 4.77195 | 0.44082 | C | -3.61404 | 4.04719 | -2.87509 |
| H | -0.27415 | 3.74256 | -1.29796 | H | -4.22978 | 1.98380 | -2.71501 |
| H | -0.62146 | 2.94041 | 0.21745 | H | -2.49466 | 2.20085 | -2.70209 |
| C | 1.65075 | 5.54099 | -0.22889 | C | -4.91492 | 4.67135 | -0.77919 |
| H | 3.66094 | 5.16415 | -0.94729 | H | -5.59825 | 2.64068 | -0.55128 |
| H | 3.26625 | 4.32578 | 0.54276 | H | -4.72858 | 3.25263 | 0.84478 |
| H | -0.38723 | 5.40735 | 0.50222 | C | -4.89930 | 4.69802 | -2.32199 |
| H | 0.78009 | 4.51512 | 1.45824 | H | -3.65202 | 4.02132 | -3.96211 |
| H | 1.92370 | 6.39936 | 0.38137 | H | -2.75450 | 4.65257 | -2.59351 |
| H | 1.32342 | 5.91822 | -1.19573 | H | -5.85233 | 5.08369 | -0.41132 |
| C | 0.41894 | 0.96454 | -3.11450 | H | -4.11114 | 5.29821 | -0.39767 |

| | | | | | | | |
|--|----------|----------|----------|---|----------|----------|----------|
| H | -4.97371 | 5.72512 | -2.67305 | H | 1.45405 | 3.87951 | 0.36773 |
| H | -5.76691 | 4.16040 | -2.69949 | H | 3.01797 | 3.29503 | -0.25511 |
| C | -1.89533 | -1.02139 | 3.41506 | H | 2.68481 | 3.89487 | -3.51577 |
| C | -0.97098 | -2.23485 | 3.68033 | H | 1.07554 | 4.63556 | -3.58586 |
| C | -2.37483 | -0.42813 | 4.76127 | H | 1.27776 | 5.51908 | -1.35137 |
| H | -2.77427 | -1.38420 | 2.88700 | H | 3.02550 | 5.28338 | -1.55118 |
| C | -1.70987 | -3.31338 | 4.50459 | H | 0.60216 | 0.35768 | -1.97148 |
| H | -0.08995 | -1.91582 | 4.23021 | C | -1.36588 | 4.26609 | -0.50027 |
| H | -0.63449 | -2.65990 | 2.73858 | C | -2.73717 | 4.73525 | -1.03266 |
| C | -3.14729 | -1.49874 | 5.56571 | H | -1.07670 | 4.93511 | 0.34035 |
| H | -1.52155 | -0.10798 | 5.35188 | H | -0.60795 | 4.40273 | -1.28879 |
| H | -3.01341 | 0.43786 | 4.60272 | C | -2.74006 | 6.22167 | -1.43813 |
| C | -2.26451 | -2.73776 | 5.82506 | H | -3.02035 | 4.11329 | -1.90413 |
| H | -1.02762 | -4.13335 | 4.71844 | H | -3.51231 | 4.56481 | -0.25810 |
| H | -2.52962 | -3.71794 | 3.91512 | C | -4.10036 | 6.70071 | -1.97229 |
| H | -3.47546 | -1.07293 | 6.51185 | H | -2.44644 | 6.83882 | -0.56484 |
| H | -4.03745 | -1.79382 | 5.01359 | H | -1.96086 | 6.39023 | -2.20851 |
| H | -2.84248 | -3.49862 | 6.34528 | H | -4.06981 | 7.76800 | -2.25678 |
| H | -1.43679 | -2.45717 | 6.47369 | H | -4.40406 | 6.12434 | -2.86582 |
| C | 0.14076 | 1.36590 | 3.03834 | H | -4.89406 | 6.57921 | -1.21168 |
| C | -0.43545 | 2.33635 | 4.10062 | C | -2.45911 | -0.84384 | -1.17378 |
| C | 1.33277 | 0.57117 | 3.62293 | H | -2.31662 | -0.03215 | -1.90623 |
| C | 0.66427 | 3.29497 | 4.61316 | H | -3.00083 | -1.65707 | -1.68218 |
| H | -0.83065 | 1.78544 | 4.94673 | P | -3.49618 | 0.00938 | 0.16855 |
| H | -1.25081 | 2.92169 | 3.68366 | C | -4.55570 | -1.37410 | 0.98556 |
| C | 2.42975 | 1.52748 | 4.14154 | C | -5.20533 | -0.83374 | 2.28524 |
| H | 0.99487 | -0.05087 | 4.44728 | C | -5.62530 | -2.11014 | 0.14240 |
| H | 1.75406 | -0.08089 | 2.86012 | H | -3.82235 | -2.11210 | 1.29761 |
| C | 1.86732 | 2.51600 | 5.18402 | C | -5.85907 | -1.97231 | 3.10075 |
| H | 0.24552 | 3.94379 | 5.37979 | H | -5.96406 | -0.09294 | 2.04731 |
| H | 1.00077 | 3.93113 | 3.79746 | H | -4.45350 | -0.33860 | 2.89538 |
| H | 3.23666 | 0.94551 | 4.58178 | C | -6.27188 | -3.26197 | 0.94612 |
| H | 2.84778 | 2.08289 | 3.30446 | H | -6.40813 | -1.41539 | -0.14932 |
| H | 2.64465 | 3.21279 | 5.49034 | H | -5.18870 | -2.51012 | -0.77018 |
| H | 1.55353 | 1.96718 | 6.06985 | C | -6.89733 | -2.74239 | 2.25776 |
| H | 0.52673 | 1.97674 | 2.22701 | H | -6.33737 | -1.56057 | 3.98733 |
| [7a _c -8a _c] [‡] | | | | H | -5.08771 | -2.66185 | 3.43845 |
| 176 | | | | H | -7.03575 | -3.74623 | 0.34081 |
| XYZ | | | | H | -5.51726 | -4.01084 | 1.17773 |
| Ru | 0.77971 | 0.44197 | -0.38105 | H | -7.29631 | -3.57554 | 2.83286 |
| C | -1.34727 | 2.82420 | -0.03343 | H | -7.72947 | -2.08200 | 2.02139 |
| C | -0.48823 | 1.82587 | -0.25728 | C | -4.62014 | 1.07659 | -0.98157 |
| P | -0.67068 | -1.36464 | -0.82517 | C | -5.22420 | 0.42268 | -2.25154 |
| N | 1.31167 | 2.47177 | -1.21488 | C | -5.73702 | 1.78733 | -0.17762 |
| C | 1.15343 | 2.70514 | -2.57094 | H | -3.93022 | 1.84610 | -1.32227 |
| C | 1.76570 | 4.08014 | -2.92818 | C | -5.95151 | 1.47512 | -3.11973 |
| C | 2.05108 | 4.76535 | -1.58081 | H | -5.93361 | -0.35394 | -1.98251 |
| C | 1.99365 | 3.59452 | -0.55226 | H | -4.44447 | -0.04211 | -2.84828 |
| O | 0.65017 | 1.94883 | -3.41470 | C | -6.47822 | 2.83469 | -1.03890 |
| P | 3.00576 | -0.66097 | -0.26039 | H | -6.46137 | 1.05781 | 0.17670 |
| H | -2.15862 | 2.50965 | 0.64535 | H | -5.31228 | 2.27573 | 0.69712 |
| | | | | C | -7.05517 | 2.19794 | -2.32010 |

| | | | | | | | |
|---|----------|----------|----------|---|----------|----------|----------|
| H | -6.38570 | 0.99003 | -3.99185 | H | 4.70940 | 0.25780 | -2.73949 |
| H | -5.22959 | 2.20568 | -3.47933 | H | 3.48056 | 1.43320 | -2.31101 |
| H | -7.28006 | 3.28447 | -0.45652 | C | 6.92262 | 1.73940 | -1.81313 |
| H | -5.78837 | 3.62980 | -1.31244 | H | 7.90800 | 0.83042 | -0.10605 |
| H | -7.51806 | 2.96479 | -2.93789 | H | 6.67791 | 2.00645 | 0.32091 |
| H | -7.83152 | 1.48413 | -2.05083 | H | 5.52413 | 2.50932 | -3.28038 |
| C | -0.97136 | -2.82387 | 0.44309 | H | 5.21706 | 3.05757 | -1.64345 |
| C | -2.04562 | -3.89426 | 0.11804 | H | 7.62022 | 2.57057 | -1.89210 |
| C | 0.33491 | -3.55261 | 0.83527 | H | 7.26915 | 0.95804 | -2.48683 |
| H | -1.31510 | -2.28591 | 1.32525 | C | 3.52154 | -2.43544 | -0.85064 |
| C | -2.29664 | -4.80588 | 1.34169 | C | 4.02689 | -2.45056 | -2.31347 |
| H | -1.71926 | -4.52274 | -0.70145 | C | 4.51657 | -3.18920 | 0.06772 |
| H | -2.97940 | -3.43463 | -0.18485 | H | 2.58597 | -2.98782 | -0.83130 |
| C | 0.12439 | -4.49357 | 2.04412 | C | 4.22601 | -3.90078 | -2.80863 |
| H | 0.69829 | -4.14073 | -0.00352 | H | 4.97610 | -1.92777 | -2.38628 |
| H | 1.10585 | -2.82990 | 1.07837 | H | 3.31860 | -1.93758 | -2.96042 |
| C | -0.99760 | -5.51681 | 1.77378 | C | 4.72244 | -4.63934 | -0.42776 |
| H | -3.05498 | -5.54608 | 1.09447 | H | 5.47736 | -2.68354 | 0.08375 |
| H | -2.67764 | -4.21306 | 2.17078 | H | 4.14709 | -3.21743 | 1.08921 |
| H | 1.05354 | -5.01434 | 2.26784 | C | 5.19952 | -4.67322 | -1.89449 |
| H | -0.13528 | -3.90223 | 2.91961 | H | 4.60754 | -3.88590 | -3.82741 |
| H | -1.17721 | -6.11183 | 2.66684 | H | 3.26593 | -4.41214 | -2.82678 |
| H | -0.68203 | -6.19807 | 0.98599 | H | 5.44949 | -5.13826 | 0.20990 |
| C | -0.18122 | -2.12445 | -2.56899 | H | 3.78463 | -5.18463 | -0.34076 |
| C | -0.54225 | -3.60834 | -2.82957 | H | 5.28277 | -5.70465 | -2.23040 |
| C | -0.72059 | -1.25810 | -3.73681 | H | 6.18981 | -4.22695 | -1.96216 |
| H | 0.90175 | -2.04180 | -2.58022 | C | 2.41168 | 2.02272 | 2.72168 |
| C | 0.01762 | -4.09072 | -4.18909 | C | 1.35529 | 2.97720 | 3.32901 |
| H | -1.62208 | -3.73668 | -2.83064 | C | 3.58622 | 1.82327 | 3.71242 |
| H | -0.13330 | -4.24690 | -2.05309 | H | 2.82099 | 2.51263 | 1.84294 |
| C | -0.13900 | -1.72776 | -5.08795 | C | 1.98732 | 4.33964 | 3.69110 |
| H | -1.80339 | -1.33613 | -3.78562 | H | 0.93442 | 2.53903 | 4.23029 |
| H | -0.45486 | -0.21607 | -3.57675 | H | 0.54115 | 3.12857 | 2.62324 |
| C | -0.47063 | -3.20964 | -5.35555 | C | 4.22243 | 3.18751 | 4.06824 |
| H | -0.27990 | -5.12492 | -4.35234 | H | 3.24584 | 1.34746 | 4.62634 |
| H | 1.10480 | -4.06794 | -4.15507 | H | 4.35203 | 1.18630 | 3.27885 |
| H | -0.54173 | -1.10863 | -5.88673 | C | 3.18011 | 4.16278 | 4.65357 |
| H | 0.94037 | -1.59137 | -5.08477 | H | 1.23432 | 4.97788 | 4.14871 |
| H | -0.00721 | -3.53815 | -6.28363 | H | 2.32514 | 4.83310 | 2.78217 |
| H | -1.54676 | -3.32552 | -5.46931 | H | 5.02779 | 3.03318 | 4.78363 |
| P | 1.57940 | 0.43767 | 1.97300 | H | 4.66104 | 3.62315 | 3.17259 |
| C | 3.02044 | -0.74158 | 1.62868 | H | 3.64652 | 5.12667 | 4.84584 |
| H | 3.98594 | -0.50926 | 2.10244 | H | 2.82198 | 3.77781 | 5.60652 |
| H | 2.72584 | -1.74569 | 1.96917 | C | 0.61073 | -0.48482 | 3.36590 |
| C | 4.47085 | 0.55157 | -0.59708 | C | 1.32749 | -0.61947 | 4.73019 |
| C | 5.88530 | 0.06029 | -0.20183 | C | -0.81344 | 0.09001 | 3.56009 |
| C | 4.47111 | 1.06740 | -2.05598 | C | 0.51354 | -1.52313 | 5.68401 |
| H | 4.23079 | 1.39683 | 0.04432 | H | 1.43556 | 0.35745 | 5.19244 |
| C | 6.91799 | 1.19876 | -0.36789 | H | 2.32399 | -1.03605 | 4.59853 |
| H | 6.18420 | -0.77084 | -0.83416 | C | -1.63391 | -0.79359 | 4.52750 |
| H | 5.90044 | -0.28915 | 0.82803 | H | -0.75933 | 1.09716 | 3.96382 |
| C | 5.51100 | 2.19577 | -2.23871 | H | -1.32292 | 0.15259 | 2.60043 |

| | | | | | | | |
|---|----------|----------|---------|---|----------|----------|----------|
| C | -0.91488 | -0.97415 | 5.88117 | C | -5.55813 | -3.34783 | 2.28916 |
| H | 1.02151 | -1.58679 | 6.64422 | H | -5.82538 | -1.21285 | 2.15178 |
| H | 0.46337 | -2.53004 | 5.27440 | H | -4.25457 | -1.68432 | 2.75904 |
| H | -2.61050 | -0.34275 | 4.68926 | C | -6.05227 | -3.61030 | -0.19360 |
| H | -1.79703 | -1.76936 | 4.07429 | H | -6.34594 | -1.48723 | -0.36438 |
| H | -1.48555 | -1.65037 | 6.51419 | H | -5.12600 | -2.11411 | -1.45463 |
| H | -0.86278 | -0.01495 | 6.39263 | C | -6.61212 | -3.75356 | 1.23738 |
| H | 0.49997 | -1.48657 | 2.95790 | H | -5.99576 | -3.39241 | 3.28459 |
| | | | | H | -4.73412 | -4.05839 | 2.26467 |
| | | | | H | -6.83217 | -3.83760 | -0.91785 |
| | | | | H | -5.25096 | -4.33104 | -0.34171 |
| | | | | H | -6.93075 | -4.77974 | 1.40928 |
| | | | | H | -7.48927 | -3.11827 | 1.34456 |
| | | | | C | -4.74705 | 1.23099 | -0.08629 |
| | | | | C | -5.43764 | 1.14825 | -1.47229 |
| | | | | C | -5.81140 | 1.45711 | 1.01541 |
| | | | | H | -4.12033 | 2.11832 | -0.10576 |
| | | | | C | -6.26098 | 2.42691 | -1.75271 |
| | | | | H | -6.10263 | 0.29170 | -1.52096 |
| | | | | H | -4.69789 | 1.03082 | -2.25931 |
| | | | | C | -6.63667 | 2.73501 | 0.74382 |
| | | | | H | -6.49140 | 0.60971 | 1.05828 |
| | | | | H | -5.32962 | 1.53885 | 1.98767 |
| | | | | C | -7.30548 | 2.68070 | -0.64562 |
| | | | | H | -6.76058 | 2.33423 | -2.71515 |
| | | | | H | -5.58913 | 3.28037 | -1.81648 |
| | | | | H | -7.39614 | 2.85170 | 1.51459 |
| | | | | H | -5.98303 | 3.60336 | 0.79620 |
| | | | | H | -7.83111 | 3.61342 | -0.84013 |
| | | | | H | -8.04484 | 1.88198 | -0.65793 |
| | | | | C | -0.88889 | -2.64449 | -0.75249 |
| | | | | C | -1.96071 | -3.52445 | -1.44644 |
| | | | | C | 0.45553 | -3.40233 | -0.77502 |
| | | | | H | -1.18795 | -2.54669 | 0.28956 |
| | | | | C | -2.10291 | -4.88684 | -0.72873 |
| | | | | H | -1.68163 | -3.72537 | -2.47274 |
| | | | | H | -2.92274 | -3.02573 | -1.46972 |
| | | | | C | 0.35529 | -4.79243 | -0.10547 |
| | | | | H | 0.79268 | -3.52686 | -1.80158 |
| | | | | H | 1.20522 | -2.81434 | -0.25868 |
| | | | | C | -0.76193 | -5.64889 | -0.73521 |
| | | | | H | -2.86576 | -5.48280 | -1.22574 |
| | | | | H | -2.42665 | -4.73341 | 0.29867 |
| | | | | H | 1.30950 | -5.30915 | -0.19050 |
| | | | | H | 0.14968 | -4.66568 | 0.95517 |
| | | | | H | -0.86083 | -6.58528 | -0.18988 |
| | | | | H | -0.49407 | -5.89530 | -1.76079 |
| | | | | C | -0.41291 | -0.68722 | -3.23234 |
| | | | | C | -0.91732 | -1.86666 | -4.09934 |
| | | | | C | -0.96759 | 0.64653 | -3.79257 |
| | | | | H | 0.66686 | -0.65146 | -3.33131 |
| | | | | C | -0.52787 | -1.66961 | -5.58442 |

| | | | | | | | |
|---|----------|----------|----------|--|----------|----------|----------|
| H | -1.99811 | -1.96389 | -4.02548 | C | 2.82460 | 0.31019 | 4.58406 |
| H | -0.47506 | -2.79936 | -3.76415 | H | 2.87238 | 1.43982 | 2.77061 |
| C | -0.54815 | 0.84418 | -5.26519 | C | 1.64004 | 3.03554 | 4.59979 |
| H | -2.05310 | 0.64688 | -3.74638 | H | 0.28356 | 1.37579 | 4.37597 |
| H | -0.59928 | 1.48022 | -3.19935 | H | 0.51203 | 2.28831 | 2.89957 |
| C | -1.03609 | -0.32592 | -6.14321 | C | 3.46969 | 1.45349 | 5.40130 |
| H | -0.92824 | -2.49334 | -6.17269 | H | 2.10096 | -0.19455 | 5.21717 |
| H | 0.55627 | -1.70572 | -5.67298 | H | 3.58783 | -0.41456 | 4.31005 |
| H | -0.95945 | 1.78096 | -5.63530 | C | 2.41353 | 2.49735 | 5.82266 |
| H | 0.53560 | 0.91750 | -5.32712 | H | 0.84954 | 3.70583 | 4.93064 |
| H | -0.68975 | -0.19945 | -7.16705 | H | 2.31554 | 3.61405 | 3.97314 |
| H | -2.12418 | -0.33255 | -6.16566 | H | 3.95334 | 1.04016 | 6.28419 |
| P | 1.46337 | -0.36901 | 2.00345 | H | 4.24035 | 1.93569 | 4.80293 |
| C | 3.05291 | -1.24888 | 1.45875 | H | 2.89728 | 3.31977 | 6.34549 |
| H | 3.93488 | -1.10371 | 2.10259 | H | 1.71382 | 2.03665 | 6.51733 |
| H | 2.86946 | -2.33453 | 1.40228 | C | 0.49188 | -1.78985 | 2.89703 |
| C | 4.48739 | 0.79870 | -0.31411 | C | 1.30887 | -2.69593 | 3.85305 |
| C | 5.69036 | 0.62699 | 0.64784 | C | -0.77972 | -1.27044 | 3.60919 |
| C | 4.97209 | 1.09757 | -1.75429 | C | 0.44544 | -3.87742 | 4.35159 |
| H | 3.92734 | 1.66735 | 0.02411 | H | 1.64748 | -2.13264 | 4.71552 |
| C | 6.61638 | 1.86433 | 0.59832 | H | 2.19075 | -3.08746 | 3.35340 |
| H | 6.26936 | -0.25367 | 0.38742 | C | -1.64203 | -2.44597 | 4.12220 |
| H | 5.34193 | 0.49652 | 1.66893 | H | -0.50150 | -0.64879 | 4.45598 |
| C | 5.91927 | 2.31746 | -1.80131 | H | -1.36655 | -0.65760 | 2.92703 |
| H | 5.50612 | 0.23919 | -2.15093 | C | -0.83450 | -3.37598 | 5.05120 |
| H | 4.11301 | 1.27912 | -2.39708 | H | 1.02995 | -4.48530 | 5.03930 |
| C | 7.10967 | 2.14283 | -0.83613 | H | 0.17346 | -4.50965 | 3.50895 |
| H | 7.46655 | 1.70388 | 1.25838 | H | -2.50650 | -2.05492 | 4.65433 |
| H | 6.07608 | 2.73325 | 0.96903 | H | -2.01183 | -3.01847 | 3.27419 |
| H | 6.28393 | 2.44828 | -2.81803 | H | -1.44813 | -4.22347 | 5.34924 |
| H | 5.36975 | 3.21724 | -1.53683 | H | -0.56219 | -2.83603 | 5.95602 |
| H | 7.72796 | 3.03796 | -0.84567 | H | 0.16784 | -2.41304 | 2.06755 |
| H | 7.73021 | 1.31394 | -1.17135 | [8a _c -9a _c] [‡] | | | |
| C | 3.87308 | -2.14604 | -1.23730 | 176 | | | |
| C | 3.67407 | -2.07428 | -2.77011 | XYZ | | | |
| C | 5.33678 | -2.51327 | -0.89461 | Ru | -0.80221 | 0.14697 | 0.00279 |
| H | 3.25402 | -2.96258 | -0.87527 | C | 0.22893 | 2.50637 | -1.41076 |
| C | 4.07035 | -3.41135 | -3.43667 | C | -0.94352 | 1.99318 | -0.90959 |
| H | 4.27646 | -1.27605 | -3.19399 | P | 1.06646 | 0.45284 | 1.46055 |
| H | 2.63484 | -1.84950 | -2.99558 | N | -2.15119 | 2.68674 | -1.28136 |
| C | 5.72334 | -3.85759 | -1.55360 | C | -2.73348 | 3.65614 | -0.48161 |
| H | 6.01538 | -1.74493 | -1.25314 | C | -3.88863 | 4.29028 | -1.28052 |
| H | 5.46557 | -2.59164 | 0.18289 | C | -3.69321 | 3.78496 | -2.72660 |
| C | 5.51869 | -3.80960 | -3.08242 | C | -2.78746 | 2.52740 | -2.59482 |
| H | 3.96536 | -3.32389 | -4.51607 | O | -2.37903 | 3.94443 | 0.66522 |
| H | 3.39073 | -4.19423 | -3.10559 | P | -3.02098 | -0.53370 | 0.33685 |
| H | 6.76261 | -4.08657 | -1.32632 | H | 1.16490 | 2.02827 | -1.09884 |
| H | 5.11405 | -4.65440 | -1.13133 | H | -2.02067 | 2.47669 | -3.38805 |
| H | 5.75101 | -4.78043 | -3.51510 | H | -3.36348 | 1.58384 | -2.63462 |
| H | 6.20783 | -3.08664 | -3.51467 | H | -4.85273 | 3.97751 | -0.83899 |
| C | 2.12225 | 0.88384 | 3.33032 | H | -3.83719 | 5.38755 | -1.18220 |
| C | 1.02615 | 1.88588 | 3.76908 | | | | |

| | | | | | | | |
|---|----------|----------|----------|---|-----------|----------|----------|
| H | -3.17289 | 4.55212 | -3.32743 | H | 3.96967 | 0.70783 | -5.77681 |
| H | -4.64086 | 3.55239 | -3.24038 | H | 5.32986 | 0.21377 | -4.78511 |
| H | -1.15128 | 1.67690 | 0.56843 | C | 1.35833 | -1.11553 | 2.57536 |
| C | 0.38355 | 3.63682 | -2.40415 | C | 2.68432 | -1.19383 | 3.37494 |
| C | 1.43967 | 4.67977 | -1.96549 | C | 0.14834 | -1.36522 | 3.50877 |
| H | 0.68093 | 3.24219 | -3.40179 | H | 1.39066 | -1.92403 | 1.85106 |
| H | -0.58617 | 4.14913 | -2.54913 | C | 2.79931 | -2.53858 | 4.12949 |
| C | 1.65663 | 5.79734 | -3.00329 | H | 2.75611 | -0.38596 | 4.09446 |
| H | 1.12802 | 5.12361 | -0.99996 | H | 3.53019 | -1.10651 | 2.70230 |
| H | 2.40504 | 4.16743 | -1.77425 | C | 0.27469 | -2.69484 | 4.28623 |
| C | 2.70409 | 6.83381 | -2.56318 | H | 0.05350 | -0.55172 | 4.22277 |
| H | 1.96365 | 5.34534 | -3.96826 | H | -0.76289 | -1.37783 | 2.91826 |
| H | 0.69132 | 6.30696 | -3.19743 | C | 1.59967 | -2.76273 | 5.07153 |
| H | 2.83774 | 7.62316 | -3.32486 | H | 3.72565 | -2.55153 | 4.70026 |
| H | 2.40651 | 7.32561 | -1.61855 | H | 2.84978 | -3.35348 | 3.40998 |
| H | 3.68914 | 6.35971 | -2.39515 | H | -0.567050 | -2.79529 | 4.96851 |
| C | 2.85059 | 0.82117 | 0.88102 | H | 0.22917 | -3.53005 | 3.59049 |
| H | 2.80251 | 1.72997 | 0.26124 | H | 1.68951 | -3.72908 | 5.56335 |
| H | 3.47926 | 1.06542 | 1.75192 | H | 1.60081 | -1.99957 | 5.84730 |
| P | 3.68238 | -0.59713 | -0.06925 | C | 0.76531 | 1.97882 | 2.64003 |
| C | 5.50791 | -0.42627 | 0.53377 | C | 1.56832 | 2.01555 | 3.96492 |
| C | 6.43972 | -1.39029 | -0.24150 | C | 0.98774 | 3.30395 | 1.87003 |
| C | 6.15752 | 0.97943 | 0.60953 | H | -0.29112 | 1.91231 | 2.88819 |
| H | 5.45372 | -0.79823 | 1.55589 | C | 1.15245 | 3.23281 | 4.82468 |
| C | 7.83465 | -1.47242 | 0.41855 | H | 2.63500 | 2.07395 | 3.75950 |
| H | 6.55768 | -1.04764 | -1.26685 | H | 1.39405 | 1.11847 | 4.54913 |
| H | 5.99937 | -2.38478 | -0.27941 | C | 0.55411 | 4.51691 | 2.72024 |
| C | 7.54558 | 0.90214 | 1.28654 | H | 2.04133 | 3.41194 | 1.62422 |
| H | 6.28053 | 1.39706 | -0.38447 | H | 0.42630 | 3.29665 | 0.94065 |
| H | 5.52786 | 1.66392 | 1.17182 | C | 1.31778 | 4.56081 | 4.05945 |
| C | 8.47877 | -0.07553 | 0.54170 | H | 1.74977 | 3.24963 | 5.73448 |
| H | 8.47883 | -2.12548 | -0.16694 | H | 0.11186 | 3.11671 | 5.12144 |
| H | 7.73785 | -1.91338 | 1.40882 | H | 0.73837 | 5.43145 | 2.16074 |
| H | 7.99468 | 1.89308 | 1.31073 | H | -0.51613 | 4.46005 | 2.90686 |
| H | 7.42717 | 0.57333 | 2.31728 | H | 0.95541 | 5.38414 | 4.67157 |
| H | 9.42898 | -0.15201 | 1.06629 | H | 2.37479 | 4.73704 | 3.86867 |
| H | 8.68644 | 0.31377 | -0.45316 | P | -0.96595 | -2.22306 | -0.44766 |
| C | 3.53011 | -0.01852 | -1.89625 | C | -2.60890 | -2.38317 | 0.43878 |
| C | 4.34290 | 1.21900 | -2.34720 | H | -3.33165 | -3.10364 | 0.02945 |
| C | 3.81233 | -1.20121 | -2.85763 | H | -2.42368 | -2.64654 | 1.49368 |
| H | 2.47510 | 0.23239 | -1.99529 | C | -4.59631 | -0.47661 | -0.84517 |
| C | 3.99930 | 1.60800 | -3.80263 | C | -5.50662 | -1.73089 | -0.86590 |
| H | 5.40642 | 1.00196 | -2.29299 | C | -5.45541 | 0.78597 | -0.60405 |
| H | 4.14473 | 2.06522 | -1.69365 | H | -4.15594 | -0.38461 | -1.83575 |
| C | 3.49075 | -0.82672 | -4.32225 | C | -6.62182 | -1.58840 | -1.92946 |
| H | 4.85745 | -1.49422 | -2.79084 | H | -5.96200 | -1.88825 | 0.10826 |
| H | 3.21842 | -2.06538 | -2.56914 | H | -4.93156 | -2.62041 | -1.10427 |
| C | 4.26376 | 0.43241 | -4.76611 | C | -6.54998 | 0.93553 | -1.68384 |
| H | 4.59464 | 2.46918 | -4.09932 | H | -5.93999 | 0.72591 | 0.36573 |
| H | 2.95245 | 1.89805 | -3.86114 | H | -4.82287 | 1.66742 | -0.60006 |
| H | 3.73719 | -1.66190 | -4.97512 | C | -7.45831 | -0.31003 | -1.72019 |
| H | 2.42322 | -0.64142 | -4.41794 | H | -7.26721 | -2.46390 | -1.89246 |

| | | | | | | | |
|---|----------|----------|----------|----|----------|----------|-----------------------|
| H | -6.16811 | -1.56139 | -2.91838 | H | 2.48325 | -4.84499 | 0.99083 |
| H | -7.14543 | 1.82248 | -1.47724 | H | 1.96712 | -7.21140 | 0.52783 |
| H | -6.08502 | 1.07355 | -2.65780 | H | 1.17029 | -6.78040 | -0.97454 |
| H | -8.19048 | -0.21480 | -2.51932 | H | 0.25359 | -3.55590 | 1.16920 |
| H | -8.00593 | -0.38518 | -0.78272 | | | | |
| C | -3.62918 | -0.18030 | 2.14292 | | | | 9a_c |
| C | -3.80519 | 1.32580 | 2.44504 | | | | 176 |
| C | -4.86616 | -0.97570 | 2.62788 | | | | XYZ |
| H | -2.77976 | -0.52131 | 2.72981 | Ru | 0.88134 | 0.04860 | -0.08496 |
| C | -4.02094 | 1.54968 | 3.95849 | C | -0.07950 | 2.71682 | -0.99831 |
| H | -4.66332 | 1.72138 | 1.91049 | C | 1.17575 | 2.16608 | -0.93703 |
| H | -2.92848 | 1.87535 | 2.10857 | P | -1.02269 | -0.88740 | -1.24020 |
| C | -5.08915 | -0.75607 | 4.14242 | N | 2.29649 | 2.98226 | -0.56565 |
| H | -5.75657 | -0.65388 | 2.09507 | C | 2.97180 | 3.74854 | -1.51206 |
| H | -4.73731 | -2.03904 | 2.43607 | C | 3.91200 | 4.70085 | -0.75201 |
| C | -5.23150 | 0.74403 | 4.47766 | C | 3.86501 | 4.23763 | 0.71979 |
| H | -4.17461 | 2.60946 | 4.15073 | C | 2.58973 | 3.35749 | 0.82275 |
| H | -3.12727 | 1.24655 | 4.50057 | O | 2.81016 | 3.67943 | -2.73094 |
| H | -5.98073 | -1.29281 | 4.46110 | P | 3.05225 | -0.69171 | 0.12689 |
| H | -4.24633 | -1.17037 | 4.69249 | H | -0.87122 | 2.12669 | -1.46778 |
| H | -5.32883 | 0.87127 | 5.55392 | H | 1.74156 | 3.91986 | 1.26377 |
| H | -6.14176 | 1.12813 | 4.02120 | H | 2.72947 | 2.44812 | 1.42951 |
| C | -1.44263 | -2.36640 | -2.31572 | H | 4.91937 | 4.67803 | -1.20031 |
| C | -0.33184 | -1.78831 | -3.22294 | H | 3.52488 | 5.72867 | -0.88752 |
| C | -1.89018 | -3.75353 | -2.83623 | H | 3.83135 | 5.07594 | 1.43554 |
| H | -2.29439 | -1.69436 | -2.38768 | H | 4.75573 | 3.63638 | 0.96377 |
| C | -0.81554 | -1.69120 | -4.68720 | H | 1.42393 | 1.29414 | -1.62587 |
| H | 0.55368 | -2.41816 | -3.17854 | C | -0.46720 | 4.11729 | -0.60370 |
| H | -0.05644 | -0.79698 | -2.86796 | C | -0.86623 | 4.94569 | -1.85415 |
| C | -2.39205 | -3.64880 | -4.29468 | H | -1.32307 | 4.09484 | 0.09861 |
| H | -1.05623 | -4.44980 | -2.80716 | H | 0.36095 | 4.62875 | -0.08296 |
| H | -2.68281 | -4.16023 | -2.21199 | C | -1.28586 | 6.38722 | -1.50974 |
| C | -1.30472 | -3.05634 | -5.21512 | H | -0.01196 | 4.95610 | -2.55788 |
| H | -0.00610 | -1.32263 | -5.31354 | H | -1.69797 | 4.43527 | -2.38140 |
| H | -1.62728 | -0.96897 | -4.74639 | C | -1.67299 | 7.20812 | -2.75137 |
| H | -2.68155 | -4.63582 | -4.64991 | H | -2.13596 | 6.36261 | -0.79839 |
| H | -3.27803 | -3.01764 | -4.32645 | H | -0.45459 | 6.89159 | -0.97713 |
| H | -1.69759 | -2.94303 | -6.22330 | H | -1.96284 | 8.23904 | -2.47928 |
| H | -0.46449 | -3.74608 | -5.26823 | H | -0.83099 | 7.27162 | -3.46493 |
| C | 0.00931 | -3.79178 | 0.13687 | H | -2.52656 | 6.74865 | -3.28354 |
| C | -0.79779 | -5.11319 | 0.16193 | C | -2.76005 | -0.08545 | -1.27898 |
| C | 1.34087 | -3.97693 | -0.62820 | H | -2.61557 | 0.97976 | -1.52214 |
| C | 0.04333 | -6.24691 | 0.79223 | H | -3.34780 | -0.52512 | -2.10012 |
| H | -1.08120 | -5.40900 | -0.84275 | P | -3.79389 | -0.28825 | 0.30234 |
| H | -1.71221 | -4.98572 | 0.73608 | C | -5.55849 | -0.48300 | -0.45668 |
| C | 2.17747 | -5.12291 | -0.01582 | C | -6.63771 | -0.55381 | 0.65203 |
| H | 1.14013 | -4.20566 | -1.67217 | C | -6.01970 | 0.48505 | -1.57703 |
| H | 1.91863 | -3.05501 | -0.59694 | H | -5.50943 | -1.47286 | -0.90749 |
| C | 1.37585 | -6.44026 | 0.03860 | C | -8.00284 | -0.99553 | 0.07778 |
| H | -0.52856 | -7.17249 | 0.77597 | H | -6.75431 | 0.42010 | 1.12174 |
| H | 0.24804 | -6.00859 | 1.83418 | H | -6.32948 | -1.25332 | 1.42658 |
| H | 3.08232 | -5.26423 | -0.60325 | C | -7.37617 | 0.03126 | -2.16446 |

| | | | | | | | |
|---|----------|----------|----------|---|----------|----------|----------|
| H | -6.13114 | 1.49314 | -1.19145 | H | 0.07755 | 1.12115 | -3.19667 |
| H | -5.28403 | 0.52456 | -2.37612 | C | -1.04167 | -0.38963 | -6.11405 |
| C | -8.45694 | -0.06598 | -1.06722 | H | -1.79133 | -2.42540 | -6.11954 |
| H | -8.74955 | -0.99768 | 0.86941 | H | -0.12214 | -2.27525 | -5.60277 |
| H | -7.92197 | -2.01441 | -0.29604 | H | -0.14069 | 1.52056 | -5.61743 |
| H | -7.69388 | 0.73339 | -2.93283 | H | 0.88788 | 0.13712 | -5.29504 |
| H | -7.25701 | -0.94015 | -2.64053 | H | -0.66402 | -0.42063 | -7.13392 |
| H | -9.38661 | -0.43489 | -1.49567 | H | -2.04359 | 0.03392 | -6.14874 |
| H | -8.65396 | 0.92719 | -0.66807 | P | 1.04741 | -1.08851 | 1.86014 |
| C | -3.64791 | 1.40386 | 1.20534 | C | 2.77082 | -1.79063 | 1.64206 |
| C | -4.39791 | 2.62299 | 0.61444 | H | 3.44768 | -1.66231 | 2.50206 |
| C | -4.05291 | 1.20636 | 2.68959 | H | 2.75764 | -2.85666 | 1.35675 |
| H | -2.58195 | 1.62815 | 1.18424 | C | 4.76603 | 0.20982 | 0.49694 |
| C | -4.16113 | 3.90137 | 1.45122 | C | 5.80066 | -0.61710 | 1.30213 |
| H | -5.46598 | 2.42545 | 0.59996 | C | 5.41777 | 0.76533 | -0.79251 |
| H | -4.08307 | 2.80111 | -0.41167 | H | 4.48242 | 1.05753 | 1.11644 |
| C | -3.82821 | 2.48467 | 3.52728 | C | 7.07082 | 0.21222 | 1.60462 |
| H | -5.10253 | 0.92837 | 2.75103 | H | 6.08897 | -1.50711 | 0.75150 |
| H | -3.47993 | 0.38878 | 3.12069 | H | 5.37524 | -0.94436 | 2.24608 |
| C | -4.57516 | 3.69015 | 2.92161 | C | 6.69649 | 1.58200 | -0.49516 |
| H | -4.72734 | 4.72514 | 1.02103 | H | 5.69052 | -0.05581 | -1.44800 |
| H | -3.10945 | 4.17434 | 1.41328 | H | 4.70650 | 1.38859 | -1.32946 |
| H | -4.16479 | 2.31458 | 4.54804 | C | 7.71459 | 0.75116 | 0.31146 |
| H | -2.76416 | 2.70665 | 3.56761 | H | 7.78524 | -0.40626 | 2.14451 |
| H | -4.36108 | 4.58727 | 3.49884 | H | 6.81013 | 1.04757 | 2.25181 |
| H | -5.64819 | 3.51608 | 2.97461 | H | 7.14295 | 1.90658 | -1.43295 |
| C | -1.45971 | -2.72906 | -0.76440 | H | 6.44051 | 2.47568 | 0.06828 |
| C | -2.82970 | -3.28891 | -1.22876 | H | 8.58166 | 1.36149 | 0.55568 |
| C | -0.31167 | -3.68517 | -1.16925 | H | 8.06266 | -0.08347 | -0.29397 |
| H | -1.49807 | -2.70148 | 0.31940 | C | 3.45674 | -2.03915 | -1.27106 |
| C | -3.04850 | -4.73088 | -0.71454 | C | 3.39443 | -1.43719 | -2.68935 |
| H | -2.91205 | -3.29263 | -2.30914 | C | 4.71491 | -2.93411 | -1.14448 |
| H | -3.62990 | -2.66862 | -0.84316 | H | 2.59313 | -2.68894 | -1.16482 |
| C | -0.54868 | -5.12889 | -0.67240 | C | 3.35497 | -2.54996 | -3.76077 |
| H | -0.20369 | -3.70516 | -2.24995 | H | 4.25972 | -0.80830 | -2.87804 |
| H | 0.62091 | -3.30703 | -0.76129 | H | 2.50854 | -0.81042 | -2.76926 |
| C | -1.90893 | -5.67122 | -1.15383 | C | 4.69329 | -4.06105 | -2.20550 |
| H | -4.00076 | -5.10238 | -1.08793 | H | 5.61787 | -2.34630 | -1.28660 |
| H | -3.10783 | -4.72159 | 0.37178 | H | 4.76991 | -3.38269 | -0.15440 |
| H | 0.25479 | -5.76950 | -1.03042 | C | 4.57710 | -3.48548 | -3.63331 |
| H | -0.52105 | -5.15122 | 0.41477 | H | 3.33525 | -2.10711 | -4.75485 |
| H | -2.07510 | -6.66817 | -0.75096 | H | 2.44328 | -3.13282 | -3.64532 |
| H | -1.90410 | -5.75365 | -2.23897 | H | 5.59727 | -4.66200 | -2.12388 |
| C | -0.64249 | -0.93066 | -3.17397 | H | 3.84784 | -4.71889 | -2.01305 |
| C | -1.56262 | -1.81434 | -4.05614 | H | 4.49984 | -4.29798 | -4.35316 |
| C | -0.60092 | 0.49894 | -3.76736 | H | 5.48141 | -2.92766 | -3.86918 |
| H | 0.36105 | -1.34296 | -3.22730 | C | 1.33942 | 0.24175 | 3.28373 |
| C | -1.10603 | -1.81526 | -5.53423 | C | 0.17470 | 1.25006 | 3.36582 |
| H | -2.58973 | -1.46019 | -4.00732 | C | 1.70078 | -0.24748 | 4.70828 |
| H | -1.55238 | -2.84076 | -3.70891 | H | 2.20317 | 0.77683 | 2.89597 |
| C | -0.13651 | 0.49985 | -5.24061 | C | 0.53540 | 2.44678 | 4.27509 |
| H | -1.58879 | 0.95083 | -3.71393 | H | -0.71579 | 0.76514 | 3.75854 |

| | | | | | | | |
|---|----------|----------|---------|---|----------|----------|----------|
| H | -0.05765 | 1.61021 | 2.36497 | H | -2.59969 | 2.99982 | -0.44050 |
| C | 2.08220 | 0.94200 | 5.62073 | H | -0.85575 | 3.30052 | -0.35165 |
| H | 0.85408 | -0.76229 | 5.15456 | C | -2.29862 | 5.75940 | -0.47303 |
| H | 2.53132 | -0.94927 | 4.67507 | H | -1.08276 | 5.07794 | -2.14814 |
| C | 0.94058 | 1.97771 | 5.68870 | H | -2.80842 | 4.71126 | -2.31013 |
| H | -0.31134 | 3.12682 | 4.34275 | C | -2.54682 | 7.17665 | -1.01632 |
| H | 1.36071 | 2.99934 | 3.83133 | H | -3.18975 | 5.41427 | 0.08875 |
| H | 2.31087 | 0.57829 | 6.62075 | H | -1.46633 | 5.78342 | 0.25814 |
| H | 2.98084 | 1.41943 | 5.23475 | H | -2.77794 | 7.88625 | -0.20153 |
| H | 1.25064 | 2.83176 | 6.28745 | H | -1.65962 | 7.55989 | -1.55383 |
| H | 0.07910 | 1.53054 | 6.18105 | H | -3.39624 | 7.19051 | -1.72439 |
| C | 0.04972 | -2.57482 | 2.61848 | C | -2.57013 | -0.90897 | -1.11389 |
| C | 0.80069 | -3.43468 | 3.66611 | H | -2.44451 | -0.15103 | -1.89933 |
| C | -1.32647 | -2.14101 | 3.17607 | H | -3.03463 | -1.78922 | -1.58537 |
| C | -0.04305 | -4.66472 | 4.07362 | P | -3.73652 | -0.05968 | 0.11749 |
| H | 1.01515 | -2.85345 | 4.55669 | C | -4.80882 | -1.47750 | 0.86141 |
| H | 1.75126 | -3.77596 | 3.26448 | C | -5.55273 | -0.97178 | 2.12403 |
| C | -2.17426 | -3.36206 | 3.59936 | C | -5.80374 | -2.22857 | -0.05671 |
| H | -1.18703 | -1.49824 | 4.04157 | H | -4.08078 | -2.20531 | 1.20645 |
| H | -1.87198 | -1.56785 | 2.42910 | C | -6.23796 | -2.13372 | 2.87904 |
| C | -1.42231 | -4.24120 | 4.62025 | H | -6.30607 | -0.23858 | 1.84745 |
| H | 0.49228 | -5.23851 | 4.82757 | H | -4.85307 | -0.47643 | 2.79304 |
| H | -0.18045 | -5.31185 | 3.20954 | C | -6.47217 | -3.40624 | 0.68928 |
| H | -3.11511 | -3.02134 | 4.02690 | H | -6.58404 | -1.55004 | -0.38938 |
| H | -2.41348 | -3.95681 | 2.72043 | H | -5.29869 | -2.60547 | -0.94339 |
| H | -2.01407 | -5.12368 | 4.85464 | C | -7.19837 | -2.91670 | 1.95961 |
| H | -1.28703 | -3.68432 | 5.54549 | H | -6.78461 | -1.74168 | 3.73447 |
| H | -0.12538 | -3.21743 | 1.76140 | H | -5.47726 | -2.81078 | 3.26307 |
| | | | | H | -7.18046 | -3.90178 | 0.02818 |

[5_c-9b_c][‡]

176

XYZ

| | | | | | | | |
|----|----------|----------|----------|---|----------|----------|----------|
| Ru | 1.02548 | 0.31364 | -0.70556 | C | -4.81390 | 0.95060 | -1.12343 |
| C | -1.45381 | 2.32714 | -2.15666 | C | -5.33309 | 0.26196 | -2.41168 |
| C | -0.46652 | 1.43109 | -2.30647 | C | -5.98238 | 1.66448 | -0.40057 |
| P | -0.77256 | -1.32807 | -0.64766 | H | -4.12189 | 1.72259 | -1.44889 |
| N | 2.47769 | 1.51822 | -1.77860 | C | -5.99946 | 1.29783 | -3.34624 |
| C | 2.87244 | 0.81809 | -2.88125 | H | -6.06032 | -0.50775 | -2.17375 |
| C | 3.52783 | 1.75762 | -3.91023 | H | -4.51464 | -0.21444 | -2.94449 |
| C | 3.74021 | 3.06379 | -3.12239 | C | -6.66140 | 2.69766 | -1.32764 |
| C | 2.71482 | 2.95910 | -1.95422 | H | -6.72700 | 0.93779 | -0.08375 |
| O | 2.67588 | -0.41157 | -3.03921 | H | -5.61706 | 2.16737 | 0.49271 |
| P | 3.00257 | -0.82038 | 0.36263 | C | -7.15075 | 2.03908 | -2.63450 |
| H | 1.76852 | 3.48660 | -2.20269 | H | -6.37870 | 0.79605 | -4.23436 |
| H | 3.11127 | 3.41371 | -1.03063 | H | -5.25261 | 2.01870 | -3.67274 |
| H | 4.44839 | 1.31465 | -4.32614 | H | -7.50003 | 3.15927 | -0.80982 |
| H | 2.81895 | 1.88455 | -4.75166 | H | -5.95056 | 3.48639 | -1.56586 |
| H | 3.58795 | 3.97677 | -3.72363 | H | -7.56744 | 2.79629 | -3.29555 |
| H | 4.76638 | 3.10243 | -2.71417 | H | -7.94711 | 1.33318 | -2.40562 |
| H | -2.21009 | 2.37911 | -2.96848 | C | -1.20806 | -2.64876 | 0.72183 |
| C | -1.71753 | 3.31455 | -1.03625 | C | -2.04811 | -3.87261 | 0.27332 |
| C | -1.97277 | 4.73952 | -1.58079 | C | 0.02116 | -3.15295 | 1.50393 |

| | | | | | | | |
|---|----------|----------|----------|---|----------|----------|----------|
| H | -1.81444 | -2.06612 | 1.41274 | C | 3.47788 | -2.64421 | 0.84293 |
| C | -2.48420 | -4.72024 | 1.49130 | C | 3.56906 | -3.57344 | -0.39211 |
| H | -1.46051 | -4.50579 | -0.38109 | C | 4.72844 | -2.80275 | 1.74016 |
| H | -2.92828 | -3.56266 | -0.28000 | H | 2.63162 | -2.97628 | 1.43414 |
| C | -0.38357 | -4.01433 | 2.72141 | C | 3.74855 | -5.04645 | 0.04074 |
| H | 0.65246 | -3.74372 | 0.84549 | H | 4.40632 | -3.28472 | -1.02077 |
| H | 0.60217 | -2.30690 | 1.85139 | H | 2.66843 | -3.47959 | -0.99408 |
| C | -1.26291 | -5.20708 | 2.29673 | C | 4.88884 | -4.27607 | 2.18116 |
| H | -3.06218 | -5.57446 | 1.14481 | H | 5.62368 | -2.50356 | 1.20419 |
| H | -3.12949 | -4.13112 | 2.13902 | H | 4.64327 | -2.17109 | 2.62177 |
| H | 0.51171 | -4.37313 | 3.22544 | C | 4.97497 | -5.21756 | 0.96154 |
| H | -0.93100 | -3.39666 | 3.43075 | H | 3.85944 | -5.67196 | -0.84252 |
| H | -1.59212 | -5.75563 | 3.17665 | H | 2.85566 | -5.38011 | 0.56599 |
| H | -0.67567 | -5.89001 | 1.68597 | H | 5.78573 | -4.37517 | 2.78925 |
| C | -0.11415 | -2.09959 | -2.32024 | H | 4.04133 | -4.56208 | 2.80117 |
| C | -0.23371 | -3.62684 | -2.53215 | H | 5.04233 | -6.25004 | 1.29780 |
| C | -0.70681 | -1.34231 | -3.53344 | H | 5.88108 | -4.99720 | 0.40056 |
| H | 0.95028 | -1.87086 | -2.29241 | C | 2.07049 | 2.75355 | 1.85850 |
| C | 0.50939 | -4.03809 | -3.82632 | C | 1.39768 | 4.01262 | 1.26357 |
| H | -1.27911 | -3.91588 | -2.61304 | C | 2.36590 | 2.98334 | 3.36195 |
| H | 0.19979 | -4.17210 | -1.69721 | H | 3.02400 | 2.62412 | 1.34946 |
| C | 0.06513 | -1.73214 | -4.80988 | C | 2.30112 | 5.25304 | 1.44839 |
| H | -1.74965 | -1.62001 | -3.65926 | H | 0.44654 | 4.19727 | 1.75327 |
| H | -0.65025 | -0.24721 | -3.34394 | H | 1.19894 | 3.86466 | 0.20717 |
| C | 0.00147 | -3.25565 | -5.05567 | C | 3.28193 | 4.21431 | 3.55186 |
| H | 0.38516 | -5.10755 | -3.98724 | H | 1.43854 | 3.15554 | 3.90102 |
| H | 1.57322 | -3.84925 | -3.69653 | H | 2.84377 | 2.11337 | 3.80484 |
| H | -0.35717 | -1.20723 | -5.66414 | C | 2.65157 | 5.47952 | 2.93382 |
| H | 1.10314 | -1.42017 | -4.71004 | H | 1.79414 | 6.12975 | 1.05102 |
| H | 0.59809 | -3.52244 | -5.92575 | H | 3.21797 | 5.12059 | 0.87767 |
| H | -1.02658 | -3.54597 | -5.26503 | H | 3.46180 | 4.36998 | 4.61376 |
| P | 1.15023 | 1.08884 | 1.43387 | H | 4.24500 | 4.02223 | 3.08271 |
| C | 2.46622 | -0.13104 | 2.03963 | H | 3.33929 | 6.31716 | 3.02878 |
| H | 3.24797 | 0.30181 | 2.68294 | H | 1.74784 | 5.73540 | 3.48354 |
| H | 2.00195 | -0.95367 | 2.60257 | C | -0.36272 | 0.87739 | 2.63949 |
| C | 4.64400 | 0.11673 | -0.08606 | C | -0.02465 | 0.40280 | 4.07589 |
| C | 5.56007 | 0.53094 | 1.09245 | C | -1.24734 | 2.14571 | 2.69629 |
| C | 5.45348 | -0.64743 | -1.16263 | C | -1.31675 | 0.14167 | 4.88422 |
| H | 4.26388 | 1.02140 | -0.55126 | H | 0.56900 | 1.15227 | 4.59162 |
| C | 6.74450 | 1.38272 | 0.57859 | H | 0.55849 | -0.51323 | 4.05267 |
| H | 5.95228 | -0.34077 | 1.60727 | C | -2.53808 | 1.88864 | 3.50357 |
| H | 5.00748 | 1.11753 | 1.82054 | H | -0.70100 | 2.95781 | 3.16661 |
| C | 6.63858 | 0.20460 | -1.66844 | H | -1.51197 | 2.45949 | 1.69088 |
| H | 5.84792 | -1.57278 | -0.75327 | C | -2.22018 | 1.39071 | 4.92811 |
| H | 4.80328 | -0.89962 | -1.99768 | H | -1.05251 | -0.16182 | 5.89529 |
| C | 7.55232 | 0.63799 | -0.50377 | H | -1.86299 | -0.68246 | 4.42943 |
| H | 7.39207 | 1.63854 | 1.41496 | H | -3.11817 | 2.80755 | 3.55390 |
| H | 6.36219 | 2.31403 | 0.16531 | H | -3.14132 | 1.14987 | 2.98160 |
| H | 7.21103 | -0.36892 | -2.39449 | H | -3.14325 | 1.15827 | 5.45491 |
| H | 6.25837 | 1.08754 | -2.17673 | H | -1.71710 | 2.17964 | 5.48396 |
| H | 8.34746 | 1.28071 | -0.87561 | H | -0.94982 | 0.09465 | 2.16487 |
| H | 8.02134 | -0.24026 | -0.06408 | H | 0.64070 | 1.43200 | -2.29826 |

| [6 _c -7b _c] [‡] | | | |
|---|----------|----------|----------|
| 176 | | | |
| XYZ | | | |
| Ru | -0.09809 | 0.93724 | -0.38686 |
| C | -2.63225 | 2.44606 | 0.79500 |
| C | -1.72217 | 1.68850 | 0.06654 |
| P | -0.76081 | -1.34131 | -0.47308 |
| N | 0.44680 | 2.79995 | -1.26636 |
| C | 1.29892 | 2.38675 | -2.20479 |
| C | 1.54148 | 3.45727 | -3.27273 |
| C | 0.86628 | 4.69957 | -2.64639 |
| C | -0.13965 | 4.09229 | -1.62142 |
| O | 1.74418 | 1.18894 | -2.18841 |
| P | 3.60608 | -0.94783 | -0.38531 |
| H | -2.47071 | 2.60569 | 1.88025 |
| H | -1.14363 | 3.94401 | -2.07659 |
| H | -0.27927 | 4.73827 | -0.73669 |
| H | 2.61464 | 3.58591 | -3.49608 |
| H | 1.04969 | 3.13921 | -4.21359 |
| H | 0.36883 | 5.35178 | -3.38512 |
| H | 1.61826 | 5.30896 | -2.11272 |
| C | -3.84701 | 3.15168 | 0.21647 |
| C | -3.71584 | 4.69179 | 0.29210 |
| H | -3.98028 | 2.84232 | -0.83769 |
| H | -4.75959 | 2.84641 | 0.77299 |
| C | -4.96489 | 5.42553 | -0.23279 |
| H | -3.52604 | 4.99418 | 1.34214 |
| H | -2.82608 | 5.00559 | -0.28706 |
| C | -4.83708 | 6.95613 | -0.15733 |
| H | -5.15334 | 5.11991 | -1.28138 |
| H | -5.85144 | 5.09748 | 0.34649 |
| H | -5.74518 | 7.45620 | -0.53921 |
| H | -4.68113 | 7.29358 | 0.88415 |
| H | -3.97946 | 7.31560 | -0.75546 |
| C | -2.54496 | -1.62821 | -1.08890 |
| H | -2.50847 | -1.20254 | -2.10502 |
| H | -2.78303 | -2.69718 | -1.19793 |
| P | -3.94595 | -0.66150 | -0.28735 |
| C | -4.70121 | -1.79673 | 1.06122 |
| C | -5.58181 | -0.95689 | 2.02089 |
| C | -5.47096 | -3.06355 | 0.61474 |
| H | -3.83768 | -2.11903 | 1.63845 |
| C | -6.02516 | -1.79174 | 3.24349 |
| H | -6.46515 | -0.59591 | 1.49997 |
| H | -5.02777 | -0.08457 | 2.36117 |
| C | -5.90103 | -3.90843 | 1.83575 |
| H | -6.36188 | -2.77724 | 0.06180 |
| H | -4.85812 | -3.67195 | -0.04709 |
| C | -6.76099 | -3.07763 | 2.81133 |
| H | -6.67361 | -1.19199 | 3.87896 |
| H | -5.14951 | -2.05874 | 3.83207 |
| H | -6.46153 | -4.77806 | 1.49832 |
| H | -5.01564 | -4.27227 | 2.35351 |
| H | -7.00640 | -3.67469 | 3.68719 |
| H | -7.69788 | -2.81086 | 2.32601 |
| C | -5.13388 | -0.44743 | -1.78255 |
| C | -5.42388 | -1.68537 | -2.66983 |
| C | -6.46521 | 0.21961 | -1.35969 |
| H | -4.59558 | 0.26999 | -2.40079 |
| C | -6.25516 | -1.28644 | -3.91084 |
| H | -5.97341 | -2.43465 | -2.10724 |
| H | -4.49522 | -2.14361 | -3.00007 |
| C | -7.30291 | 0.62149 | -2.59425 |
| H | -7.04770 | -0.46819 | -0.75107 |
| H | -6.26492 | 1.10195 | -0.75582 |
| C | -7.57319 | -0.59362 | -3.50610 |
| H | -6.47133 | -2.17274 | -4.50417 |
| H | -5.66994 | -0.61248 | -4.53347 |
| H | -8.24600 | 1.05632 | -2.26929 |
| H | -6.76895 | 1.38434 | -3.15741 |
| H | -8.11091 | -0.27497 | -4.39667 |
| H | -8.20698 | -1.30505 | -2.97999 |
| C | -0.59734 | -2.61106 | 1.00398 |
| C | -1.51247 | -3.86112 | 0.98372 |
| C | 0.87027 | -3.06531 | 1.19365 |
| H | -0.87725 | -2.02339 | 1.87629 |
| C | -1.35664 | -4.67056 | 2.29248 |
| H | -1.26509 | -4.50420 | 0.14530 |
| H | -2.55229 | -3.57866 | 0.87516 |
| C | 1.04532 | -3.87321 | 2.49898 |
| H | 1.17620 | -3.68745 | 0.35723 |
| H | 1.53092 | -2.20545 | 1.20620 |
| C | 0.10727 | -5.09710 | 2.52395 |
| H | -1.99511 | -5.55071 | 2.24937 |
| H | -1.69349 | -4.06502 | 3.13177 |
| H | 2.07982 | -4.19832 | 2.58903 |
| H | 0.82836 | -3.23514 | 3.35325 |
| H | 0.19560 | -5.61295 | 3.47778 |
| H | 0.40629 | -5.79637 | 1.74554 |
| C | 0.22942 | -2.13193 | -1.95247 |
| C | -0.14196 | -3.59381 | -2.30966 |
| C | 0.12044 | -1.24053 | -3.21585 |
| H | 1.26761 | -2.11009 | -1.62582 |
| C | 0.73497 | -4.13495 | -3.46200 |
| H | -1.18569 | -3.65221 | -2.60917 |
| H | -0.01242 | -4.24397 | -1.45133 |
| C | 0.98726 | -1.78710 | -4.37178 |
| H | -0.91286 | -1.18601 | -3.54968 |
| H | 0.45964 | -0.23411 | -2.98177 |
| C | 0.62807 | -3.24601 | -4.71603 |
| H | 0.42967 | -5.15260 | -3.69806 |
| H | 1.77225 | -4.17369 | -3.13505 |
| H | 0.85411 | -1.15599 | -5.24798 |

| | | | | | | | |
|---|----------|-----------|----------|----|----------|----------|-----------------------|
| H | 2.03584 | -1.731320 | -4.08807 | H | 0.50274 | 5.83008 | 2.39572 |
| H | 1.29148 | -3.62070 | -5.49278 | H | 1.38294 | 5.56515 | 0.90151 |
| H | -0.38760 | -3.28974 | -5.10463 | H | 4.70498 | 4.91049 | 2.63192 |
| P | 1.57485 | 1.03659 | 1.23964 | H | 3.95814 | 4.99341 | 1.04702 |
| C | 3.23529 | 0.07185 | 1.17062 | H | 2.88260 | 6.63399 | 2.54394 |
| H | 4.07439 | 0.71664 | 1.46005 | H | 2.53776 | 5.38084 | 3.72261 |
| H | 3.16205 | -0.69268 | 1.96169 | C | 1.01835 | 0.38666 | 2.99155 |
| C | 4.50681 | 0.24052 | -1.59073 | C | 1.94552 | 0.75119 | 4.17724 |
| C | 5.51194 | 1.27381 | -1.02503 | C | -0.44211 | 0.73924 | 3.35694 |
| C | 5.16458 | -0.55518 | -2.74427 | C | 1.52067 | -0.00968 | 5.45460 |
| H | 3.66344 | 0.78983 | -2.00981 | H | 1.88981 | 1.81740 | 4.37735 |
| C | 6.01222 | 2.22198 | -2.13974 | H | 2.98131 | 0.51313 | 3.94917 |
| H | 6.36938 | 0.77829 | -0.57813 | C | -0.88675 | -0.01469 | 4.63124 |
| H | 5.04259 | 1.87210 | -0.24968 | H | -0.53661 | 1.80679 | 3.53082 |
| C | 5.65913 | 0.38810 | -3.86329 | H | -1.09913 | 0.49126 | 2.52834 |
| H | 6.01259 | -1.12697 | -2.37340 | C | 0.05101 | 0.28733 | 5.81917 |
| H | 4.45166 | -1.26347 | -3.16083 | H | 2.17024 | 0.27479 | 6.28006 |
| C | 6.64405 | 1.43812 | -3.30871 | H | 1.64597 | -1.07913 | 5.29618 |
| H | 6.73967 | 2.91865 | -1.72717 | H | -1.90572 | 0.26988 | 4.88589 |
| H | 5.17501 | 2.80841 | -2.51271 | H | -0.88753 | -1.08576 | 4.43805 |
| H | 6.14168 | -0.19273 | -4.64708 | H | -0.24220 | -0.30496 | 6.68359 |
| H | 4.80513 | 0.89383 | -4.30928 | H | -0.04490 | 1.33570 | 6.09487 |
| H | 6.93684 | 2.12628 | -4.09916 | H | 1.06456 | -0.69243 | 2.86918 |
| H | 7.54653 | 0.93825 | -2.96168 | H | -2.84166 | 1.05115 | 0.27778 |
| C | 4.85656 | -2.18438 | 0.41366 | | | | |
| C | 5.02747 | -3.44193 | -0.47556 | | | | 7b_c |
| C | 6.24600 | -1.65635 | 0.84635 | | | | 176 |
| H | 4.34297 | -2.51025 | 1.31677 | | | | XYZ |
| C | 5.83573 | -4.54066 | 0.25147 | Ru | -0.20334 | 1.04362 | -0.12565 |
| H | 5.53898 | -3.18193 | -1.39902 | C | -2.55317 | 2.36027 | 1.51032 |
| H | 4.05068 | -3.83568 | -0.74892 | C | -1.71502 | 1.64895 | 0.49648 |
| C | 7.05015 | -2.74874 | 1.58838 | P | -0.92319 | -1.20085 | -0.48473 |
| H | 6.81332 | -1.34301 | -0.02620 | N | 0.39251 | 2.91217 | -0.97978 |
| H | 6.13828 | -0.78967 | 1.49494 | C | 1.33860 | 2.54866 | -1.84610 |
| C | 7.20893 | -4.01262 | 0.71730 | C | 1.70945 | 3.69006 | -2.79893 |
| H | 5.97423 | -5.39334 | -0.41039 | C | 1.00517 | 4.90169 | -2.14736 |
| H | 5.27297 | -4.88832 | 1.11578 | C | -0.11608 | 4.24938 | -1.28245 |
| H | 8.03091 | -2.36182 | 1.85830 | O | 1.78327 | 1.35273 | -1.86088 |
| H | 6.53772 | -3.00937 | 2.51252 | P | 3.53247 | -1.03409 | -0.57470 |
| H | 7.73145 | -4.78514 | 1.27791 | H | -1.89119 | 3.06882 | 2.05227 |
| H | 7.81711 | -3.77448 | -0.15326 | H | -1.06836 | 4.18234 | -1.85125 |
| C | 2.12895 | 2.89916 | 1.41687 | H | -0.33002 | 4.82473 | -0.36355 |
| C | 0.98612 | 3.75278 | 2.01790 | H | 2.80267 | 3.80008 | -2.90396 |
| C | 3.45424 | 3.20732 | 2.16037 | H | 1.30744 | 3.46083 | -3.80590 |
| H | 2.25090 | 3.20540 | 0.38132 | H | 0.60181 | 5.62520 | -2.87707 |
| C | 1.31228 | 5.26089 | 1.94324 | H | 1.71318 | 5.44341 | -1.49416 |
| H | 0.83508 | 3.48682 | 3.06071 | C | -3.81530 | 3.10836 | 1.01299 |
| H | 0.06071 | 3.55173 | 1.48518 | C | -3.53729 | 4.30558 | 0.09160 |
| C | 3.78415 | 4.71683 | 2.08508 | H | -4.46647 | 2.38093 | 0.49599 |
| H | 3.38726 | 2.91617 | 3.20412 | H | -4.37054 | 3.45265 | 1.90911 |
| H | 4.28369 | 2.66125 | 1.72390 | C | -4.81635 | 5.05438 | -0.32850 |
| C | 2.64134 | 5.57910 | 2.65748 | H | -2.84924 | 5.01472 | 0.59757 |

| | | | | | | | |
|---|----------|----------|----------|---|----------|----------|----------|
| H | -3.00478 | 3.94912 | -0.81129 | C | 0.86947 | -3.96825 | 2.26627 |
| C | -4.53936 | 6.24902 | -1.25666 | H | 1.02383 | -3.58717 | 0.15036 |
| H | -5.50421 | 4.34598 | -0.83270 | H | 1.35316 | -2.18532 | 1.13695 |
| H | -5.35036 | 5.40540 | 0.57783 | C | -0.05818 | -5.19657 | 2.16903 |
| H | -5.47344 | 6.76546 | -1.54259 | H | -2.15259 | -5.64101 | 1.82742 |
| H | -3.88209 | 6.99155 | -0.76686 | H | -1.87611 | -4.23863 | 2.84427 |
| H | -4.03733 | 5.92356 | -2.18672 | H | 1.90563 | -4.29220 | 2.34047 |
| C | -2.71302 | -1.35480 | -1.08136 | H | 0.63616 | -3.41053 | 3.17106 |
| H | -2.67808 | -0.82658 | -2.04744 | H | 0.02375 | -5.79527 | 3.07376 |
| H | -2.97580 | -2.40230 | -1.29258 | H | 0.25675 | -5.82057 | 1.33489 |
| P | -4.07250 | -0.43383 | -0.14998 | C | 0.05167 | -1.82408 | -2.04063 |
| C | -4.83180 | -1.74363 | 1.03496 | C | -0.32122 | -3.24337 | -2.53918 |
| C | -5.70679 | -1.03508 | 2.09997 | C | -0.08436 | -0.80566 | -3.20113 |
| C | -5.60708 | -2.94424 | 0.43933 | H | 1.09463 | -1.82987 | -1.72877 |
| H | -3.96812 | -2.14003 | 1.56413 | C | 0.52839 | -3.65568 | -3.76296 |
| C | -6.14304 | -2.01684 | 3.21103 | H | -1.37276 | -3.27815 | -2.81495 |
| H | -6.59386 | -0.61179 | 1.63525 | H | -0.16528 | -3.97651 | -1.75485 |
| H | -5.15143 | -0.21158 | 2.54371 | C | 0.75801 | -1.22376 | -4.42627 |
| C | -6.02889 | -3.93794 | 1.54614 | H | -1.12431 | -0.71834 | -3.50565 |
| H | -6.50273 | -2.59142 | -0.06519 | H | 0.25589 | 0.17114 | -2.86763 |
| H | -5.00219 | -3.46559 | -0.29952 | C | 0.39107 | -2.63946 | -4.91317 |
| C | -6.88202 | -3.23849 | 2.62521 | H | 0.21866 | -4.64359 | -4.09843 |
| H | -6.78735 | -1.50290 | 3.92157 | H | 1.57319 | -3.72505 | -3.46651 |
| H | -5.26408 | -2.35610 | 3.75588 | H | 0.60436 | -0.50452 | -5.22805 |
| H | -6.59180 | -4.75868 | 1.10573 | H | 1.81229 | -1.19459 | -4.16098 |
| H | -5.14027 | -4.36383 | 2.00808 | H | 1.03594 | -2.92810 | -5.74058 |
| H | -7.12192 | -3.94195 | 3.41994 | H | -0.63356 | -2.64457 | -5.28005 |
| H | -7.82209 | -2.91308 | 2.18379 | P | 1.74611 | 0.95506 | 1.32946 |
| C | -5.27378 | -0.08246 | -1.61586 | C | 3.32904 | -0.10197 | 1.06540 |
| C | -5.55335 | -1.20927 | -2.64448 | H | 4.22724 | 0.46632 | 1.33615 |
| C | -6.61570 | 0.50842 | -1.11780 | H | 3.25864 | -0.91264 | 1.80881 |
| H | -4.75298 | 0.71154 | -2.14970 | C | 4.51081 | 0.14339 | -1.73052 |
| C | -6.39319 | -0.67710 | -3.82873 | C | 5.65688 | 1.00561 | -1.14607 |
| H | -6.09243 | -2.02721 | -2.17552 | C | 5.01724 | -0.62123 | -2.97773 |
| H | -4.62231 | -1.61490 | -3.03106 | H | 3.71893 | 0.81844 | -2.05337 |
| C | -7.46352 | 1.04409 | -2.29332 | C | 6.20421 | 1.98518 | -2.21041 |
| H | -7.18719 | -0.25608 | -0.59651 | H | 6.47329 | 0.38052 | -0.79549 |
| H | -6.43057 | 1.31448 | -0.41147 | H | 5.30255 | 1.58251 | -0.29709 |
| C | -7.71992 | -0.05627 | -3.34406 | C | 5.55955 | 0.35190 | -4.04805 |
| H | -6.59838 | -1.48887 | -4.52402 | H | 5.81310 | -1.30884 | -2.69964 |
| H | -5.81923 | 0.07487 | -4.36681 | H | 4.21095 | -1.21309 | -3.40524 |
| H | -8.41169 | 1.42348 | -1.91744 | C | 6.68314 | 1.23907 | -3.47300 |
| H | -6.94228 | 1.87641 | -2.76213 | H | 7.02601 | 2.56068 | -1.78835 |
| H | -8.26424 | 0.35885 | -4.18984 | H | 5.42122 | 2.68904 | -2.48522 |
| H | -8.34254 | -0.83434 | -2.90636 | H | 5.93404 | -0.21146 | -4.90061 |
| C | -0.76660 | -2.59041 | 0.87229 | H | 4.74747 | 0.98267 | -4.40400 |
| C | -1.67065 | -3.83980 | 0.72621 | H | 7.01072 | 1.95578 | -4.22337 |
| C | 0.70261 | -3.04725 | 1.03709 | H | 7.54013 | 0.61721 | -3.22084 |
| H | -1.06110 | -2.08155 | 1.78883 | C | 4.67218 | -2.45144 | 0.07533 |
| C | -1.52330 | -4.76297 | 1.95822 | C | 4.68372 | -3.64315 | -0.91503 |
| H | -1.40538 | -4.40144 | -0.16388 | C | 6.12193 | -2.10466 | 0.49302 |
| H | -2.71136 | -3.55568 | 0.62899 | H | 4.15523 | -2.79616 | 0.96947 |

| | | | | | | | |
|---|----------|----------|----------|----|----------|----------|----------|
| C | 5.39270 | -4.87403 | -0.30566 | Ru | -0.24706 | 0.58940 | -0.67685 |
| H | 5.19301 | -3.36284 | -1.83375 | C | -2.59739 | 2.65186 | -1.18669 |
| H | 3.66353 | -3.91130 | -1.18168 | C | -1.69949 | 1.54553 | -0.74684 |
| C | 6.82792 | -3.32955 | 1.11887 | P | -1.09823 | -1.00250 | 0.83433 |
| H | 6.69226 | -1.78418 | -0.37494 | N | 0.13652 | 0.99818 | -2.78837 |
| H | 6.12643 | -1.28506 | 1.20840 | C | 0.94366 | -0.03326 | -2.99602 |
| C | 6.82683 | -4.52921 | 0.14816 | C | 1.20782 | -0.29180 | -4.47757 |
| H | 5.42140 | -5.67999 | -1.03634 | C | 0.61064 | 0.97839 | -5.13198 |
| H | 4.82158 | -5.23083 | 0.54939 | C | -0.37031 | 1.53528 | -4.05016 |
| H | 7.85150 | -3.06813 | 1.38032 | O | 1.34166 | -0.72408 | -1.98586 |
| H | 6.31834 | -3.60903 | 2.03906 | P | 3.46703 | -1.28988 | 0.41167 |
| H | 7.28062 | -5.39387 | 0.62823 | H | -3.56301 | 2.21372 | -1.50635 |
| H | 7.43148 | -4.28611 | -0.72348 | H | -1.40991 | 1.18535 | -4.23117 |
| C | 2.42733 | 2.77164 | 1.52730 | H | -0.39782 | 2.64141 | -4.04541 |
| C | 1.39054 | 3.66588 | 2.24947 | H | 2.27927 | -0.44821 | -4.69171 |
| C | 3.82420 | 2.97147 | 2.16928 | H | 0.67767 | -1.21544 | -4.78426 |
| H | 2.49017 | 3.11444 | 0.49814 | H | 0.10325 | 0.77970 | -6.09175 |
| C | 1.80118 | 5.15416 | 2.20287 | H | 1.41081 | 1.71568 | -5.32325 |
| H | 1.30226 | 3.36425 | 3.28985 | C | -2.89122 | 3.81628 | -0.20456 |
| H | 0.41673 | 3.54504 | 1.78376 | C | -3.69393 | 3.40318 | 1.04082 |
| C | 4.23893 | 4.46074 | 2.11489 | H | -1.94447 | 4.30300 | 0.09084 |
| H | 3.82280 | 2.64714 | 3.20507 | H | -3.46702 | 4.57573 | -0.77153 |
| H | 4.57940 | 2.39293 | 1.64830 | C | -4.11726 | 4.60176 | 1.91062 |
| C | 3.20248 | 5.36576 | 2.81059 | H | -4.59541 | 2.84121 | 0.72401 |
| H | 1.06842 | 5.74881 | 2.74454 | H | -3.09703 | 2.69279 | 1.64600 |
| H | 1.80040 | 5.49645 | 1.17054 | C | -4.90196 | 4.18772 | 3.16690 |
| H | 5.21180 | 4.57909 | 2.58801 | H | -3.21846 | 5.17778 | 2.20893 |
| H | 4.34350 | 4.76544 | 1.07539 | H | -4.73336 | 5.29388 | 1.30120 |
| H | 3.49754 | 6.40832 | 2.71170 | H | -5.19878 | 5.06651 | 3.76734 |
| H | 3.17581 | 5.13342 | 3.87351 | H | -5.82296 | 3.63726 | 2.89881 |
| C | 1.32405 | 0.25355 | 3.09752 | H | -4.29716 | 3.52686 | 3.81533 |
| C | 2.37398 | 0.52448 | 4.20318 | C | -2.77844 | -1.72281 | 0.35231 |
| C | -0.08006 | 0.64534 | 3.61199 | H | -2.54986 | -2.46674 | -0.42048 |
| C | 2.03586 | -0.27518 | 5.48250 | H | -3.21714 | -2.27682 | 1.19699 |
| H | 2.38578 | 1.58181 | 4.45192 | P | -4.07328 | -0.49939 | -0.27003 |
| H | 3.37163 | 0.25386 | 3.86694 | C | -5.63976 | -1.32036 | 0.50635 |
| C | -0.43476 | -0.14124 | 4.89457 | C | -6.82628 | -0.32454 | 0.52876 |
| H | -0.11883 | 1.70894 | 3.82823 | C | -6.11262 | -2.68831 | -0.04347 |
| H | -0.81988 | 0.44548 | 2.84291 | H | -5.34816 | -1.47754 | 1.54344 |
| C | 0.62313 | 0.06964 | 5.99799 | C | -8.00832 | -0.87653 | 1.35775 |
| H | 2.77373 | -0.05717 | 6.25206 | H | -7.16933 | -0.12557 | -0.48350 |
| H | 2.09415 | -1.34065 | 5.26825 | H | -6.50238 | 0.62431 | 0.95129 |
| H | -1.41134 | 0.17506 | 5.25536 | C | -7.28449 | -3.25012 | 0.79420 |
| H | -0.50292 | -1.20193 | 4.66047 | H | -6.44524 | -2.58115 | -1.07268 |
| H | 0.38490 | -0.54619 | 6.86279 | H | -5.29311 | -3.40408 | -0.03811 |
| H | 0.60328 | 1.10835 | 6.32200 | C | -8.46430 | -2.25625 | 0.83783 |
| H | 1.30848 | -0.82015 | 2.92641 | H | -8.84061 | -0.17631 | 1.32188 |
| H | -2.86354 | 1.60129 | 2.25717 | H | -7.70521 | -0.96774 | 2.39907 |
| | | | | H | -7.61582 | -4.19716 | 0.37247 |
| | | | | H | -6.94154 | -3.44777 | 1.80804 |
| | | | | H | -9.25497 | -2.64859 | 1.47423 |
| | | | | H | -8.87710 | -2.14535 | -0.16307 |

8b_c

176

XYZ

| | | | | | | | |
|---|----------|----------|----------|---|---------|----------|----------|
| C | -4.08150 | -0.73229 | -2.18246 | C | 3.32287 | 0.55312 | 0.83969 |
| C | -3.91477 | -2.15021 | -2.78628 | H | 4.26810 | 1.09505 | 0.69797 |
| C | -5.32618 | -0.04886 | -2.80224 | H | 3.15393 | 0.51790 | 1.93020 |
| H | -3.20785 | -0.15580 | -2.47997 | C | 4.26581 | -1.37651 | -1.33101 |
| C | -3.80299 | -2.08166 | -4.32736 | C | 5.39292 | -0.38069 | -1.69937 |
| H | -4.75834 | -2.78266 | -2.52433 | C | 4.72332 | -2.82127 | -1.64848 |
| H | -3.01819 | -2.62775 | -2.40137 | H | 3.40730 | -1.15810 | -1.96440 |
| C | -5.21891 | 0.02806 | -4.34139 | C | 5.79017 | -0.52036 | -3.18726 |
| H | -6.22364 | -0.60705 | -2.54547 | H | 6.27392 | -0.55181 | -1.08773 |
| H | -5.44175 | 0.95481 | -2.39929 | H | 5.06841 | 0.63924 | -1.52159 |
| C | -5.02173 | -1.37369 | -4.95449 | C | 5.11981 | -2.97087 | -3.13427 |
| H | -3.71388 | -3.08857 | -4.73088 | H | 5.57926 | -3.08744 | -1.03203 |
| H | -2.89684 | -1.54217 | -4.59569 | H | 3.92553 | -3.52342 | -1.41955 |
| H | -6.11781 | 0.48653 | -4.74908 | C | 6.22151 | -1.96308 | -3.52237 |
| H | -4.37737 | 0.66260 | -4.61200 | H | 6.60089 | 0.16934 | -3.41459 |
| H | -4.88826 | -1.29253 | -6.03137 | H | 4.94346 | -0.24421 | -3.81249 |
| H | -5.91465 | -1.97151 | -4.78132 | H | 5.46598 | -3.98568 | -3.32059 |
| C | -1.32544 | -0.37565 | 2.66528 | H | 4.24335 | -2.80555 | -3.75761 |
| C | -2.59001 | -0.86852 | 3.40864 | H | 6.44249 | -2.04557 | -4.58463 |
| C | -0.06082 | -0.64142 | 3.51947 | H | 7.13496 | -2.20078 | -2.98041 |
| H | -1.42098 | 0.70137 | 2.54709 | C | 4.75662 | -1.74846 | 1.77572 |
| C | -2.69905 | -0.21494 | 4.80595 | C | 4.75589 | -3.27675 | 2.03197 |
| H | -2.57043 | -1.94954 | 3.52419 | C | 6.21313 | -1.24604 | 1.62427 |
| H | -3.47878 | -0.61391 | 2.83814 | H | 4.34813 | -1.28238 | 2.67111 |
| C | -0.17326 | 0.01887 | 4.91161 | C | 5.59958 | -3.64086 | 3.27476 |
| H | 0.08331 | -1.70884 | 3.65769 | H | 5.15606 | -3.80163 | 1.16776 |
| H | 0.82034 | -0.26312 | 3.00797 | H | 3.73566 | -3.62569 | 2.17646 |
| C | -1.43526 | -0.46654 | 5.65351 | C | 7.05326 | -1.59196 | 2.87526 |
| H | -3.57361 | -0.60816 | 5.32034 | H | 6.67808 | -1.70988 | 0.75821 |
| H | -2.84544 | 0.85693 | 4.68810 | H | 6.23186 | -0.16966 | 1.46857 |
| H | 0.71393 | -0.21480 | 5.49683 | C | 7.04325 | -3.11032 | 3.15018 |
| H | -0.21511 | 1.09991 | 4.79933 | H | 5.61396 | -4.72125 | 3.40442 |
| H | -1.52339 | 0.04693 | 6.60865 | H | 5.13534 | -3.21331 | 4.16146 |
| H | -1.34456 | -1.53086 | 5.86203 | H | 8.07669 | -1.24953 | 2.73471 |
| C | -0.08598 | -2.64945 | 0.93189 | H | 6.64964 | -1.06579 | 3.73825 |
| C | -0.72903 | -3.75724 | 1.80695 | H | 7.59608 | -3.32475 | 4.06254 |
| C | 0.18673 | -3.20926 | -0.48689 | H | 7.54746 | -3.62598 | 2.33511 |
| H | 0.87435 | -2.37936 | 1.36502 | C | 2.62807 | 2.68515 | -1.20125 |
| C | 0.17461 | -5.00853 | 1.88052 | C | 1.65445 | 3.80708 | -1.63750 |
| H | -1.68763 | -4.04947 | 1.38615 | C | 4.02561 | 3.30905 | -0.95482 |
| H | -0.91580 | -3.39934 | 2.81488 | H | 2.72120 | 1.98919 | -2.03251 |
| C | 1.08467 | -4.46464 | -0.42290 | C | 2.15263 | 4.49859 | -2.92617 |
| H | -0.75117 | -3.47915 | -0.96582 | H | 1.57774 | 4.55201 | -0.84959 |
| H | 0.66785 | -2.45152 | -1.10241 | H | 0.66321 | 3.39595 | -1.80524 |
| C | 0.47286 | -5.56125 | 0.47247 | C | 4.54660 | 3.97765 | -2.24834 |
| H | -0.31255 | -5.77156 | 2.48462 | H | 3.97084 | 4.06364 | -0.17736 |
| H | 1.10960 | -4.75045 | 2.37393 | H | 4.74585 | 2.56469 | -0.63267 |
| H | 1.23687 | -4.85147 | -1.42843 | C | 3.57497 | 5.06820 | -2.74483 |
| H | 2.05889 | -4.18508 | -0.02925 | H | 1.46677 | 5.29853 | -3.19756 |
| H | 1.15398 | -6.40683 | 0.54351 | H | 2.15356 | 3.77907 | -3.74194 |
| H | -0.45087 | -5.92304 | 0.02494 | H | 5.52594 | 4.41320 | -2.05996 |
| P | 1.84235 | 1.57233 | 0.18749 | H | 4.66956 | 3.22128 | -3.02106 |

| | | | | | | | |
|---|----------|---------|----------|---|----------|----------|----------|
| H | 3.93251 | 5.48082 | -3.68595 | H | -4.60622 | 6.32227 | 3.92480 |
| H | 3.54877 | 5.88112 | -2.02167 | H | -5.64694 | 5.18078 | 3.03083 |
| C | 1.59035 | 2.62839 | 1.79935 | H | -4.38501 | 4.56314 | 4.12918 |
| C | 2.80526 | 3.45800 | 2.28290 | C | -2.69997 | -1.76241 | -0.18989 |
| C | 0.33929 | 3.53362 | 1.75789 | H | -2.48907 | -2.12801 | -1.20282 |
| C | 2.53585 | 4.03545 | 3.69133 | H | -3.01204 | -2.63891 | 0.39641 |
| H | 2.98059 | 4.28660 | 1.60360 | P | -4.17204 | -0.57171 | -0.22121 |
| H | 3.70874 | 2.85480 | 2.30898 | C | -5.55070 | -1.78031 | 0.38758 |
| C | 0.05188 | 4.14057 | 3.15003 | C | -6.78812 | -0.98397 | 0.87265 |
| H | 0.48829 | 4.34157 | 1.04737 | C | -6.00427 | -2.93428 | -0.53887 |
| H | -0.51708 | 2.95657 | 1.42141 | H | -5.10952 | -2.23745 | 1.27129 |
| C | 1.26958 | 4.91690 | 3.69429 | C | -7.80131 | -1.90303 | 1.59234 |
| H | 3.39460 | 4.62090 | 4.01383 | H | -7.28139 | -0.50776 | 0.02860 |
| H | 2.41318 | 3.21893 | 4.40035 | H | -6.47499 | -0.19270 | 1.55070 |
| H | -0.80729 | 4.80451 | 3.08568 | C | -6.99966 | -3.86818 | 0.18750 |
| H | -0.20568 | 3.34409 | 3.84467 | H | -6.49383 | -2.53197 | -1.42170 |
| H | 1.06450 | 5.26644 | 4.70405 | H | -5.14706 | -3.51413 | -0.87476 |
| H | 1.44353 | 5.79457 | 3.07479 | C | -8.22814 | -3.08357 | 0.69448 |
| H | 1.40505 | 1.86213 | 2.54860 | H | -8.67729 | -1.32677 | 1.88364 |
| H | -2.12017 | 3.06222 | -2.10214 | H | -7.34963 | -2.29041 | 2.50364 |
| | | | | H | -7.32062 | -4.65855 | -0.48833 |
| | | | | H | -6.50100 | -4.34316 | 1.03027 |
| | | | | H | -8.88931 | -3.74809 | 1.24704 |
| | | | | H | -8.78741 | -2.70342 | -0.15827 |
| | | | | C | -4.40856 | -0.19740 | -2.09690 |
| | | | | C | -4.30598 | -1.33840 | -3.14147 |
| | | | | C | -5.72358 | 0.59020 | -2.32166 |
| | | | | H | -3.58215 | 0.48139 | -2.29442 |
| | | | | C | -4.36490 | -0.76833 | -4.57800 |
| | | | | H | -5.11673 | -2.04962 | -3.01717 |
| | | | | H | -3.37402 | -1.88476 | -3.02633 |
| | | | | C | -5.79871 | 1.16314 | -3.75459 |
| | | | | H | -6.57866 | -0.06314 | -2.16271 |
| | | | | H | -5.79970 | 1.40382 | -1.60352 |
| | | | | C | -5.65455 | 0.04646 | -4.80937 |
| | | | | H | -4.31142 | -1.58441 | -5.29610 |
| | | | | H | -3.50004 | -0.12958 | -4.74625 |
| | | | | H | -6.74529 | 1.68197 | -3.89316 |
| | | | | H | -5.00365 | 1.89346 | -3.89158 |
| | | | | H | -5.64462 | 0.47891 | -5.80783 |
| | | | | H | -6.51505 | -0.61741 | -4.75075 |
| | | | | C | -1.17509 | -1.14143 | 2.37987 |
| | | | | C | -2.47433 | -1.75449 | 2.95410 |
| | | | | C | 0.06076 | -1.74863 | 3.09120 |
| | | | | H | -1.19743 | -0.07898 | 2.60933 |
| | | | | C | -2.54958 | -1.55800 | 4.48599 |
| | | | | H | -2.52690 | -2.81754 | 2.73156 |
| | | | | H | -3.33861 | -1.27794 | 2.50062 |
| | | | | C | -0.01415 | -1.54660 | 4.62137 |
| | | | | H | 0.12459 | -2.81358 | 2.89215 |
| | | | | H | 0.97372 | -1.29882 | 2.71092 |
| | | | | C | -1.31352 | -2.14627 | 5.19648 |

| | | | | | | | |
|---|----------|----------|----------|----|----------|----------|-----------------------|
| H | -3.45364 | -2.02968 | 4.86580 | H | 6.66653 | -1.76316 | 0.51063 |
| H | -2.62009 | -0.49476 | 4.70684 | H | 6.08878 | -0.50594 | 1.58832 |
| H | 0.84907 | -2.01464 | 5.09040 | C | 6.94734 | -3.77448 | 2.43345 |
| H | 0.02554 | -0.48461 | 4.85224 | H | 5.59511 | -5.43864 | 2.10996 |
| H | -1.37177 | -1.94708 | 6.26449 | H | 4.98440 | -4.22507 | 3.21917 |
| H | -1.30090 | -3.22667 | 5.06603 | H | 7.90253 | -1.83869 | 2.64158 |
| C | -0.02452 | -2.80749 | 0.02166 | H | 6.40375 | -1.99628 | 3.53937 |
| C | -0.67193 | -4.12464 | 0.52524 | H | 7.44883 | -4.22081 | 3.28980 |
| C | 0.23477 | -2.92906 | -1.50108 | H | 7.53255 | -4.01969 | 1.54922 |
| H | 0.94274 | -2.69214 | 0.50479 | C | 2.52880 | 2.91884 | -0.35213 |
| C | 0.24670 | -5.33486 | 0.24356 | C | 1.54839 | 4.11379 | -0.42954 |
| H | -1.61685 | -4.29089 | 0.01560 | C | 3.90144 | 3.43410 | 0.15246 |
| H | -0.88398 | -4.08112 | 1.58901 | H | 2.66900 | 2.54467 | -1.36345 |
| C | 1.14045 | -4.14231 | -1.81005 | C | 2.08125 | 5.20640 | -1.38307 |
| H | -0.70737 | -3.05366 | -2.02947 | H | 1.42138 | 4.54822 | 0.55877 |
| H | 0.71193 | -2.02704 | -1.87793 | H | 0.57597 | 3.77258 | -0.77172 |
| C | 0.54843 | -5.45758 | -1.26358 | C | 4.45583 | 4.51102 | -0.80935 |
| H | -0.23177 | -6.24425 | 0.60218 | H | 3.80307 | 3.87314 | 1.13966 |
| H | 1.17880 | -5.21858 | 0.79295 | H | 4.62760 | 2.63216 | 0.22670 |
| H | 1.28363 | -4.22130 | -2.88577 | C | 3.47838 | 5.69595 | -0.94949 |
| H | 2.11739 | -3.97675 | -1.36220 | H | 1.38617 | 6.04342 | -1.40188 |
| H | 1.24185 | -6.27796 | -1.43713 | H | 2.13754 | 4.80605 | -2.39283 |
| H | -0.37201 | -5.69064 | -1.79551 | H | 5.41578 | 4.86536 | -0.43878 |
| P | 1.70806 | 1.39625 | 0.54602 | H | 4.62853 | 4.06584 | -1.78726 |
| C | 3.19892 | 0.26773 | 0.95994 | H | 3.86416 | 6.40948 | -1.67470 |
| H | 4.11781 | 0.86547 | 1.03332 | H | 3.40032 | 6.21191 | 0.00559 |
| H | 2.98715 | -0.08293 | 1.98466 | C | 1.31539 | 1.88329 | 2.39222 |
| C | 4.38564 | -0.94174 | -1.58825 | C | 2.45982 | 2.56133 | 3.18548 |
| C | 5.47518 | 0.15819 | -1.57979 | C | 0.02582 | 2.71690 | 2.56090 |
| C | 4.94392 | -2.22521 | -2.25039 | C | 2.09500 | 2.65609 | 4.68496 |
| H | 3.56024 | -0.58782 | -2.20415 | H | 2.62257 | 3.56730 | 2.81045 |
| C | 5.97844 | 0.44840 | -3.01292 | H | 3.39224 | 2.01389 | 3.07829 |
| H | 6.32163 | -0.14010 | -0.96797 | C | -0.36353 | 2.83703 | 4.05209 |
| H | 5.07913 | 1.07692 | -1.15972 | H | 0.17824 | 3.71478 | 2.16151 |
| C | 5.44542 | -1.94370 | -3.68438 | H | -0.78554 | 2.26199 | 2.00006 |
| H | 5.77115 | -2.62066 | -1.66495 | C | 0.78331 | 3.44273 | 4.88858 |
| H | 4.17335 | -2.99164 | -2.28536 | H | 2.90465 | 3.14259 | 5.22535 |
| C | 6.51214 | -0.82921 | -3.69317 | H | 1.98626 | 1.65393 | 5.09508 |
| H | 6.76209 | 1.20298 | -2.97868 | H | -1.25276 | 3.45671 | 4.14589 |
| H | 5.16083 | 0.85526 | -3.60460 | H | -0.61252 | 1.85280 | 4.44250 |
| H | 5.85956 | -2.85417 | -4.11328 | H | 0.51268 | 3.44434 | 5.94246 |
| H | 4.60426 | -1.64333 | -4.30590 | H | 0.93764 | 4.47794 | 4.59050 |
| H | 6.80837 | -0.60701 | -4.71638 | H | 1.13495 | 0.91587 | 2.85271 |
| H | 7.39906 | -1.17469 | -3.16528 | H | -1.93196 | 2.22631 | -1.64944 |
| C | 4.68641 | -2.15617 | 1.31929 | | | | 9b_c |
| C | 4.75314 | -3.69331 | 1.13420 | | | | 176 |
| C | 6.11971 | -1.58200 | 1.43234 | | | | XYZ |
| H | 4.19422 | -1.97924 | 2.27437 | Ru | 0.90622 | 0.20605 | -0.74079 |
| C | 5.52993 | -4.36706 | 2.28816 | C | -1.41977 | 2.30689 | -1.83199 |
| H | 5.23943 | -3.93679 | 0.19265 | C | -0.55669 | 1.25710 | -1.81141 |
| H | 3.74643 | -4.10352 | 1.09179 | P | -0.70653 | -1.54369 | -0.47571 |

| | | | | | | | |
|---|----------|----------|----------|---|----------|----------|----------|
| N | 2.16039 | 1.50969 | -2.00324 | C | -5.67242 | 0.48635 | -3.96436 |
| C | 2.06709 | 0.65065 | -3.01247 | H | -5.88359 | -0.91407 | -2.34127 |
| C | 2.47638 | 1.23220 | -4.35825 | H | -4.30318 | -0.93414 | -3.09369 |
| C | 3.04228 | 2.61121 | -3.93928 | C | -6.31054 | 2.41887 | -2.43798 |
| C | 2.43877 | 2.85470 | -2.51866 | H | -6.52711 | 1.06223 | -0.77804 |
| O | 1.54424 | -0.50492 | -2.77781 | H | -5.37268 | 2.35055 | -0.48885 |
| P | 3.03648 | -0.68466 | 0.28079 | C | -6.79673 | 1.45446 | -3.54010 |
| H | 1.49494 | 3.43437 | -2.57762 | H | -6.05401 | -0.22152 | -4.69782 |
| H | 3.13471 | 3.40757 | -1.86362 | H | -4.87251 | 1.04983 | -4.44062 |
| H | 3.19401 | 0.58902 | -4.89697 | H | -7.13596 | 3.04606 | -2.10656 |
| H | 1.57467 | 1.32035 | -4.99497 | H | -5.54423 | 3.07554 | -2.84493 |
| H | 2.77946 | 3.41876 | -4.64339 | H | -7.14119 | 2.02148 | -4.40261 |
| H | 4.14390 | 2.56769 | -3.87653 | H | -7.64400 | 0.88101 | -3.16848 |
| H | -1.89027 | 2.51860 | -2.81360 | C | -1.14732 | -2.44804 | 1.19655 |
| C | -1.88333 | 3.26984 | -0.76582 | C | -2.14330 | -3.63581 | 1.14457 |
| C | -1.85644 | 4.74360 | -1.23193 | C | 0.10046 | -2.89173 | 1.99101 |
| H | -2.92732 | 3.02542 | -0.47525 | H | -1.62832 | -1.65236 | 1.76267 |
| H | -1.28932 | 3.14483 | 0.15087 | C | -2.54969 | -4.06908 | 2.57222 |
| C | -2.44277 | 5.72759 | -0.20212 | H | -1.68711 | -4.48893 | 0.65800 |
| H | -0.81666 | 5.03918 | -1.47830 | H | -3.03258 | -3.37983 | 0.57971 |
| H | -2.42645 | 4.83200 | -2.18073 | C | -0.26412 | -3.36173 | 3.41782 |
| C | -2.42943 | 7.18890 | -0.68190 | H | 0.60173 | -3.70263 | 1.46835 |
| H | -3.48271 | 5.42568 | 0.03643 | H | 0.80057 | -2.06851 | 2.06114 |
| H | -1.87791 | 5.64553 | 0.74805 | C | -1.31318 | -4.49151 | 3.39147 |
| H | -2.85753 | 7.87021 | 0.07587 | H | -3.25204 | -4.89797 | 2.51218 |
| H | -1.39930 | 7.53053 | -0.89586 | H | -3.05525 | -3.24878 | 3.07737 |
| H | -3.01746 | 7.30912 | -1.61109 | H | 0.63424 | -3.70178 | 3.92938 |
| C | -2.47149 | -1.20065 | -1.08405 | H | -0.65941 | -2.51918 | 3.98124 |
| H | -2.29582 | -0.68072 | -2.03780 | H | -1.60780 | -4.74511 | 4.40763 |
| H | -2.97579 | -2.15328 | -1.30940 | H | -0.87409 | -5.38240 | 2.94668 |
| P | -3.59240 | 0.02767 | -0.16498 | C | -0.11049 | -2.84260 | -1.82139 |
| C | -4.76389 | -1.07211 | 0.90007 | C | -0.34241 | -4.34738 | -1.54101 |
| C | -5.55314 | -0.18888 | 1.89993 | C | -0.66151 | -2.49480 | -3.22686 |
| C | -5.74096 | -2.04610 | 0.19763 | H | 0.96140 | -2.67799 | -1.85876 |
| H | -4.08258 | -1.67194 | 1.49657 | C | 0.33408 | -5.22091 | -2.62402 |
| C | -6.30460 | -1.05236 | 2.93863 | H | -1.40686 | -4.56833 | -1.53034 |
| H | -6.27435 | 0.42678 | 1.36910 | H | 0.06573 | -4.62655 | -0.57396 |
| H | -4.87389 | 0.48554 | 2.41575 | C | 0.02285 | -3.35403 | -4.31231 |
| C | -6.48219 | -2.92891 | 1.22825 | H | -1.73315 | -2.67180 | -3.26633 |
| H | -6.48111 | -1.48424 | -0.36523 | H | -0.47678 | -1.44719 | -3.44317 |
| H | -5.21191 | -2.68413 | -0.50689 | C | -0.16439 | -4.85980 | -4.03744 |
| C | -7.24673 | -2.06403 | 2.25255 | H | 0.13436 | -6.27039 | -2.41581 |
| H | -6.87724 | -0.40981 | 3.60461 | H | 1.41190 | -5.07955 | -2.57603 |
| H | -5.58236 | -1.59106 | 3.54916 | H | -0.39232 | -3.10280 | -5.28620 |
| H | -7.17727 | -3.58863 | 0.71241 | H | 1.08401 | -3.11577 | -4.33791 |
| H | -5.76408 | -3.55768 | 1.75073 | H | 0.37486 | -5.44570 | -4.77895 |
| H | -7.71310 | -2.70186 | 3.00074 | H | -1.21877 | -5.11554 | -4.12369 |
| H | -8.04285 | -1.52484 | 1.74275 | P | 1.15011 | 1.15724 | 1.38629 |
| C | -4.57703 | 0.70866 | -1.67815 | C | 2.61064 | 0.09026 | 1.94810 |
| C | -5.10117 | -0.28194 | -2.74993 | H | 3.41424 | 0.62148 | 2.48043 |
| C | -5.72909 | 1.64329 | -1.23463 | H | 2.25927 | -0.71491 | 2.61152 |
| H | -3.82944 | 1.32960 | -2.16522 | C | 4.57352 | 0.28361 | -0.39328 |

| | | | | | | | |
|---|----------|----------|----------|---------------------------------------|----------|----------|----------|
| C | 5.59532 | 0.80824 | 0.64604 | C | -1.27671 | 1.93488 | 2.79609 |
| C | 5.29881 | -0.50857 | -1.50763 | C | -0.47735 | 0.73089 | 5.39820 |
| H | 4.10624 | 1.14247 | -0.86694 | H | 0.96185 | 2.04195 | 4.49334 |
| C | 6.66977 | 1.68040 | -0.04444 | H | 1.39517 | 0.34982 | 4.39107 |
| H | 6.08637 | -0.01493 | 1.15643 | C | -2.31331 | 1.64311 | 3.90489 |
| H | 5.09783 | 1.40905 | 1.40200 | H | -0.94233 | 2.96583 | 2.88573 |
| C | 6.37217 | 0.36361 | -2.19625 | H | -1.75621 | 1.82336 | 1.82698 |
| H | 5.78548 | -1.38591 | -1.09058 | C | -1.67966 | 1.69243 | 5.30995 |
| H | 4.57892 | -0.84993 | -2.24844 | H | -0.00958 | 0.80888 | 6.37764 |
| C | 7.38750 | 0.90961 | -1.17140 | H | -0.82440 | -0.29398 | 5.28390 |
| H | 7.39430 | 2.01334 | 0.69616 | H | -3.12456 | 2.36494 | 3.83826 |
| H | 6.19700 | 2.56805 | -0.46020 | H | -2.74140 | 0.65624 | 3.74227 |
| H | 6.88851 | -0.22591 | -2.95112 | H | -2.42175 | 1.42714 | 6.06006 |
| H | 5.88953 | 1.19521 | -2.70455 | H | -1.34684 | 2.70624 | 5.52377 |
| H | 8.10007 | 1.56418 | -1.66884 | H | -0.44628 | -0.03497 | 2.76695 |
| H | 7.94922 | 0.08208 | -0.74215 | H | -0.48033 | 0.78017 | -2.81289 |
| C | 3.61934 | -2.44730 | 0.83762 | [9b _c -10b _c]‡ | | | |
| C | 3.71575 | -3.45826 | -0.33044 | 176 | | | |
| C | 4.91188 | -2.48915 | 1.68798 | XYZ | | | |
| H | 2.80954 | -2.78164 | 1.47934 | Ru | -0.82227 | -0.33802 | -0.71189 |
| C | 3.96797 | -4.88737 | 0.20211 | C | 0.94858 | -1.66352 | -3.00696 |
| H | 4.52410 | -3.18569 | -1.00231 | C | 0.34573 | -1.11245 | -1.94546 |
| H | 2.79671 | -3.44583 | -0.90945 | P | 0.86716 | 1.42797 | -0.37561 |
| C | 5.15660 | -3.91555 | 2.23175 | N | -2.20990 | -1.61749 | -1.81112 |
| H | 5.76768 | -2.19692 | 1.08634 | C | -2.72547 | -1.06100 | -2.95443 |
| H | 4.84115 | -1.79360 | 2.52147 | C | -3.22605 | -2.17893 | -3.89959 |
| C | 5.23297 | -4.94441 | 1.08414 | C | -3.21074 | -3.43452 | -3.01747 |
| H | 4.07120 | -5.57383 | -0.63572 | C | -2.11615 | -3.07918 | -1.98135 |
| H | 3.10792 | -5.21195 | 0.78466 | O | -2.78463 | 0.15593 | -3.23904 |
| H | 6.08159 | -3.93147 | 2.80467 | P | -3.04495 | 0.78963 | 0.14056 |
| H | 4.34901 | -4.18703 | 2.90891 | H | 0.80390 | -1.17271 | -3.98284 |
| H | 5.35240 | -5.94520 | 1.49384 | H | -1.11421 | -3.36142 | -2.36734 |
| H | 6.10856 | -4.73588 | 0.47239 | H | -2.25874 | -3.61330 | -1.03129 |
| C | 2.04895 | 2.88474 | 1.41914 | H | -4.20319 | -1.92021 | -4.34025 |
| C | 1.24669 | 4.00731 | 0.72660 | H | -2.50083 | -2.25676 | -4.73429 |
| C | 2.54107 | 3.38950 | 2.79818 | H | -2.99090 | -4.37160 | -3.55975 |
| H | 2.92575 | 2.68806 | 0.80521 | H | -4.18559 | -3.55854 | -2.50915 |
| C | 2.10503 | 5.28260 | 0.56243 | H | -0.56206 | 0.10499 | -2.33630 |
| H | 0.36814 | 4.25063 | 1.31800 | C | 1.69436 | -2.99079 | -3.03622 |
| H | 0.90854 | 3.66851 | -0.24727 | C | 1.85554 | -3.69833 | -1.67932 |
| C | 3.43251 | 4.64143 | 2.63167 | H | 1.14945 | -3.66746 | -3.73068 |
| H | 1.68865 | 3.66022 | 3.41476 | H | 2.69075 | -2.85097 | -3.50612 |
| H | 3.09909 | 2.62081 | 3.32640 | C | 2.59195 | -5.04611 | -1.79358 |
| C | 2.66544 | 5.77116 | 1.91429 | H | 2.39013 | -3.03542 | -0.97138 |
| H | 1.50216 | 6.06634 | 0.10876 | H | 0.85284 | -3.86154 | -1.23975 |
| H | 2.93177 | 5.07632 | -0.11353 | C | 2.73886 | -5.76630 | -0.44259 |
| H | 3.76535 | 4.98162 | 3.61037 | H | 2.04988 | -5.70202 | -2.50495 |
| H | 4.31971 | 4.38138 | 2.05748 | H | 3.59591 | -4.88218 | -2.23476 |
| H | 3.32364 | 6.62313 | 1.75710 | H | 3.27338 | -6.72741 | -0.55107 |
| H | 1.84556 | 6.10489 | 2.54736 | H | 3.30175 | -5.14689 | 0.27998 |
| C | -0.06763 | 0.97608 | 2.89322 | H | 1.75008 | -5.98077 | 0.00411 |
| C | 0.56822 | 1.04946 | 4.30535 | | | | |

| | | | | | | | |
|---|----------|----------|----------|---|----------|----------|----------|
| C | 2.62309 | 1.02439 | -0.97484 | H | 0.69213 | 2.44273 | 4.06336 |
| H | 2.42413 | 0.54076 | -1.94499 | H | 1.82217 | 4.57446 | 4.53290 |
| H | 3.17573 | 1.95434 | -1.17598 | H | 1.21554 | 5.27043 | 3.04078 |
| P | 3.68784 | -0.29235 | -0.11692 | C | 0.35156 | 2.76950 | -1.71614 |
| C | 4.86202 | 0.67485 | 1.06363 | C | 0.62868 | 4.25837 | -1.39168 |
| C | 5.60782 | -0.31303 | 1.99661 | C | 0.93432 | 2.45368 | -3.11781 |
| C | 5.88237 | 1.67506 | 0.46685 | H | -0.72438 | 2.63994 | -1.78403 |
| H | 4.18294 | 1.24019 | 1.69636 | C | 0.00395 | 5.18489 | -2.46179 |
| C | 6.35306 | 0.43766 | 3.12345 | H | 1.70028 | 4.43856 | -1.35958 |
| H | 6.32817 | -0.89461 | 1.42771 | H | 0.21673 | 4.52856 | -0.42451 |
| H | 4.90324 | -1.01472 | 2.43506 | C | 0.29300 | 3.35668 | -4.19430 |
| C | 6.62012 | 2.44765 | 1.58468 | H | 2.00837 | 2.61952 | -3.12086 |
| H | 6.62157 | 1.13873 | -0.12146 | H | 0.75389 | 1.41588 | -3.37756 |
| H | 5.39080 | 2.38350 | -0.19615 | C | 0.51688 | 4.84847 | -3.87589 |
| C | 7.33653 | 1.47930 | 2.54940 | H | 0.23642 | 6.21978 | -2.21800 |
| H | 6.89293 | -0.27511 | 3.74373 | H | -1.07845 | 5.08077 | -2.43812 |
| H | 5.62850 | 0.94000 | 3.76156 | H | 0.72237 | 3.11776 | -5.16498 |
| H | 7.34453 | 3.12816 | 1.14140 | H | -0.77360 | 3.14859 | -4.24886 |
| H | 5.90593 | 3.05055 | 2.14164 | H | 0.00624 | 5.46841 | -4.60976 |
| H | 7.79788 | 2.03905 | 3.36047 | H | 1.57926 | 5.07665 | -3.93812 |
| H | 8.13283 | 0.96492 | 2.01485 | P | -1.40445 | -1.11394 | 1.50846 |
| C | 4.68901 | -0.88160 | -1.65784 | C | -2.73654 | 0.15940 | 1.90543 |
| C | 5.28393 | 0.17636 | -2.62306 | H | -3.60285 | -0.18197 | 2.48779 |
| C | 5.78476 | -1.90335 | -1.26669 | H | -2.27082 | 0.97363 | 2.48115 |
| H | 3.93420 | -1.42397 | -2.22115 | C | -4.65496 | -0.12229 | -0.43042 |
| C | 5.87210 | -0.50365 | -3.88107 | C | -5.70199 | -0.44242 | 0.66631 |
| H | 6.07189 | 0.74188 | -2.13572 | C | -5.33519 | 0.60280 | -1.61683 |
| H | 4.52001 | 0.88379 | -2.93340 | H | -4.25768 | -1.06258 | -0.80483 |
| C | 6.38495 | -2.58679 | -2.51599 | C | -6.85364 | -1.29500 | 0.08392 |
| H | 6.58556 | -1.40257 | -0.72780 | H | -6.11631 | 0.47155 | 1.08248 |
| H | 5.36998 | -2.66113 | -0.60509 | H | -5.25109 | -0.99628 | 1.48281 |
| C | 6.94661 | -1.54571 | -3.50657 | C | -6.48043 | -0.25378 | -2.19936 |
| H | 6.30381 | 0.25172 | -4.53488 | H | -5.75142 | 1.54991 | -1.28563 |
| H | 5.07175 | -0.99286 | -4.43271 | H | -4.59200 | 0.79276 | -2.39011 |
| H | 7.17409 | -3.27272 | -2.21413 | C | -7.52462 | -0.60138 | -1.11873 |
| H | 5.61372 | -3.17413 | -3.00995 | H | -7.58974 | -1.48395 | 0.86303 |
| H | 7.30557 | -2.04542 | -4.40399 | H | -6.45864 | -2.25869 | -0.23161 |
| H | 7.79699 | -1.03932 | -3.05364 | H | -6.95744 | 0.28721 | -3.01394 |
| C | 1.30106 | 2.31041 | 1.31074 | H | -6.07000 | -1.17172 | -2.61379 |
| C | 2.40335 | 3.40120 | 1.29863 | H | -8.29167 | -1.25058 | -1.53579 |
| C | 0.06271 | 2.88055 | 2.03950 | H | -8.01599 | 0.30952 | -0.78188 |
| H | 1.67780 | 1.48241 | 1.90881 | C | -3.45138 | 2.64828 | 0.48091 |
| C | 2.77992 | 3.80886 | 2.74201 | C | -3.56904 | 3.50415 | -0.80349 |
| H | 2.05206 | 4.28651 | 0.78274 | C | -4.67197 | 2.90758 | 1.39755 |
| H | 3.29139 | 3.05757 | 0.78138 | H | -2.57127 | 2.99634 | 1.01522 |
| C | 0.40259 | 3.31636 | 3.48309 | C | -3.65775 | 5.00580 | -0.44758 |
| H | -0.32533 | 3.73834 | 1.49718 | H | -4.45557 | 3.22569 | -1.36366 |
| H | -0.72399 | 2.13751 | 2.07066 | H | -2.71456 | 3.33081 | -1.45094 |
| C | 1.55116 | 4.34495 | 3.50454 | C | -4.76607 | 4.40638 | 1.76466 |
| H | 3.55490 | 4.57197 | 2.71085 | H | -5.58735 | 2.61562 | 0.89033 |
| H | 3.18828 | 2.95054 | 3.27159 | H | -4.59839 | 2.31862 | 2.30913 |
| H | -0.48314 | 3.73978 | 3.95261 | C | -4.84277 | 5.28774 | 0.50019 |

| | | | | | | | |
|------------------------|----------|----------|----------|---|----------|----------|----------|
| H | -3.76963 | 5.58888 | -1.35931 | C | -2.06837 | -2.63540 | -2.49889 |
| H | -2.73169 | 5.32118 | 0.02929 | O | -2.70633 | 0.74838 | -3.33602 |
| H | -5.64391 | 4.57376 | 2.38559 | P | -3.02692 | 0.75819 | 0.22345 |
| H | -3.89378 | 4.68895 | 2.35105 | H | 1.18452 | -0.85085 | -3.79316 |
| H | -4.84810 | 6.33825 | 0.78338 | H | -1.05912 | -2.91154 | -2.86926 |
| H | -5.77619 | 5.08598 | -0.02165 | H | -2.26857 | -3.25845 | -1.61255 |
| C | -2.32750 | -2.81221 | 1.65847 | H | -4.07844 | -1.15534 | -4.74627 |
| C | -1.34285 | -4.00468 | 1.59373 | H | -2.36941 | -1.45186 | -5.14120 |
| C | -3.28993 | -3.00445 | 2.85870 | H | -2.90096 | -3.69711 | -4.26417 |
| H | -2.93319 | -2.82733 | 0.75659 | H | -4.12297 | -3.01841 | -3.15365 |
| C | -2.10094 | -5.34462 | 1.45839 | H | -1.14255 | 0.93165 | -1.96566 |
| H | -0.74686 | -4.03648 | 2.50211 | C | 1.82606 | -2.82762 | -2.97494 |
| H | -0.66159 | -3.88363 | 0.75511 | C | 1.90121 | -3.63380 | -1.66883 |
| C | -4.06998 | -4.33099 | 2.70680 | H | 1.25750 | -3.41482 | -3.72990 |
| H | -2.73950 | -3.03363 | 3.79288 | H | 2.84449 | -2.72757 | -3.40292 |
| H | -4.00064 | -2.18710 | 2.92697 | C | 2.57593 | -5.00576 | -1.85315 |
| C | -3.11154 | -5.53576 | 2.60833 | H | 2.44357 | -3.04383 | -0.90522 |
| H | -1.38581 | -6.16460 | 1.45520 | H | 0.87572 | -3.77704 | -1.27860 |
| H | -2.62784 | -5.36812 | 0.50717 | C | 2.64537 | -5.82247 | -0.55172 |
| H | -4.73585 | -4.45638 | 3.55834 | H | 2.02943 | -5.58556 | -2.62464 |
| H | -4.68841 | -4.28506 | 1.81256 | H | 3.60078 | -4.85956 | -2.25088 |
| H | -3.68210 | -6.44861 | 2.45108 | H | 3.13880 | -6.79841 | -0.71076 |
| H | -2.57410 | -5.64490 | 3.54847 | H | 3.21258 | -5.28139 | 0.22823 |
| C | -0.16267 | -0.92832 | 2.97339 | H | 1.63402 | -6.01985 | -0.14990 |
| C | -0.71623 | -1.26957 | 4.37772 | C | 2.61288 | 1.25023 | -0.87394 |
| C | 1.16475 | -1.68396 | 2.72490 | H | 2.42163 | 0.98685 | -1.92547 |
| C | 0.31049 | -0.90519 | 5.47311 | H | 3.18442 | 2.19049 | -0.86874 |
| H | -0.92116 | -2.33352 | 4.44646 | P | 3.63365 | -0.24846 | -0.31072 |
| H | -1.64853 | -0.73947 | 4.56078 | C | 4.80442 | 0.39100 | 1.07872 |
| C | 2.19787 | -1.35830 | 3.82811 | C | 5.49242 | -0.81094 | 1.77495 |
| H | 0.98935 | -2.75554 | 2.71631 | C | 5.87211 | 1.46125 | 0.74453 |
| H | 1.57454 | -1.41440 | 1.75326 | H | 4.12695 | 0.82195 | 1.81144 |
| C | 1.64360 | -1.64495 | 5.23951 | C | 6.23304 | -0.36575 | 3.05634 |
| H | -0.09257 | -1.16656 | 6.44945 | H | 6.20707 | -1.27538 | 1.10072 |
| H | 0.48308 | 0.16914 | 5.46849 | H | 4.75299 | -1.56637 | 2.02846 |
| H | 3.09618 | -1.94857 | 3.66336 | C | 6.60485 | 1.93068 | 2.02261 |
| H | 2.48009 | -0.30958 | 3.76076 | H | 6.60865 | 1.04485 | 0.06311 |
| H | 2.37159 | -1.34189 | 5.98909 | H | 5.42184 | 2.31983 | 0.25134 |
| H | 1.48394 | -2.71529 | 5.35416 | C | 7.26427 | 0.74166 | 2.75283 |
| H | 0.06384 | 0.13451 | 2.96752 | H | 6.73348 | -1.22085 | 3.50649 |
| | | | | H | 5.50937 | 0.00495 | 3.77982 |
| 10b_c | | | | H | 7.36219 | 2.66685 | 1.76020 |
| 176 | | | | H | 5.89604 | 2.41678 | 2.68980 |
| XYZ | | | | H | 7.72274 | 1.08407 | 3.67834 |
| Ru | -0.81175 | -0.12399 | -0.80495 | H | 8.05678 | 0.33306 | 2.12883 |
| C | 1.17886 | -1.45134 | -2.86627 | C | 4.65036 | -0.49606 | -1.93206 |
| C | 0.46533 | -0.91946 | -1.87090 | C | 5.29907 | 0.73608 | -2.61460 |
| P | 0.86175 | 1.55961 | -0.21619 | C | 5.70552 | -1.61836 | -1.77570 |
| N | -2.12212 | -1.20052 | -2.17054 | H | 3.88942 | -0.86370 | -2.61566 |
| C | -2.63096 | -0.49954 | -3.22531 | C | 5.88972 | 0.34717 | -3.98972 |
| C | -3.11351 | -1.47668 | -4.32007 | H | 6.09538 | 1.14282 | -1.99923 |
| C | -3.13075 | -2.83804 | -3.60873 | H | 4.56549 | 1.52420 | -2.75984 |

| | | | | | | | |
|---|----------|----------|----------|---|----------|----------|----------|
| C | 6.31026 | -2.01333 | -3.14187 | C | -6.78089 | -1.36144 | -0.25193 |
| H | 6.50993 | -1.28494 | -1.12416 | H | -6.10117 | 0.23962 | 1.02772 |
| H | 5.25379 | -2.49418 | -1.31462 | H | -5.21200 | -1.25676 | 1.21402 |
| C | 6.92331 | -0.79065 | -3.85598 | C | -6.38147 | 0.03145 | -2.33583 |
| H | 6.35774 | 1.21807 | -4.44465 | H | -5.71085 | 1.68284 | -1.13545 |
| H | 5.08511 | 0.02792 | -4.64920 | H | -4.51139 | 1.12943 | -2.31671 |
| H | 7.07218 | -2.77694 | -2.99781 | C | -7.44021 | -0.49931 | -1.34745 |
| H | 5.53188 | -2.44369 | -3.76862 | H | -7.52920 | -1.68257 | 0.47020 |
| H | 7.28385 | -1.08012 | -4.84094 | H | -6.35942 | -2.25689 | -0.70451 |
| H | 7.78019 | -0.43356 | -3.28766 | H | -6.85319 | 0.68453 | -3.06700 |
| C | 1.28476 | 2.11160 | 1.60935 | H | -5.94322 | -0.80280 | -2.87863 |
| C | 2.44953 | 3.11316 | 1.82051 | H | -8.18477 | -1.08841 | -1.87879 |
| C | 0.04552 | 2.62778 | 2.37565 | H | -7.95740 | 0.33885 | -0.88411 |
| H | 1.58621 | 1.17280 | 2.07110 | C | -3.46981 | 2.53705 | 0.82678 |
| C | 2.77401 | 3.26022 | 3.32511 | C | -3.58588 | 3.57001 | -0.32026 |
| H | 2.18481 | 4.09130 | 1.43854 | C | -4.70798 | 2.63685 | 1.75103 |
| H | 3.34055 | 2.79355 | 1.29421 | H | -2.60424 | 2.81728 | 1.42095 |
| C | 0.33840 | 2.81544 | 3.88187 | C | -3.69704 | 5.00030 | 0.25479 |
| H | -0.27994 | 3.57734 | 1.95842 | H | -4.46463 | 3.36787 | -0.92341 |
| H | -0.77398 | 1.92907 | 2.26124 | H | -2.72458 | 3.50193 | -0.97825 |
| C | 1.54168 | 3.75185 | 4.11127 | C | -4.83071 | 4.06330 | 2.33474 |
| H | 3.59456 | 3.96373 | 3.45009 | H | -5.61074 | 2.40977 | 1.19061 |
| H | 3.10124 | 2.30279 | 3.72560 | H | -4.63705 | 1.92010 | 2.56634 |
| H | -0.54401 | 3.21735 | 4.37594 | C | -4.89908 | 5.12373 | 1.21530 |
| H | 0.54849 | 1.84646 | 4.32993 | H | -3.80403 | 5.71195 | -0.56118 |
| H | 1.77273 | 3.80222 | 5.17323 | H | -2.78140 | 5.25014 | 0.78749 |
| H | 1.28431 | 4.75754 | 3.78480 | H | -5.72117 | 4.12524 | 2.95716 |
| C | 0.39356 | 3.14212 | -1.26850 | H | -3.97264 | 4.26521 | 2.97314 |
| C | 0.90422 | 4.51964 | -0.77984 | H | -4.92221 | 6.11934 | 1.65348 |
| C | 0.78488 | 2.95257 | -2.75596 | H | -5.82204 | 4.99321 | 0.65371 |
| H | -0.69001 | 3.15857 | -1.22295 | C | -2.36278 | -3.05034 | 1.25806 |
| C | 0.32972 | 5.66026 | -1.65397 | C | -1.41868 | -4.25033 | 1.00707 |
| H | 1.99058 | 4.55609 | -0.81830 | C | -3.32267 | -3.38754 | 2.42748 |
| H | 0.60127 | 4.70060 | 0.24633 | H | -2.97423 | -2.91725 | 0.36874 |
| C | 0.18350 | 4.07498 | -3.62861 | C | -2.22573 | -5.52533 | 0.67440 |
| H | 1.86621 | 2.97611 | -2.86182 | H | -0.81774 | -4.43677 | 1.89384 |
| H | 0.42705 | 1.99106 | -3.11206 | H | -0.74023 | -4.02678 | 0.18857 |
| C | 0.65498 | 5.46229 | -3.14779 | C | -4.15409 | -4.64424 | 2.07982 |
| H | 0.73024 | 6.61148 | -1.30845 | H | -2.76511 | -3.58521 | 3.33640 |
| H | -0.75001 | 5.69639 | -1.52384 | H | -3.99903 | -2.56415 | 2.63390 |
| H | 0.47935 | 3.92289 | -4.66440 | C | -3.24233 | -5.85403 | 1.78750 |
| H | -0.90232 | 4.02052 | -3.58825 | H | -1.54179 | -6.36075 | 0.54028 |
| H | 0.17743 | 6.24476 | -3.73383 | H | -2.75263 | -5.38097 | -0.26642 |
| H | 1.72925 | 5.55174 | -3.29789 | H | -4.82039 | -4.87482 | 2.90868 |
| P | -1.38765 | -1.37679 | 1.34187 | H | -4.77420 | -4.43738 | 1.20983 |
| C | -2.71254 | -0.13428 | 1.86104 | H | -3.84778 | -6.70888 | 1.49396 |
| H | -3.58723 | -0.54019 | 2.38618 | H | -2.70860 | -6.12868 | 2.69540 |
| H | -2.24160 | 0.58551 | 2.54744 | C | -0.19466 | -1.38011 | 2.85652 |
| C | -4.59902 | -0.08332 | -0.52539 | C | -0.78523 | -1.89373 | 4.19092 |
| C | -5.65966 | -0.59076 | 0.48364 | C | 1.13905 | -2.10328 | 2.54905 |
| C | -5.26704 | 0.80729 | -1.60044 | C | 0.21292 | -1.66678 | 5.34822 |
| H | -4.17162 | -0.94303 | -1.03564 | H | -0.98644 | -2.95827 | 4.12102 |

| | | | | | | | |
|----|----------|----------|---|---|----------|----------|----------|
| H | -1.72402 | -1.39120 | 4.41378 | C | -4.93687 | -0.79642 | 1.00140 |
| C | 2.14397 | -1.91752 | 3.70935 | C | -5.60730 | 0.09026 | 2.08194 |
| H | 0.96162 | -3.16528 | 2.40282 | C | -6.01295 | -1.67724 | 0.32128 |
| H | 1.57116 | -1.71605 | 1.62807 | H | -4.25806 | -1.45997 | 1.52972 |
| C | 1.55348 | -2.37351 | 5.06025 | C | -6.35383 | -0.76850 | 3.12786 |
| H | -0.21448 | -2.04564 | 6.27436 | H | -6.31416 | 0.77444 | 1.61955 |
| H | 0.38262 | -0.60001 | 5.47949 | H | -4.85502 | 0.69528 | 2.58256 |
| H | 3.04757 | -2.48408 | 3.49698 | C | -6.74890 | -2.55551 | 1.35934 |
| H | 2.42559 | -0.86862 | 3.77699 | H | -6.74687 | -1.04628 | -0.17215 |
| H | 2.26104 | -2.16443 | 5.85976 | H | -5.56761 | -2.31504 | -0.43918 |
| H | 1.39357 | -3.44974 | 5.03951 | C | -7.39689 | -1.68888 | 2.45960 |
| H | 0.03023 | -0.32429 | 2.98744 | H | -6.84475 | -0.12019 | 3.85099 |
| | | | | H | -5.63455 | -1.37681 | 3.67298 |
| | | | [7a _c -10b _c] [‡] | H | -7.51295 | -3.14814 | 0.85996 |
| | | | 176 | H | -6.04424 | -3.24915 | 1.81332 |
| | | | XYZ | H | -7.86044 | -2.32766 | 3.20865 |
| Ru | 0.70152 | 0.38284 | -0.63760 | H | -8.18392 | -1.07985 | 2.01907 |
| C | -1.31245 | 2.80539 | -0.86477 | C | -4.78893 | 1.05411 | -1.53633 |
| C | -0.50151 | 1.75520 | -0.74226 | C | -5.42658 | 0.11684 | -2.59439 |
| P | -0.98096 | -1.43418 | -0.55549 | C | -5.85009 | 2.05432 | -1.01573 |
| N | 2.03564 | 1.58547 | -1.81027 | H | -4.03476 | 1.63796 | -2.05959 |
| C | 2.54197 | 1.05808 | -2.96440 | C | -6.01933 | 0.94018 | -3.76142 |
| C | 3.10140 | 2.20140 | -3.84542 | H | -6.21978 | -0.47866 | -2.15378 |
| C | 3.18391 | 3.39605 | -2.88273 | H | -4.68557 | -0.57119 | -2.99219 |
| C | 2.07558 | 3.05497 | -1.85624 | C | -6.45546 | 2.87926 | -2.17364 |
| O | 2.57066 | -0.14913 | -3.29353 | H | -6.65200 | 1.51886 | -0.51261 |
| P | 2.97631 | -0.93141 | -0.04764 | H | -5.40079 | 2.72819 | -0.28903 |
| H | -2.32935 | 2.56411 | -1.20592 | C | -7.06003 | 1.96184 | -3.25712 |
| H | 1.09789 | 3.46001 | -2.19332 | H | -6.48176 | 0.26895 | -4.48255 |
| H | 2.27716 | 3.47865 | -0.85562 | H | -5.21661 | 1.46628 | -4.27437 |
| H | 4.05388 | 1.91001 | -4.31797 | H | -7.22208 | 3.54723 | -1.78577 |
| H | 2.37259 | 2.38356 | -4.66060 | H | -5.67808 | 3.49790 | -2.61762 |
| H | 3.02915 | 4.37931 | -3.36197 | H | -7.42190 | 2.56181 | -4.08959 |
| H | 4.17014 | 3.41643 | -2.38184 | H | -7.91489 | 1.43025 | -2.84317 |
| H | 0.45355 | -0.05283 | -2.15565 | C | -1.43152 | -2.49981 | 1.01691 |
| C | -1.07396 | 4.27718 | -0.56848 | C | -2.54594 | -3.56982 | 0.88578 |
| C | -1.55146 | 5.19203 | -1.71865 | C | -0.19421 | -3.16160 | 1.66627 |
| H | -1.61084 | 4.56599 | 0.36097 | H | -1.79322 | -1.74129 | 1.70980 |
| H | -0.00155 | 4.46128 | -0.38422 | C | -2.91879 | -4.13787 | 2.27489 |
| C | -1.36096 | 6.69064 | -1.41823 | H | -2.20741 | -4.39339 | 0.26909 |
| H | -1.00606 | 4.92374 | -2.64542 | H | -3.43245 | -3.15959 | 0.41603 |
| H | -2.62341 | 4.99155 | -1.92373 | C | -0.53082 | -3.75939 | 3.05148 |
| C | -1.84479 | 7.60024 | -2.56022 | H | 0.18361 | -3.95336 | 1.02487 |
| H | -1.90120 | 6.94788 | -0.48479 | H | 0.59956 | -2.43292 | 1.77833 |
| H | -0.28917 | 6.88917 | -1.21606 | C | -1.69098 | -4.77135 | 2.96078 |
| H | -1.69330 | 8.66789 | -2.31906 | H | -3.70220 | -4.88443 | 2.16162 |
| H | -1.29975 | 7.38745 | -3.49858 | H | -3.31418 | -3.34263 | 2.90350 |
| H | -2.92221 | 7.45131 | -2.76068 | H | 0.35235 | -4.24410 | 3.46306 |
| C | -2.72035 | -0.91900 | -1.10855 | H | -0.80776 | -2.95625 | 3.73132 |
| H | -2.51465 | -0.33545 | -2.02062 | H | -1.95820 | -5.11652 | 3.95733 |
| H | -3.28562 | -1.81116 | -1.41983 | H | -1.36833 | -5.63983 | 2.38991 |
| P | -3.77394 | 0.28906 | -0.08097 | C | -0.47376 | -2.61453 | -2.03709 |

| | | | | | | | |
|---|----------|----------|----------|----|----------|----------|--|
| C | -0.82006 | -4.11838 | -1.90713 | H | 4.67416 | -6.55033 | -0.08112 |
| C | -1.00690 | -2.09298 | -3.39576 | H | 5.61263 | -5.23400 | -0.76240 |
| H | 0.60690 | -2.51968 | -2.06479 | C | 2.52129 | 2.45353 | 2.08011 |
| C | -0.21608 | -4.92806 | -3.07929 | C | 1.61797 | 3.69607 | 2.26052 |
| H | -1.89880 | -4.25423 | -1.90913 | C | 3.54508 | 2.39482 | 3.24221 |
| H | -0.43489 | -4.52704 | -0.97821 | H | 3.08276 | 2.58398 | 1.15693 |
| C | -0.38082 | -2.88102 | -4.56658 | C | 2.46332 | 4.98900 | 2.26885 |
| H | -2.08720 | -2.20394 | -3.44084 | H | 1.07854 | 3.62432 | 3.20167 |
| H | -0.76397 | -1.04059 | -3.50567 | H | 0.88375 | 3.74449 | 1.46212 |
| C | -0.68081 | -4.38874 | -4.44650 | C | 4.41308 | 3.67489 | 3.24336 |
| H | -0.50072 | -5.97335 | -2.97475 | H | 3.03461 | 2.32165 | 4.19668 |
| H | 0.86913 | -4.88009 | -3.02499 | H | 4.19478 | 1.52985 | 3.15561 |
| H | -0.77469 | -2.50037 | -5.50657 | C | 3.54349 | 4.94336 | 3.36991 |
| H | 0.69495 | -2.71840 | -4.57332 | H | 1.81210 | 5.84637 | 2.42544 |
| H | -0.18296 | -4.93492 | -5.24497 | H | 2.93885 | 5.11321 | 1.29809 |
| H | -1.75093 | -4.55530 | -4.55503 | H | 5.12130 | 3.62854 | 4.06824 |
| P | 1.47832 | 0.86135 | 1.71248 | H | 4.98883 | 3.71969 | 2.32098 |
| C | 2.74704 | -0.52970 | 1.79264 | H | 4.17320 | 5.82829 | 3.30741 |
| H | 3.65512 | -0.33335 | 2.37738 | H | 3.06356 | 4.95308 | 4.34671 |
| H | 2.25801 | -1.39874 | 2.25852 | C | 0.30209 | 0.48999 | 3.19497 |
| C | 4.58500 | 0.01319 | -0.57053 | C | 0.91488 | 0.61071 | 4.61021 |
| C | 5.66053 | 0.21501 | 0.52647 | C | -1.00937 | 1.30820 | 3.10682 |
| C | 5.22882 | -0.60779 | -1.83402 | C | -0.08812 | 0.11939 | 5.67841 |
| H | 4.19689 | 0.99063 | -0.84654 | H | 1.15806 | 1.64773 | 4.82179 |
| C | 6.81552 | 1.09889 | -0.00003 | H | 1.83410 | 0.03271 | 4.68012 |
| H | 6.06534 | -0.74076 | 0.84788 | C | -2.01701 | 0.84468 | 4.18344 |
| H | 5.23590 | 0.69883 | 1.39930 | H | -0.80011 | 2.36452 | 3.25136 |
| C | 6.37407 | 0.28360 | -2.36150 | H | -1.45388 | 1.19853 | 2.11948 |
| H | 5.63974 | -1.58505 | -1.59803 | C | -1.40927 | 0.91272 | 5.60053 |
| H | 4.46507 | -0.72222 | -2.60247 | H | 0.35272 | 0.23030 | 6.66704 |
| C | 7.44773 | 0.51141 | -1.27785 | H | -0.28900 | -0.93946 | 5.52800 |
| H | 7.57134 | 1.20114 | 0.77638 | H | -2.90713 | 1.46808 | 4.13592 |
| H | 6.43201 | 2.09456 | -0.21423 | H | -2.32417 | -0.17796 | 3.97342 |
| H | 6.82340 | -0.18535 | -3.23436 | H | -2.11900 | 0.51918 | 6.32514 |
| H | 5.97091 | 1.24279 | -2.67780 | H | -1.21899 | 1.95186 | 5.86182 |
| H | 8.21676 | 1.18522 | -1.64972 | H | 0.04233 | -0.55491 | 3.04248 |
| H | 7.93016 | -0.43475 | -1.03977 | | | | |
| C | 3.35059 | -2.82481 | 0.06422 | | | | [10b _c -11b _c] [‡] |
| C | 3.42720 | -3.53111 | -1.31112 | | | | 176 |
| C | 4.58393 | -3.20771 | 0.91906 | | | | XYZ |
| H | 2.47326 | -3.21460 | 0.57486 | Ru | 0.80346 | 0.13641 | -0.61099 |
| C | 3.48817 | -5.06469 | -1.12760 | C | -1.16581 | 2.40436 | -1.82126 |
| H | 4.31114 | -3.21019 | -1.85190 | C | -0.41522 | 1.40351 | -1.33695 |
| H | 2.56768 | -3.26670 | -1.91966 | P | -0.64026 | -1.65104 | -0.08976 |
| C | 4.65507 | -4.74006 | 1.11172 | N | 1.29985 | 1.33723 | -2.45891 |
| H | 5.49463 | -2.87499 | 0.42860 | C | 0.96091 | 0.81678 | -3.70717 |
| H | 4.54033 | -2.72638 | 1.89339 | C | 1.25014 | 1.87629 | -4.78882 |
| C | 4.68602 | -5.47480 | -0.24501 | C | 2.21128 | 2.86283 | -4.11068 |
| H | 3.56828 | -5.54349 | -2.10127 | C | 1.90705 | 2.67405 | -2.59712 |
| H | 2.56516 | -5.41296 | -0.66802 | O | 0.47543 | -0.29670 | -3.94803 |
| H | 5.54236 | -4.99218 | 1.68906 | P | 2.99764 | -0.72336 | 0.14223 |
| H | 3.78995 | -5.07097 | 1.68326 | H | -0.91841 | 2.79511 | -2.81980 |

| | | | | | | | |
|---|----------|----------|----------|---|----------|----------|----------|
| H | 1.20453 | 3.44824 | -2.22769 | H | -5.81976 | -1.73367 | -4.66058 |
| H | 2.82684 | 2.74321 | -1.99232 | H | -4.71390 | -0.37660 | -4.76990 |
| H | 1.64156 | 1.39993 | -5.70242 | H | -7.14003 | 2.07378 | -3.13735 |
| H | 0.28451 | 2.35145 | -5.05608 | H | -5.53137 | 1.97941 | -3.83184 |
| H | 2.07790 | 3.91030 | -4.43260 | H | -7.02816 | 0.43435 | -5.04082 |
| H | 3.25686 | 2.58040 | -4.32648 | H | -7.50780 | -0.33025 | -3.53674 |
| H | 0.66303 | -0.83745 | -1.88086 | C | -1.06693 | -2.14425 | 1.75345 |
| C | -2.29203 | 3.13671 | -1.11114 | C | -2.14179 | -3.22992 | 2.01969 |
| C | -2.14393 | 4.67263 | -1.20622 | C | 0.19334 | -2.49903 | 2.57683 |
| H | -3.26661 | 2.86173 | -1.56234 | H | -1.45596 | -1.20785 | 2.15079 |
| H | -2.34665 | 2.81785 | -0.05699 | C | -2.49830 | -3.28589 | 3.52326 |
| C | -3.29667 | 5.42987 | -0.51978 | H | -1.77533 | -4.20698 | 1.72931 |
| H | -1.17988 | 4.98530 | -0.76006 | H | -3.04067 | -3.04290 | 1.44352 |
| H | -2.09605 | 4.97018 | -2.27461 | C | -0.11992 | -2.58928 | 4.08846 |
| C | -3.16148 | 6.95836 | -0.62360 | H | 0.59661 | -3.45334 | 2.24792 |
| H | -4.25983 | 5.111167 | -0.96719 | H | 0.96495 | -1.75387 | 2.41671 |
| H | -3.34310 | 5.13312 | 0.54720 | C | -1.24911 | -3.60146 | 4.37198 |
| H | -4.00048 | 7.47419 | -0.12244 | H | -3.25691 | -4.04797 | 3.69032 |
| H | -2.22357 | 7.30968 | -0.15432 | H | -2.91891 | -2.33268 | 3.83734 |
| H | -3.14805 | 7.28787 | -1.67934 | H | 0.77826 | -2.87659 | 4.63193 |
| C | -2.37114 | -1.49570 | -0.83939 | H | -0.42014 | -1.60915 | 4.45276 |
| H | -2.12912 | -1.24946 | -1.88630 | H | -1.50257 | -3.58388 | 5.42998 |
| H | -2.87430 | -2.47549 | -0.83650 | H | -0.90041 | -4.60524 | 4.13706 |
| P | -3.51657 | -0.07110 | -0.35036 | C | -0.02454 | -3.25585 | -1.04579 |
| C | -4.69695 | -0.78635 | 0.98971 | C | -0.40602 | -4.63203 | -0.44415 |
| C | -5.46893 | 0.36973 | 1.67566 | C | -0.44152 | -3.22809 | -2.53977 |
| C | -5.68398 | -1.91458 | 0.60317 | H | 1.05734 | -3.16980 | -1.01128 |
| H | -4.02278 | -1.18687 | 1.74149 | C | 0.24688 | -5.79279 | -1.23241 |
| C | -6.24786 | -0.13148 | 2.91300 | H | -1.48559 | -4.76117 | -0.46214 |
| H | -6.17019 | 0.82086 | 0.97853 | H | -0.08122 | -4.70577 | 0.58860 |
| H | -4.77215 | 1.14803 | 1.97956 | C | 0.24383 | -4.36705 | -3.32565 |
| C | -6.45409 | -2.42985 | 1.84092 | H | -1.51659 | -3.35945 | -2.62469 |
| H | -6.40548 | -1.54395 | -0.11990 | H | -0.17602 | -2.27180 | -2.98417 |
| H | -5.15567 | -2.74439 | 0.13864 | C | -0.11009 | -5.74487 | -2.73090 |
| C | -7.20819 | -1.28198 | 2.54465 | H | -0.07206 | -6.74077 | -0.80305 |
| H | -6.80992 | 0.69123 | 3.35069 | H | 1.32740 | -5.73499 | -1.12178 |
| H | -5.54262 | -0.47960 | 3.66533 | H | -0.06785 | -4.32300 | -4.36706 |
| H | -7.15866 | -3.20209 | 1.53816 | H | 1.32269 | -4.22777 | -3.30377 |
| H | -5.75443 | -2.88379 | 2.53988 | H | 0.42109 | -6.53301 | -3.26076 |
| H | -7.69829 | -1.65624 | 3.44121 | H | -1.17547 | -5.92928 | -2.85448 |
| H | -7.98506 | -0.90409 | 1.88272 | P | 1.55596 | 1.41667 | 1.35671 |
| C | -4.47860 | 0.10714 | -2.01590 | C | 2.97225 | 0.23435 | 1.76982 |
| C | -4.91723 | -1.17577 | -2.76946 | H | 3.93135 | 0.67790 | 2.07653 |
| C | -5.69254 | 1.05967 | -1.87968 | H | 2.63886 | -0.42155 | 2.58812 |
| H | -3.74590 | 0.60673 | -2.64788 | C | 4.45737 | 0.13630 | -0.78714 |
| C | -5.49615 | -0.82341 | -4.15942 | C | 5.87057 | -0.04279 | -0.17937 |
| H | -5.67254 | -1.71241 | -2.20268 | C | 4.46458 | -0.21896 | -2.29325 |
| H | -4.07475 | -1.84757 | -2.90567 | H | 4.20133 | 1.19090 | -0.70806 |
| C | -6.27537 | 1.42494 | -3.26330 | C | 6.90282 | 0.82357 | -0.93656 |
| H | -6.47297 | 0.58429 | -1.29030 | H | 6.17949 | -1.08188 | -0.24684 |
| H | -5.40249 | 1.96951 | -1.35937 | H | 5.87545 | 0.23284 | 0.87277 |
| C | -6.68039 | 0.15926 | -4.04713 | C | 5.50877 | 0.63016 | -3.05271 |

| | | | | | | | |
|---|----------|----------|----------|----|----------|----------|------------------------|
| H | 4.70001 | -1.27053 | -2.43006 | C | -1.11799 | 2.44750 | 5.26438 |
| H | 3.47502 | -0.04378 | -2.70793 | H | 0.77284 | 2.39554 | 6.32716 |
| C | 6.91746 | 0.48088 | -2.44074 | H | 0.25672 | 0.83578 | 5.71212 |
| H | 7.89101 | 0.66509 | -0.50913 | H | -2.75102 | 2.26940 | 3.84887 |
| H | 6.65614 | 1.87557 | -0.80670 | H | -1.93392 | 0.75626 | 4.19209 |
| H | 5.52691 | 0.33037 | -4.09836 | H | -1.72634 | 2.24596 | 6.14357 |
| H | 5.21481 | 1.67688 | -3.01898 | H | -1.07091 | 3.52778 | 5.14121 |
| H | 7.61762 | 1.13229 | -2.95955 | H | 0.41280 | 0.37889 | 3.21496 |
| H | 7.26462 | -0.54212 | -2.57271 | | | | |
| C | 3.54630 | -2.51791 | 0.64210 | | | | 11b_c |
| C | 4.09749 | -3.32754 | -0.55663 | | | | 176 |
| C | 4.52221 | -2.60718 | 1.84309 | | | | XYZ |
| H | 2.61594 | -2.98945 | 0.94936 | Ru | -0.76842 | 0.08020 | -0.56324 |
| C | 4.34236 | -4.80098 | -0.16026 | C | 1.02997 | -2.57387 | -1.17301 |
| H | 5.03730 | -2.90068 | -0.89451 | C | 0.28250 | -1.46213 | -1.40887 |
| H | 3.40029 | -3.28521 | -1.39038 | P | 1.01827 | 1.03256 | 0.43566 |
| C | 4.76993 | -4.08139 | 2.23773 | N | -0.19104 | -1.30401 | -2.79060 |
| H | 5.47339 | -2.14582 | 1.59535 | C | 0.47822 | -0.51470 | -3.73430 |
| H | 4.11868 | -2.07860 | 2.70226 | C | -0.11293 | -0.82431 | -5.11945 |
| C | 5.29965 | -4.90353 | 1.04491 | C | -1.36076 | -1.67778 | -4.82812 |
| H | 4.75665 | -5.33967 | -1.00991 | C | -1.03151 | -2.31985 | -3.46310 |
| H | 3.39430 | -5.27011 | 0.09332 | O | 1.40614 | 0.26418 | -3.50750 |
| H | 5.48203 | -4.11926 | 3.05967 | P | -2.71054 | 1.47792 | -0.07911 |
| H | 3.83906 | -4.51937 | 2.59279 | H | 1.27456 | -3.21660 | -2.03891 |
| H | 5.41526 | -5.94489 | 1.33784 | H | -0.46187 | -3.26383 | -3.58825 |
| H | 6.28246 | -4.53354 | 0.75926 | H | -1.92064 | -2.54537 | -2.85675 |
| C | 2.42427 | 3.13701 | 1.12677 | H | -0.30943 | 0.10913 | -5.67275 |
| C | 1.38654 | 4.28137 | 1.05333 | H | 0.64963 | -1.38722 | -5.69226 |
| C | 3.56481 | 3.50934 | 2.10723 | H | -1.57164 | -2.43469 | -5.60220 |
| H | 2.87156 | 3.04654 | 0.14069 | H | -2.25116 | -1.03173 | -4.73297 |
| C | 2.05401 | 5.60533 | 0.62003 | H | -0.15641 | 1.09297 | -1.64892 |
| H | 0.92263 | 4.42608 | 2.02565 | C | 1.55547 | -3.09013 | 0.14163 |
| H | 0.60237 | 4.01986 | 0.34746 | C | 1.26204 | -4.59390 | 0.35669 |
| C | 4.23723 | 4.83141 | 1.66839 | H | 2.65553 | -2.94960 | 0.19838 |
| H | 3.18335 | 3.62920 | 3.11608 | H | 1.14097 | -2.49052 | 0.97078 |
| H | 4.32021 | 2.72918 | 2.13487 | C | 1.93611 | -5.17657 | 1.61314 |
| C | 3.21336 | 5.98095 | 1.56612 | H | 0.16765 | -4.75956 | 0.41079 |
| H | 1.31113 | 6.40021 | 0.61169 | H | 1.61014 | -5.15968 | -0.53305 |
| H | 2.43290 | 5.50177 | -0.39467 | C | 1.63437 | -6.66972 | 1.82439 |
| H | 5.01690 | 5.09235 | 2.38131 | H | 3.03166 | -5.02566 | 1.53865 |
| H | 4.71510 | 4.68692 | 0.70136 | H | 1.61187 | -4.60361 | 2.50447 |
| H | 3.70708 | 6.88158 | 1.20734 | H | 2.13459 | -7.06141 | 2.72876 |
| H | 2.81642 | 6.19877 | 2.55583 | H | 0.54834 | -6.84654 | 1.93894 |
| C | 0.52321 | 1.43654 | 2.98867 | H | 1.97898 | -7.27285 | 0.96345 |
| C | 1.17977 | 2.10527 | 4.21923 | C | 2.64931 | 0.74587 | -0.51001 |
| C | -0.89768 | 2.00522 | 2.75920 | H | 2.26609 | 0.41713 | -1.49347 |
| C | 0.30783 | 1.89745 | 5.47875 | H | 3.10952 | 1.73082 | -0.66748 |
| H | 1.29010 | 3.17256 | 4.04992 | P | 3.99949 | -0.47109 | -0.00143 |
| H | 2.17149 | 1.69289 | 4.39362 | C | 5.37529 | 0.72103 | 0.63009 |
| C | -1.77535 | 1.81858 | 4.01764 | C | 6.38540 | -0.05593 | 1.51186 |
| H | -0.84349 | 3.06393 | 2.52020 | C | 6.14559 | 1.59379 | -0.38997 |
| H | -1.36191 | 1.50433 | 1.91236 | H | 4.83918 | 1.40072 | 1.28924 |

| | | | | | | | |
|---|----------|----------|----------|---|----------|----------|----------|
| C | 7.36174 | 0.90224 | 2.23143 | H | 3.19405 | 3.28021 | 0.84347 |
| H | 6.95746 | -0.74912 | 0.89911 | H | 2.22325 | 3.26363 | 2.29705 |
| H | 5.85208 | -0.64750 | 2.25297 | C | 1.03793 | 5.12678 | -0.97067 |
| C | 7.10286 | 2.57209 | 0.32929 | H | 1.94206 | 3.25235 | -1.51221 |
| H | 6.73385 | 0.96192 | -1.05000 | H | 0.20084 | 3.20378 | -1.51635 |
| H | 5.45383 | 2.16006 | -1.00968 | C | 2.21657 | 5.71014 | -0.16726 |
| C | 8.10108 | 1.81218 | 1.22795 | H | 3.07089 | 5.52758 | 1.81885 |
| H | 8.08365 | 0.32681 | 2.80773 | H | 1.31809 | 5.48986 | 1.78518 |
| H | 6.80494 | 1.52044 | 2.93314 | H | 1.07620 | 5.48531 | -1.99730 |
| H | 7.64561 | 3.16169 | -0.40710 | H | 0.10631 | 5.48278 | -0.53784 |
| H | 6.52369 | 3.26435 | 0.93748 | H | 2.15068 | 6.79600 | -0.14185 |
| H | 8.73022 | 2.51982 | 1.76425 | H | 3.15402 | 5.45040 | -0.65496 |
| H | 8.75374 | 1.20433 | 0.60421 | P | -2.42039 | -1.20645 | 0.86862 |
| C | 4.48420 | -1.22338 | -1.70480 | C | -3.46318 | 0.33056 | 1.21213 |
| C | 4.69170 | -0.28907 | -2.92354 | H | -4.55971 | 0.22853 | 1.23019 |
| C | 5.70106 | -2.16888 | -1.54746 | H | -3.14557 | 0.69153 | 2.20477 |
| H | 3.61875 | -1.84361 | -1.93018 | C | -3.95457 | 1.30415 | -1.55662 |
| C | 4.92062 | -1.11647 | -4.20936 | C | -5.39628 | 1.82360 | -1.33744 |
| H | 5.55039 | 0.35731 | -2.77148 | C | -3.36611 | 1.88899 | -2.86314 |
| H | 3.81913 | 0.34241 | -3.06798 | H | -4.01530 | 0.22582 | -1.69012 |
| C | 5.94243 | -2.99369 | -2.83153 | C | -6.29427 | 1.46506 | -2.54391 |
| H | 6.59657 | -1.59028 | -1.33037 | H | -5.39153 | 2.90356 | -1.22059 |
| H | 5.54140 | -2.84533 | -0.71008 | H | -5.82555 | 1.39817 | -0.43314 |
| C | 6.11983 | -2.07625 | -4.05939 | C | -4.26349 | 1.54427 | -4.07298 |
| H | 5.08977 | -0.44523 | -5.04911 | H | -3.28104 | 2.96937 | -2.78429 |
| H | 4.02379 | -1.69206 | -4.42912 | H | -2.36502 | 1.49351 | -3.02155 |
| H | 6.82440 | -3.61911 | -2.70622 | C | -5.71299 | 2.02821 | -3.85762 |
| H | 5.09443 | -3.65546 | -2.99644 | H | -7.29467 | 1.86118 | -2.38110 |
| H | 6.22749 | -2.67952 | -4.95869 | H | -6.38081 | 0.38289 | -2.62039 |
| H | 7.03392 | -1.49631 | -3.94586 | H | -3.85189 | 1.99956 | -4.97129 |
| C | 1.14865 | 0.50755 | 2.31638 | H | -4.26516 | 0.46691 | -4.22541 |
| C | 2.53780 | 0.45679 | 2.99902 | H | -6.33425 | 1.72096 | -4.69628 |
| C | 0.16148 | 1.34188 | 3.17134 | H | -5.72962 | 3.11575 | -3.82067 |
| H | 0.77259 | -0.51220 | 2.29645 | C | -2.93549 | 3.23053 | 0.72899 |
| C | 2.43846 | -0.06174 | 4.45215 | C | -2.82501 | 4.38177 | -0.29844 |
| H | 2.99848 | 1.43988 | 3.01294 | C | -4.21135 | 3.40994 | 1.59095 |
| H | 3.19124 | -0.20408 | 2.43819 | H | -2.08274 | 3.30617 | 1.40085 |
| C | 0.07301 | 0.82889 | 4.62667 | C | -2.80632 | 5.75405 | 0.41175 |
| H | 0.47068 | 2.38270 | 3.19791 | H | -3.67252 | 4.35534 | -0.97761 |
| H | -0.82730 | 1.31413 | 2.72010 | H | -1.92422 | 4.26620 | -0.89500 |
| C | 1.46403 | 0.78968 | 5.29060 | C | -4.19713 | 4.78238 | 2.30311 |
| H | 3.42599 | -0.05043 | 4.90914 | H | -5.10087 | 3.34498 | 0.97165 |
| H | 2.09643 | -1.09483 | 4.44381 | H | -4.27962 | 2.62805 | 2.34190 |
| H | -0.59414 | 1.47098 | 5.19887 | C | -4.05727 | 5.94136 | 1.29476 |
| H | -0.35180 | -0.17182 | 4.63599 | H | -2.75592 | 6.54629 | -0.33228 |
| H | 1.38230 | 0.38144 | 6.29593 | H | -1.91426 | 5.82932 | 1.03014 |
| H | 1.85130 | 1.80280 | 5.38008 | H | -5.11405 | 4.89948 | 2.87725 |
| C | 1.06672 | 2.99413 | 0.46389 | H | -3.36667 | 4.81317 | 3.00582 |
| C | 2.24690 | 3.60291 | 1.26723 | H | -3.99553 | 6.88768 | 1.82792 |
| C | 1.05959 | 3.58079 | -0.97122 | H | -4.94300 | 5.97944 | 0.66353 |
| H | 0.14555 | 3.30373 | 0.95139 | C | -3.54780 | -2.34834 | -0.23586 |
| C | 2.21259 | 5.14848 | 1.26743 | C | -3.04210 | -3.81130 | -0.22950 |

| | | | | | | | |
|------------------------|----------|----------|----------|---|----------|----------|----------|
| C | -5.07673 | -2.30417 | 0.01260 | H | 1.79830 | -0.55429 | -5.47706 |
| H | -3.37659 | -1.95511 | -1.23550 | H | 2.53905 | -0.05330 | -3.92841 |
| C | -3.79549 | -4.67030 | -1.26971 | H | 0.90048 | 0.22064 | -0.97742 |
| H | -3.19219 | -4.25012 | 0.75311 | C | -2.43434 | -3.41082 | -0.97567 |
| H | -1.97575 | -3.83348 | -0.44378 | C | -3.59790 | -3.98785 | -1.81659 |
| C | -5.82406 | -3.16073 | -1.03600 | H | -2.02323 | -4.25460 | -0.38377 |
| H | -5.31629 | -2.67663 | 1.00357 | H | -2.78637 | -2.66462 | -0.23957 |
| H | -5.44421 | -1.28391 | -0.04937 | C | -4.53719 | -4.91474 | -1.02357 |
| C | -5.31973 | -4.61827 | -1.03929 | H | -4.18137 | -3.16690 | -2.27613 |
| H | -3.44613 | -5.69881 | -1.20812 | H | -3.16968 | -4.56248 | -2.66362 |
| H | -3.56967 | -4.30937 | -2.27072 | C | -5.69726 | -5.46443 | -1.86861 |
| H | -6.89114 | -3.13770 | -0.82397 | H | -3.94573 | -5.75787 | -0.61317 |
| H | -5.67884 | -2.72690 | -2.02350 | H | -4.94401 | -4.37699 | -0.14460 |
| H | -5.83109 | -5.18278 | -1.81607 | H | -6.34631 | -6.13710 | -1.27936 |
| H | -5.55848 | -5.08498 | -0.08554 | H | -6.33005 | -4.64629 | -2.26041 |
| C | -2.36512 | -1.92554 | 2.67282 | H | -5.32177 | -6.03686 | -2.73715 |
| C | -3.73750 | -2.33670 | 3.25877 | C | 2.68148 | -0.41771 | 1.08677 |
| C | -1.34083 | -3.06867 | 2.86296 | H | 2.60582 | 0.61096 | 1.46762 |
| C | -3.60411 | -2.69461 | 4.75653 | H | 3.30158 | -0.96973 | 1.80491 |
| H | -4.12253 | -3.20454 | 2.73087 | P | 3.51830 | -0.27084 | -0.61421 |
| H | -4.45988 | -1.53190 | 3.14409 | P | -3.09655 | 0.44950 | 0.09432 |
| C | -1.21126 | -3.45425 | 4.35459 | C | -2.61703 | 2.09394 | 0.88037 |
| H | -1.64476 | -3.94524 | 2.29852 | H | -3.26823 | 2.95511 | 0.66258 |
| H | -0.37032 | -2.76012 | 2.48675 | H | -2.61409 | 1.94487 | 1.97337 |
| C | -2.57778 | -3.82717 | 4.96606 | C | -3.87439 | 1.04107 | -1.57452 |
| H | -4.57498 | -2.99745 | 5.14359 | C | -4.04308 | -0.12787 | -2.57398 |
| H | -3.29151 | -1.81284 | 5.31255 | C | -5.18295 | 1.86390 | -1.48860 |
| H | -0.52322 | -4.29142 | 4.45118 | H | -3.10646 | 1.69638 | -1.97812 |
| H | -0.78638 | -2.61923 | 4.90760 | C | -4.44214 | 0.39845 | -3.97054 |
| H | -2.46363 | -4.02959 | 6.02888 | H | -4.81275 | -0.80851 | -2.22075 |
| H | -2.94723 | -4.73769 | 4.49826 | H | -3.11451 | -0.69067 | -2.64545 |
| H | -2.00783 | -1.07409 | 3.24824 | C | -5.57838 | 2.39995 | -2.88403 |
| | | | | H | -5.99199 | 1.24369 | -1.11315 |
| 12b_c | | | | H | -5.06782 | 2.70120 | -0.80423 |
| 176 | | | | C | -5.72648 | 1.25163 | -3.90422 |
| XYZ | | | | H | -4.59188 | -0.44206 | -4.64485 |
| Ru | -0.52748 | -0.11720 | -0.33406 | H | -3.62965 | 0.99917 | -4.37470 |
| C | -1.32711 | -2.83827 | -1.81307 | H | -6.51379 | 2.95077 | -2.80777 |
| C | -0.53509 | -1.73655 | -1.62187 | H | -4.81759 | 3.09660 | -3.23069 |
| P | 0.88216 | -1.04034 | 1.14462 | H | -5.95065 | 1.66059 | -4.88715 |
| N | 0.49700 | -1.65416 | -2.64899 | H | -6.56449 | 0.62037 | -3.61494 |
| C | 1.54544 | -2.53924 | -2.76074 | C | -4.50103 | -0.18784 | 1.28231 |
| C | 2.29062 | -2.20677 | -4.06645 | C | -5.36296 | 0.91537 | 1.94796 |
| C | 1.84422 | -0.77158 | -4.39650 | C | -5.42011 | -1.24229 | 0.62071 |
| C | 0.45669 | -0.65174 | -3.71803 | H | -3.94571 | -0.68896 | 2.07382 |
| O | 1.82183 | -3.45151 | -1.96744 | C | -6.32566 | 0.29785 | 2.98874 |
| P | -0.79189 | 2.18676 | 0.40300 | H | -5.94525 | 1.44362 | 1.19839 |
| H | -1.10422 | -3.44401 | -2.70978 | H | -4.73470 | 1.64658 | 2.44780 |
| H | -0.37718 | -0.87423 | -4.41852 | C | -6.37896 | -1.86640 | 1.65912 |
| H | 0.28244 | 0.35163 | -3.28691 | H | -6.01086 | -0.78061 | -0.16555 |
| H | 3.37728 | -2.32797 | -3.93458 | H | -4.82404 | -2.02614 | 0.16470 |
| H | 1.96851 | -2.93366 | -4.83805 | C | -7.22653 | -0.78328 | 2.35732 |

| | | | | | | | |
|---|----------|----------|----------|---|----------|----------|----------|
| H | -6.93951 | 1.08518 | 3.42167 | H | 4.89813 | 3.78150 | 1.07124 |
| H | -5.74430 | -0.14305 | 3.79623 | H | 5.36721 | 3.91729 | -2.71108 |
| H | -7.02985 | -2.58391 | 1.16389 | H | 4.15673 | 4.13124 | -1.46043 |
| H | -5.79994 | -2.40994 | 2.40311 | H | 6.34603 | 4.87552 | -0.60603 |
| H | -7.84918 | -1.23775 | 3.12498 | H | 7.07198 | 3.33529 | -1.02680 |
| H | -7.89065 | -0.31997 | 1.63019 | C | 4.93454 | -1.57839 | -0.58104 |
| C | -0.74040 | 3.20319 | -1.25555 | C | 5.86083 | -1.39602 | -1.80912 |
| C | -1.72415 | 4.38849 | -1.42094 | C | 5.80833 | -1.76396 | 0.68690 |
| C | 0.69801 | 3.65646 | -1.59738 | H | 4.39198 | -2.50947 | -0.73599 |
| H | -1.01240 | 2.44851 | -1.99088 | C | 6.80374 | -2.60757 | -1.98388 |
| C | -1.66029 | 4.94376 | -2.86298 | H | 6.46516 | -0.49974 | -1.68916 |
| H | -1.47785 | 5.18761 | -0.72878 | H | 5.26623 | -1.26866 | -2.71083 |
| H | -2.74349 | 4.07796 | -1.20904 | C | 6.74646 | -2.98360 | 0.53148 |
| C | 0.77018 | 4.21438 | -3.03629 | H | 6.41497 | -0.88069 | 0.86288 |
| H | 1.01770 | 4.43185 | -0.90585 | H | 5.19077 | -1.91018 | 1.56863 |
| H | 1.37920 | 2.81460 | -1.49943 | C | 7.64725 | -2.84473 | -0.71371 |
| C | -0.22696 | 5.37459 | -3.23776 | H | 7.46005 | -2.44260 | -2.83625 |
| H | -2.33748 | 5.79073 | -2.95431 | H | 6.21126 | -3.49557 | -2.19502 |
| H | -2.00013 | 4.17840 | -3.55805 | H | 7.36357 | -3.08627 | 1.42217 |
| H | 1.78192 | 4.55730 | -3.24232 | H | 6.14789 | -3.88822 | 0.44392 |
| H | 0.54620 | 3.41687 | -3.74182 | H | 8.25334 | -3.74053 | -0.83322 |
| H | -0.20254 | 5.70832 | -4.27297 | H | 8.32846 | -2.00756 | -0.57270 |
| H | 0.06911 | 6.21766 | -2.61637 | C | 1.06078 | -2.97196 | 1.07999 |
| C | -0.18214 | 3.30211 | 1.87811 | C | 2.39867 | -3.55391 | 1.59729 |
| C | 1.35391 | 3.45910 | 1.96602 | C | -0.11097 | -3.68418 | 1.79526 |
| C | -0.84987 | 4.69484 | 1.97841 | H | 1.00502 | -3.19072 | 0.01411 |
| H | -0.49812 | 2.72616 | 2.74629 | C | 2.45704 | -5.08101 | 1.36402 |
| C | 1.75765 | 4.14852 | 3.28951 | H | 2.52597 | -3.35078 | 2.65774 |
| H | 1.71897 | 4.05321 | 1.13309 | H | 3.23234 | -3.10228 | 1.07405 |
| H | 1.83396 | 2.48753 | 1.90745 | C | -0.06621 | -5.20900 | 1.55054 |
| C | -0.46762 | 5.38251 | 3.30924 | H | -0.05216 | -3.51105 | 2.86665 |
| H | -0.51823 | 5.32393 | 1.15720 | H | -1.06041 | -3.28612 | 1.45080 |
| H | -1.93195 | 4.61093 | 1.91509 | C | 1.27151 | -5.80486 | 2.03297 |
| C | 1.06338 | 5.51761 | 3.44620 | H | 3.39584 | -5.47047 | 1.75343 |
| H | 2.83769 | 4.27729 | 3.31631 | H | 2.43921 | -5.27333 | 0.29318 |
| H | 1.48524 | 3.50743 | 4.12567 | H | -0.89511 | -5.68681 | 2.06952 |
| H | -0.93107 | 6.36599 | 3.35475 | H | -0.18315 | -5.40846 | 0.48793 |
| H | -0.85716 | 4.79945 | 4.14154 | H | 1.30902 | -6.86766 | 1.80283 |
| H | 1.31056 | 5.94821 | 4.41423 | H | 1.34555 | -5.70249 | 3.11424 |
| H | 1.43326 | 6.19871 | 2.68220 | C | 0.54241 | -0.50159 | 2.99926 |
| C | 4.26019 | 1.49859 | -0.44230 | C | -0.93937 | -0.66621 | 3.40665 |
| C | 5.40106 | 1.73239 | 0.57818 | C | 1.44258 | -1.10035 | 4.10920 |
| C | 4.67404 | 2.06124 | -1.82507 | H | 0.74514 | 0.56669 | 2.96874 |
| H | 3.40732 | 2.08692 | -0.11060 | C | -1.23203 | 0.01447 | 4.76328 |
| C | 5.75510 | 3.23364 | 0.68413 | H | -1.19483 | -1.71856 | 3.48604 |
| H | 6.29206 | 1.19254 | 0.26917 | H | -1.57758 | -0.23987 | 2.63830 |
| H | 5.11710 | 1.35965 | 1.56019 | C | 1.16810 | -0.42693 | 5.47465 |
| C | 5.04122 | 3.56030 | -1.73605 | H | 1.25841 | -2.16696 | 4.20626 |
| H | 5.52899 | 1.51384 | -2.21376 | H | 2.49332 | -0.97273 | 3.86360 |
| H | 3.85886 | 1.93161 | -2.53357 | C | -0.31769 | -0.54527 | 5.87299 |
| C | 6.15073 | 3.80844 | -0.69234 | H | -2.27521 | -0.13778 | 5.03410 |
| H | 6.57326 | 3.36931 | 1.38897 | H | -1.07287 | 1.08749 | 4.67498 |

| | | | | | | | |
|----|----------|----------|--|---|----------|----------|----------|
| H | 1.79131 | -0.88543 | 6.23999 | C | 5.50848 | -2.94736 | -1.07604 |
| H | 1.44338 | 0.62464 | 5.41928 | H | 5.36156 | -0.84911 | -0.60707 |
| H | -0.49586 | -0.01187 | 6.80458 | H | 3.96478 | -1.46609 | -1.46410 |
| H | -0.56197 | -1.59176 | 6.04475 | C | 5.82302 | -3.49226 | 1.39356 |
| | | | | H | 5.68780 | -1.39733 | 1.88123 |
| | | | [12b _c -13b _c] [‡] | H | 4.51731 | -2.39447 | 2.72679 |
| | | | 176 | C | 6.52157 | -3.31972 | 0.02783 |
| | | | XYZ | H | 6.03439 | -2.75963 | -2.00975 |
| Ru | 0.71541 | -0.21691 | -0.30302 | H | 4.83417 | -3.78468 | -1.24487 |
| C | 2.41421 | 0.33038 | -3.10799 | H | 6.56452 | -3.68555 | 2.16626 |
| C | 1.55973 | -0.31859 | -2.26879 | H | 5.15979 | -4.35436 | 1.35572 |
| P | -0.67490 | 1.62003 | -0.25767 | H | 7.03855 | -4.23928 | -0.23843 |
| N | 0.98298 | -1.54116 | -2.84856 | H | 7.27197 | -2.53543 | 0.10652 |
| C | -0.18770 | -1.51048 | -3.59194 | C | 3.59883 | 1.00802 | 1.79492 |
| C | -0.25783 | -2.79383 | -4.43343 | C | 4.14497 | 0.86756 | 3.23927 |
| C | 0.85768 | -3.69777 | -3.87576 | C | 4.72214 | 1.53078 | 0.86890 |
| C | 1.81565 | -2.71896 | -3.14830 | H | 2.81504 | 1.76186 | 1.81719 |
| O | -1.01179 | -0.58629 | -3.61537 | C | 4.67640 | 2.22727 | 3.74976 |
| P | 0.11937 | -1.42153 | 1.64374 | H | 4.95165 | 0.14140 | 3.27110 |
| H | 2.57829 | -0.12207 | -4.10290 | H | 3.37060 | 0.52198 | 3.91760 |
| H | 2.66799 | -2.42431 | -3.79268 | C | 5.25633 | 2.89278 | 1.36592 |
| H | 2.23036 | -3.14035 | -2.21640 | H | 5.54533 | 0.82169 | 0.85054 |
| H | -1.26651 | -3.23652 | -4.39106 | H | 4.35366 | 1.63408 | -0.14725 |
| H | -0.07736 | -2.50244 | -5.48626 | C | 5.76730 | 2.79460 | 2.81820 |
| H | 1.38479 | -4.27191 | -4.65592 | H | 5.07540 | 2.10377 | 4.75464 |
| H | 0.43717 | -4.42223 | -3.16007 | H | 3.85093 | 2.93379 | 3.81175 |
| H | 0.13661 | 0.31184 | -1.78209 | H | 6.06031 | 3.22618 | 0.71311 |
| C | 3.16777 | 1.61433 | -2.89219 | H | 4.46193 | 3.63428 | 1.31004 |
| C | 4.66629 | 1.51660 | -3.26604 | H | 6.07725 | 3.77648 | 3.16961 |
| H | 2.72107 | 2.40962 | -3.53012 | H | 6.64071 | 2.14607 | 2.85012 |
| H | 3.05246 | 1.94709 | -1.84634 | C | 0.15107 | -3.28109 | 1.08989 |
| C | 5.40568 | 2.86584 | -3.19483 | C | 0.14294 | -4.33826 | 2.22219 |
| H | 5.16616 | 0.78287 | -2.60396 | C | -0.95826 | -3.59239 | 0.05814 |
| H | 4.75514 | 1.10885 | -4.29455 | H | 1.10427 | -3.36163 | 0.57019 |
| C | 6.89413 | 2.76030 | -3.56703 | C | 0.30651 | -5.76601 | 1.65414 |
| H | 4.90575 | 3.58991 | -3.86957 | H | -0.79745 | -4.29320 | 2.76390 |
| H | 5.30888 | 3.28497 | -2.17330 | H | 0.94113 | -4.14259 | 2.93452 |
| H | 7.39711 | 3.74268 | -3.51057 | C | -0.80958 | -5.02620 | -0.49920 |
| H | 7.42837 | 2.07047 | -2.88721 | H | -1.93689 | -3.49330 | 0.51918 |
| H | 7.02226 | 2.37675 | -4.59657 | H | -0.90578 | -2.87456 | -0.75814 |
| C | -2.34225 | 1.45619 | -1.15208 | C | -0.80145 | -6.07896 | 0.62810 |
| H | -2.86474 | 2.41874 | -1.21744 | H | 0.27392 | -6.48594 | 2.46951 |
| H | -2.06003 | 1.14583 | -2.17216 | H | 1.27996 | -5.85780 | 1.17621 |
| P | -3.48463 | 0.10951 | -0.47518 | H | -1.62199 | -5.23137 | -1.19314 |
| P | 2.67403 | -0.53702 | 1.05757 | H | 0.12222 | -5.10014 | -1.05448 |
| C | 1.76386 | -1.25573 | 2.54982 | H | -0.64649 | -7.07000 | 0.20679 |
| H | 2.19410 | -2.16304 | 3.00799 | H | -1.76712 | -6.08431 | 1.12990 |
| H | 1.66223 | -0.48959 | 3.33368 | C | -1.19278 | -1.20512 | 3.07169 |
| C | 3.96656 | -1.92468 | 0.66301 | C | -2.59473 | -1.72927 | 2.68323 |
| C | 4.68823 | -1.69730 | -0.68615 | C | -0.77134 | -1.76966 | 4.45229 |
| C | 5.00475 | -2.23460 | 1.76771 | H | -1.26616 | -0.12673 | 3.17767 |
| H | 3.33945 | -2.80764 | 0.54976 | C | -3.63717 | -1.35692 | 3.76157 |

| | | | | | | | |
|---|----------|----------|----------|------------------------|----------|----------|----------|
| H | -2.57266 | -2.81079 | 2.58322 | H | -1.53443 | 3.50405 | -2.62956 |
| H | -2.89500 | -1.31028 | 1.72429 | C | 1.87620 | 4.95928 | -1.26871 |
| C | -1.81385 | -1.39852 | 5.53242 | H | 0.61559 | 4.42675 | 0.38549 |
| H | -0.68088 | -2.85065 | 4.41110 | H | 1.85014 | 3.23196 | 0.03303 |
| H | 0.19553 | -1.37391 | 4.75005 | C | 0.88670 | 5.91160 | -1.96893 |
| C | -3.22462 | -1.89066 | 5.14906 | H | -0.84326 | 5.79022 | -3.27111 |
| H | -4.60686 | -1.76480 | 3.48413 | H | 0.40469 | 4.60851 | -3.62309 |
| H | -3.73999 | -0.27449 | 3.80648 | H | 2.54875 | 5.52780 | -0.62925 |
| H | -1.51602 | -1.83321 | 6.48453 | H | 2.48347 | 4.45734 | -2.01760 |
| H | -1.83071 | -0.31794 | 5.65960 | H | 1.42956 | 6.61076 | -2.60163 |
| H | -3.94340 | -1.56763 | 5.89919 | H | 0.35246 | 6.49489 | -1.22117 |
| H | -3.23503 | -2.97883 | 5.13465 | C | -1.29817 | 2.31315 | 1.45706 |
| C | -5.00213 | 1.10080 | 0.18556 | C | -0.16387 | 2.44330 | 2.50052 |
| C | -5.61981 | 2.24001 | -0.66555 | C | -2.11642 | 3.62941 | 1.43216 |
| C | -6.12477 | 0.13090 | 0.63187 | H | -1.96897 | 1.52963 | 1.80436 |
| H | -4.60672 | 1.56323 | 1.08902 | C | -0.71030 | 2.78750 | 3.90561 |
| C | -6.70812 | 2.99422 | 0.13355 | H | 0.53042 | 3.22354 | 2.20428 |
| H | -6.06902 | 1.83822 | -1.56838 | H | 0.40231 | 1.51792 | 2.55005 |
| H | -4.85811 | 2.95091 | -0.97374 | C | -2.67978 | 3.97391 | 2.83057 |
| C | -7.22415 | 0.86766 | 1.42963 | H | -1.49008 | 4.45389 | 1.10291 |
| H | -6.57866 | -0.33384 | -0.24041 | H | -2.94344 | 3.55350 | 0.73211 |
| H | -5.70876 | -0.66644 | 1.24390 | C | -1.55133 | 4.08016 | 3.87648 |
| C | -7.81750 | 2.03568 | 0.61456 | H | 0.11822 | 2.90170 | 4.60214 |
| H | -7.14130 | 3.77546 | -0.48807 | H | -1.32858 | 1.96936 | 4.26841 |
| H | -6.25251 | 3.47929 | 0.99477 | H | -3.22734 | 4.91316 | 2.78231 |
| H | -8.01289 | 0.16809 | 1.69959 | H | -3.38376 | 3.20269 | 3.13741 |
| H | -6.80007 | 1.25272 | 2.35503 | H | -1.97333 | 4.26954 | 4.86140 |
| H | -8.54040 | 2.57960 | 1.21924 | H | -0.90882 | 4.92304 | 3.62932 |
| H | -8.34817 | 1.63857 | -0.24865 | 13b_c | | | |
| C | -3.91813 | -0.81481 | -2.09993 | 176 | | | |
| C | -4.54203 | -2.20077 | -1.80063 | XYZ | | | |
| C | -4.77393 | -0.07815 | -3.15788 | | | | |
| H | -2.93815 | -0.98417 | -2.54412 | Ru | 1.10466 | 0.26393 | -0.26026 |
| C | -4.66961 | -3.04703 | -3.08775 | C | 2.12233 | 1.51561 | -1.77035 |
| H | -5.52909 | -2.08188 | -1.35928 | C | 0.93926 | 0.87954 | -2.31732 |
| H | -3.92911 | -2.73607 | -1.07894 | P | -0.86641 | 1.57147 | 0.48651 |
| C | -4.87185 | -0.91070 | -4.45608 | N | 0.93944 | -0.02793 | -3.41633 |
| H | -5.77916 | 0.08836 | -2.77857 | C | -0.18505 | -0.15175 | -4.23265 |
| H | -4.34119 | 0.89325 | -3.38652 | C | 0.22024 | -0.98215 | -5.45995 |
| C | -5.47354 | -2.30398 | -4.17559 | C | 1.55287 | -1.64043 | -5.05561 |
| H | -5.15064 | -3.99588 | -2.85735 | C | 2.11737 | -0.71172 | -3.94821 |
| H | -3.67503 | -3.27012 | -3.46788 | O | -1.28354 | 0.36757 | -4.01639 |
| H | -5.48647 | -0.38496 | -5.18434 | P | 0.55212 | -2.04607 | 0.22662 |
| H | -3.87794 | -1.02270 | -4.88463 | H | 3.05743 | 1.01343 | -2.06605 |
| H | -5.48734 | -2.89321 | -5.09033 | H | 2.84357 | 0.02414 | -4.35094 |
| H | -6.50492 | -2.19082 | -3.84646 | H | 2.62218 | -1.27863 | -3.14621 |
| C | 0.11336 | 3.09971 | -1.26452 | H | -0.57683 | -1.69345 | -5.73124 |
| C | -0.87698 | 4.06094 | -1.96922 | H | 0.33986 | -0.28793 | -6.31473 |
| C | 1.12819 | 3.90735 | -0.41904 | H | 2.26172 | -1.75239 | -5.89276 |
| H | 0.66912 | 2.58436 | -2.04251 | H | 1.36783 | -2.64731 | -4.64110 |
| C | -0.12330 | 5.11267 | -2.81619 | H | 0.00778 | 1.44946 | -2.38833 |
| H | -1.49921 | 4.57533 | -1.24125 | C | 2.33419 | 3.03430 | -1.77761 |

| | | | | | | | |
|---|----------|----------|----------|---|----------|----------|----------|
| C | 3.69446 | 3.47406 | -1.20410 | H | 5.00062 | 0.01893 | 5.57897 |
| H | 2.26622 | 3.41558 | -2.82224 | H | 5.99002 | 0.17511 | 4.13875 |
| H | 1.54255 | 3.54835 | -1.21537 | C | -0.08638 | -2.78033 | 1.93425 |
| C | 3.89498 | 5.00142 | -1.20614 | C | -1.56685 | -3.22708 | 1.88249 |
| H | 3.79646 | 3.09100 | -0.16864 | C | 0.77726 | -3.90077 | 2.56450 |
| H | 4.51089 | 3.00592 | -1.79237 | H | -0.03161 | -1.92110 | 2.60174 |
| C | 5.26339 | 5.43482 | -0.65375 | C | -2.09211 | -3.57813 | 3.29217 |
| H | 3.77524 | 5.38416 | -2.23994 | H | -1.66931 | -4.10479 | 1.25254 |
| H | 3.08929 | 5.47628 | -0.61052 | H | -2.17926 | -2.44482 | 1.44450 |
| H | 5.37724 | 6.53399 | -0.66604 | C | 0.24997 | -4.28365 | 3.96795 |
| H | 5.39842 | 5.09537 | 0.39033 | H | 0.77635 | -4.78250 | 1.92815 |
| H | 6.08959 | 5.00583 | -1.25129 | H | 1.80722 | -3.57396 | 2.67111 |
| C | -2.40325 | 0.68850 | 1.18785 | C | -1.23743 | -4.68884 | 3.93547 |
| H | -1.99321 | 0.01921 | 1.96574 | H | -3.12847 | -3.90221 | 3.22299 |
| H | -3.02384 | 1.43281 | 1.69985 | H | -2.06824 | -2.69115 | 3.92246 |
| P | -3.46629 | -0.53168 | 0.19373 | H | 0.84815 | -5.10152 | 4.36470 |
| P | 3.06281 | -0.89872 | 0.08886 | H | 0.37575 | -3.43514 | 4.63786 |
| C | 2.36715 | -2.62724 | 0.08341 | H | -1.58621 | -4.88913 | 4.94638 |
| H | 2.50023 | -3.07095 | -0.91551 | H | -1.35032 | -5.60732 | 3.36282 |
| H | 2.76311 | -3.33958 | 0.82183 | C | -0.08285 | -3.17648 | -1.22877 |
| C | 4.71675 | -1.01950 | -0.93071 | C | 0.10861 | -4.69791 | -1.00129 |
| C | 5.72832 | 0.10086 | -0.59588 | C | -1.51620 | -2.87688 | -1.71610 |
| C | 5.41965 | -2.39935 | -0.87331 | H | 0.58794 | -2.87485 | -2.03043 |
| H | 4.38929 | -0.86350 | -1.95489 | C | -0.20619 | -5.49032 | -2.29038 |
| C | 6.91958 | 0.07216 | -1.57946 | H | -0.55045 | -5.04873 | -0.21287 |
| H | 6.11010 | -0.02980 | 0.41290 | H | 1.12767 | -4.91461 | -0.69152 |
| H | 5.24113 | 1.07026 | -0.64427 | C | -1.84027 | -3.67929 | -2.99740 |
| C | 6.61894 | -2.43839 | -1.84883 | H | -2.24159 | -3.12768 | -0.94755 |
| H | 5.77543 | -2.60227 | 0.13321 | H | -1.60976 | -1.81383 | -1.92399 |
| H | 4.72808 | -3.19369 | -1.14006 | C | -1.63542 | -5.19402 | -2.78842 |
| C | 7.62181 | -1.30155 | -1.56214 | H | -0.09216 | -6.55540 | -2.09796 |
| H | 7.62896 | 0.85304 | -1.31317 | H | 0.50994 | -5.22034 | -3.06407 |
| H | 6.56177 | 0.28491 | -2.58481 | H | -2.86775 | -3.48567 | -3.29714 |
| H | 7.11878 | -3.40175 | -1.76877 | H | -1.19732 | -3.33915 | -3.80572 |
| H | 6.25187 | -2.34584 | -2.86915 | H | -1.81855 | -5.72440 | -3.72058 |
| H | 8.41934 | -1.31991 | -2.30196 | H | -2.35411 | -5.56066 | -2.05793 |
| H | 8.07812 | -1.46098 | -0.58696 | C | -4.81277 | -0.89606 | 1.52904 |
| C | 3.49937 | -0.70330 | 1.97999 | C | -5.56870 | 0.27418 | 2.20984 |
| C | 4.55889 | -1.67322 | 2.56106 | C | -5.83282 | -1.93277 | 0.99561 |
| C | 3.86718 | 0.74913 | 2.35731 | H | -4.23872 | -1.39007 | 2.31148 |
| H | 2.54840 | -0.93148 | 2.45960 | C | -6.47368 | -0.24738 | 3.35034 |
| C | 4.65927 | -1.52740 | 4.09674 | H | -6.18745 | 0.79982 | 1.48938 |
| H | 5.53316 | -1.46041 | 2.12948 | H | -4.86915 | 0.99507 | 2.62408 |
| H | 4.31464 | -2.70432 | 2.31771 | C | -6.74772 | -2.45796 | 2.12466 |
| C | 3.97239 | 0.91284 | 3.89106 | H | -6.45326 | -1.47888 | 0.22636 |
| H | 4.81864 | 1.02333 | 1.91151 | H | -5.30823 | -2.76890 | 0.53765 |
| H | 3.11818 | 1.43140 | 1.96338 | C | -7.47780 | -1.29974 | 2.83586 |
| C | 4.99261 | -0.07499 | 4.49502 | H | -7.01098 | 0.58628 | 3.79834 |
| H | 5.42471 | -2.20053 | 4.47786 | H | -5.85421 | -0.69034 | 4.12790 |
| H | 3.71383 | -1.81952 | 4.54997 | H | -7.47466 | -3.15486 | 1.71225 |
| H | 4.26727 | 1.93243 | 4.12992 | H | -6.14752 | -3.00461 | 2.84947 |
| H | 2.99673 | 0.74098 | 4.34154 | H | -8.06562 | -1.68655 | 3.66579 |

| | | | | | | |
|---|----------|----------|----------|--|----------|----------|
| H | -8.16831 | -0.82774 | 2.13956 | | | |
| C | -4.23334 | 0.37829 | -1.31157 | [13b _c -1 _c] [‡] | | |
| C | -4.76452 | -0.66325 | -2.32880 | 176 | | |
| C | -5.32275 | 1.45090 | -1.07102 | XYZ | | |
| H | -3.38146 | 0.85913 | -1.78774 | Ru | -0.94344 | -0.12389 |
| C | -5.15080 | 0.01648 | -3.66133 | C | -1.88090 | -2.25054 |
| H | -5.63400 | -1.17524 | -1.92269 | C | -0.72405 | -2.81284 |
| H | -4.00353 | -1.41427 | -2.51999 | P | 0.86861 | -0.93825 |
| C | -5.70019 | 2.15450 | -2.39470 | N | 0.23762 | -2.22498 |
| H | -6.21540 | 0.98186 | -0.66556 | C | 1.28430 | -2.97976 |
| H | -4.98746 | 2.18986 | -0.34795 | C | 2.00999 | -2.05984 |
| C | -6.19194 | 1.13456 | -3.44306 | C | 1.57486 | -0.63640 |
| H | -5.55009 | -0.72744 | -4.34778 | C | 0.21100 | -0.82601 |
| H | -4.25523 | 0.43540 | -4.11643 | O | 1.50278 | -4.16323 |
| H | -6.47555 | 2.89499 | -2.20713 | P | -0.67861 | 2.08265 |
| H | -4.83170 | 2.68144 | -2.78444 | H | -2.15437 | -1.22389 |
| H | -6.39260 | 1.64198 | -4.38437 | H | -0.65409 | -0.65999 |
| H | -7.12856 | 0.69576 | -3.10369 | H | 0.08589 | -0.18188 |
| C | -0.05488 | 2.23305 | 2.14686 | H | 3.09723 | -2.23455 |
| C | 0.78402 | 3.50922 | 1.88441 | H | 1.67192 | -2.32836 |
| C | -0.99725 | 2.43910 | 3.36218 | H | 1.49546 | 0.04991 |
| H | 0.63716 | 1.43829 | 2.41841 | H | 2.29775 | -0.21233 |
| C | 1.54585 | 3.97595 | 3.14492 | H | -0.49769 | -3.87314 |
| H | 0.13793 | 4.31795 | 1.55851 | C | -2.95342 | -3.14486 |
| H | 1.49487 | 3.31786 | 1.08501 | C | -3.89928 | -3.73992 |
| C | -0.20603 | 2.88563 | 4.61300 | H | -2.48541 | -3.98266 |
| H | -1.74822 | 3.19103 | 3.14236 | H | -3.55504 | -2.58788 |
| H | -1.51940 | 1.51621 | 3.59663 | C | -5.02692 | -4.60270 |
| C | 0.59420 | 4.17468 | 4.34124 | H | -4.34001 | -2.92117 |
| H | 2.06414 | 4.90663 | 2.92379 | H | -3.29596 | -4.34645 |
| H | 2.29967 | 3.23957 | 3.40867 | C | -5.95032 | -5.20972 |
| H | -0.89903 | 3.04423 | 5.43691 | H | -4.58137 | -5.41462 |
| H | 0.47748 | 2.09294 | 4.91093 | H | -5.62547 | -3.98696 |
| H | 1.16393 | 4.45028 | 5.22619 | H | -6.74877 | -5.82250 |
| H | -0.09464 | 4.98997 | 4.12875 | H | -6.43615 | -4.42022 |
| C | -1.87598 | 3.07787 | -0.31607 | H | -5.38475 | -5.85826 |
| C | -2.64229 | 3.97996 | 0.68798 | C | 2.54453 | -0.04184 |
| C | -1.05310 | 3.97174 | -1.27305 | H | 2.29126 | 1.00558 |
| H | -2.61401 | 2.56096 | -0.92111 | H | 3.23637 | -0.38147 |
| C | -3.54753 | 4.99655 | -0.04781 | P | 3.39763 | 0.01111 |
| H | -1.94062 | 4.53475 | 1.30292 | P | -3.05016 | 0.87192 |
| H | -3.26390 | 3.39051 | 1.35436 | C | -2.38819 | 2.58696 |
| C | -1.95768 | 4.97959 | -2.01737 | H | -2.85305 | 3.45962 |
| H | -0.30472 | 4.52535 | -0.71404 | H | -2.41810 | 2.73229 |
| H | -0.53638 | 3.36008 | -2.00367 | C | -4.38190 | 1.23813 |
| C | -2.74025 | 5.86730 | -1.03014 | C | -5.28354 | 0.01337 |
| H | -4.04356 | 5.62666 | 0.68794 | C | -5.26745 | 2.49999 |
| H | -4.32231 | 4.46423 | -0.59432 | H | -3.76003 | 1.39164 |
| H | -1.34243 | 5.59929 | -2.66620 | C | -6.14511 | 0.22812 |
| H | -2.65687 | 4.43836 | -2.65149 | H | -5.94389 | -0.16114 |
| H | -3.41137 | 6.52967 | -1.57286 | H | -4.67579 | -0.87685 |
| H | -2.04417 | 6.49146 | -0.47314 | C | -6.12334 | 2.73123 |
| | | | | | | -2.29583 |

| | | | | | | | |
|---|----------|----------|----------|---|----------|----------|----------|
| H | -5.93093 | 2.39363 | -0.17559 | H | 1.39056 | 2.00000 | -2.07132 |
| H | -4.66032 | 3.38360 | -0.85618 | C | 0.11020 | 4.44885 | -4.19494 |
| C | -7.00303 | 1.50455 | -2.61375 | H | -1.91243 | 5.20107 | -3.97369 |
| H | -6.78805 | -0.63616 | -2.88707 | H | -1.81732 | 3.47630 | -4.27778 |
| H | -5.49480 | 0.30968 | -3.60154 | H | 1.97090 | 3.33665 | -4.10269 |
| H | -6.75116 | 3.60880 | -2.15406 | H | 0.54939 | 2.34286 | -4.36522 |
| H | -5.46750 | 2.93357 | -3.14049 | H | 0.14588 | 4.60199 | -5.27165 |
| H | -7.54990 | 1.67177 | -3.53942 | H | 0.54830 | 5.32776 | -3.72582 |
| H | -7.73678 | 1.37282 | -1.82084 | C | 4.24112 | 1.74386 | -0.44605 |
| C | -3.97798 | 0.39362 | 1.85865 | C | 4.97110 | 2.17065 | 0.85352 |
| C | -5.19448 | 1.26159 | 2.26240 | C | 5.16853 | 1.97271 | -1.66511 |
| C | -4.35436 | -1.10101 | 1.91917 | H | 3.39662 | 2.41991 | -0.56381 |
| H | -3.19210 | 0.55631 | 2.59394 | C | 5.41679 | 3.64914 | 0.77202 |
| C | -5.68583 | 0.89015 | 3.68074 | H | 5.84933 | 1.55503 | 1.01859 |
| H | -6.01291 | 1.10422 | 1.56497 | H | 4.32134 | 2.04418 | 1.71553 |
| H | -4.93862 | 2.31893 | 2.23534 | C | 5.62666 | 3.44586 | -1.75488 |
| C | -4.85952 | -1.49075 | 3.32664 | H | 6.04827 | 1.33818 | -1.58731 |
| H | -5.13209 | -1.32476 | 1.19317 | H | 4.65128 | 1.69992 | -2.58283 |
| H | -3.47700 | -1.69218 | 1.66525 | C | 6.32230 | 3.89547 | -0.45295 |
| C | -6.04716 | -0.60782 | 3.76634 | H | 5.94718 | 3.92119 | 1.68256 |
| H | -6.55330 | 1.49502 | 3.93826 | H | 4.53859 | 4.28819 | 0.70417 |
| H | -4.90481 | 1.11590 | 4.40427 | H | 6.30530 | 3.56797 | -2.59680 |
| H | -5.15869 | -2.53704 | 3.33109 | H | 4.76198 | 4.08049 | -1.93918 |
| H | -4.04805 | -1.38163 | 4.04250 | H | 6.57951 | 4.95084 | -0.51646 |
| H | -6.33911 | -0.85965 | 4.78389 | H | 7.25074 | 3.34087 | -0.33083 |
| H | -6.90278 | -0.80690 | 3.12375 | C | 4.74140 | -1.36085 | -0.39112 |
| C | 0.48699 | 3.29866 | 1.06921 | C | 5.28099 | -1.72618 | -1.79705 |
| C | 0.18286 | 4.79934 | 0.83421 | C | 5.92820 | -1.15434 | 0.58107 |
| C | 0.42829 | 2.99736 | 2.58521 | H | 4.18632 | -2.22557 | -0.03874 |
| H | 1.49952 | 3.10314 | 0.72424 | C | 6.17896 | -2.98311 | -1.74689 |
| C | 1.12499 | 5.71628 | 1.64851 | H | 5.85469 | -0.89782 | -2.20591 |
| H | -0.84699 | 5.01493 | 1.11139 | H | 4.44965 | -1.90795 | -2.47375 |
| H | 0.29691 | 5.04721 | -0.21495 | C | 6.81238 | -2.42058 | 0.65199 |
| C | 1.38309 | 3.90317 | 3.39448 | H | 6.54488 | -0.32568 | 0.24373 |
| H | -0.58422 | 3.14478 | 2.95305 | H | 5.56951 | -0.91126 | 1.57883 |
| H | 0.68957 | 1.96266 | 2.76740 | C | 7.33982 | -2.80785 | -0.74548 |
| C | 1.07459 | 5.39378 | 3.15449 | H | 6.57613 | -3.18889 | -2.73892 |
| H | 0.84749 | 6.75518 | 1.48137 | H | 5.57747 | -3.84131 | -1.45368 |
| H | 2.14442 | 5.59112 | 1.28889 | H | 7.64869 | -2.24457 | 1.32579 |
| H | 1.29082 | 3.66993 | 4.45331 | H | 6.23218 | -3.24513 | 1.06132 |
| H | 2.41124 | 3.69642 | 3.10397 | H | 7.91476 | -3.72942 | -0.68166 |
| H | 1.78996 | 6.01372 | 3.69082 | H | 8.01091 | -2.02957 | -1.10398 |
| H | 0.08471 | 5.62582 | 3.54260 | C | 0.42617 | -0.72823 | 3.15308 |
| C | -0.61903 | 2.76709 | -1.82381 | C | -0.50667 | -1.84715 | 3.66409 |
| C | -1.44337 | 4.02173 | -2.21460 | C | 1.59248 | -0.51774 | 4.15386 |
| C | 0.84431 | 2.91328 | -2.29756 | H | -0.16967 | 0.17868 | 3.14705 |
| H | -1.05386 | 1.92442 | -2.35390 | C | -1.06157 | -1.50592 | 5.06503 |
| C | -1.35401 | 4.29787 | -3.73476 | H | 0.02961 | -2.78862 | 3.73330 |
| H | -1.09696 | 4.90289 | -1.68397 | H | -1.32665 | -1.97371 | 2.96047 |
| H | -2.48891 | 3.88070 | -1.95556 | C | 1.05499 | -0.19703 | 5.56914 |
| C | 0.93055 | 3.19946 | -3.81409 | H | 2.21595 | -1.40606 | 4.20745 |
| H | 1.33279 | 3.72621 | -1.76571 | H | 2.22752 | 0.30477 | 3.83745 |

| | | | | | | | |
|---|----------|----------|----------|---|----------|----------|----------|
| C | 0.08484 | -1.28483 | 6.07355 | H | -2.96201 | 5.40234 | 0.23061 |
| H | -1.70572 | -2.31215 | 5.41053 | H | -1.85673 | 5.14257 | -1.13043 |
| H | -1.66850 | -0.60479 | 5.00646 | C | -3.57140 | 7.26774 | -1.76465 |
| H | 1.88988 | -0.09681 | 6.26023 | H | -3.80099 | 5.33753 | -2.74261 |
| H | 0.53742 | 0.76006 | 5.54546 | H | -4.90543 | 5.59150 | -1.38202 |
| H | -0.31986 | -0.99744 | 7.04193 | H | -4.27538 | 7.79586 | -2.43301 |
| H | 0.62834 | -2.21759 | 6.21148 | H | -3.65766 | 7.72241 | -0.75999 |
| C | 1.48618 | -2.77671 | 1.02533 | H | -2.54740 | 7.46623 | -2.13217 |
| C | 2.53770 | -3.28381 | 2.04463 | C | -2.33561 | -1.27576 | -2.43916 |
| C | 0.33227 | -3.80385 | 0.95493 | H | -1.44313 | -1.64041 | -2.97275 |
| H | 1.95823 | -2.76290 | 0.04419 | H | -3.14892 | -1.99526 | -2.61194 |
| C | 3.08071 | -4.67088 | 1.62598 | P | -2.86414 | 0.39290 | -3.19227 |
| H | 2.08613 | -3.37302 | 3.02844 | C | -4.39155 | -0.19979 | -4.14994 |
| H | 3.37014 | -2.59216 | 2.13321 | H | -5.18688 | -0.45853 | -3.46081 |
| C | 0.85570 | -5.18726 | 0.50777 | C | -1.65832 | 0.53752 | -4.63318 |
| H | -0.13524 | -3.91083 | 1.92766 | C | -3.58044 | -0.71504 | 0.14610 |
| H | -0.43058 | -3.45311 | 0.27070 | C | -4.74581 | -1.70136 | -0.11157 |
| C | 1.94323 | -5.70225 | 1.47377 | C | -3.50501 | -0.38654 | 1.65501 |
| H | 3.79743 | -5.01870 | 2.36757 | H | -3.80604 | 0.21278 | -0.37551 |
| H | 3.61042 | -4.58019 | 0.67989 | C | -6.08447 | -1.09717 | 0.37160 |
| H | 0.03115 | -5.89647 | 0.47254 | H | -4.57337 | -2.63299 | 0.42125 |
| H | 1.26782 | -5.11552 | -0.49708 | H | -4.82787 | -1.93802 | -1.16864 |
| H | 2.34785 | -6.64506 | 1.11134 | C | -4.83688 | 0.21653 | 2.15443 |
| H | 1.49787 | -5.89191 | 2.44858 | H | -3.28906 | -1.28617 | 2.22588 |
| | | | | H | -2.70368 | 0.32382 | 1.83263 |

7a_c-I

150

XYZ

| | | | | | | | |
|----|----------|----------|----------|---|----------|----------|----------|
| Ru | -0.13719 | 0.45907 | -0.40539 | C | -6.02426 | -0.72591 | 1.86765 |
| C | -2.28893 | 2.70930 | 0.20196 | H | -6.88731 | -1.81143 | 0.19954 |
| C | -1.44229 | 1.72863 | -0.10762 | H | -6.30797 | -0.20722 | -0.21337 |
| P | -1.86286 | -1.19297 | -0.61425 | H | -4.77060 | 0.41173 | 3.22291 |
| N | 1.01035 | 2.10675 | -1.28861 | H | -5.00249 | 1.17037 | 1.65799 |
| C | 1.21376 | 2.06765 | -2.62584 | H | -6.95544 | -0.24966 | 2.16729 |
| C | 1.61502 | 3.46165 | -3.15031 | H | -5.91728 | -1.63320 | 2.45944 |
| C | 1.96446 | 4.24310 | -1.87507 | C | -1.50686 | -3.08713 | -0.28733 |
| C | 1.17312 | 3.47873 | -0.77968 | C | -1.58383 | -3.45650 | 1.21350 |
| O | 1.09511 | 1.06312 | -3.38475 | C | -2.32115 | -4.10970 | -1.12124 |
| P | 2.02048 | -0.88825 | -0.53024 | H | -0.47061 | -3.19137 | -0.59453 |
| H | -2.31982 | 3.02035 | 1.25984 | C | -1.10035 | -4.90033 | 1.47640 |
| H | 0.18244 | 3.94149 | -0.59277 | H | -2.60747 | -3.36548 | 1.56662 |
| H | 1.71766 | 3.47850 | 0.17822 | H | -0.97751 | -2.77041 | 1.79583 |
| H | 2.42880 | 3.38771 | -3.89103 | C | -1.84775 | -5.55772 | -0.85282 |
| H | 0.73543 | 3.88633 | -3.67374 | H | -3.37908 | -4.03792 | -0.88673 |
| H | 1.70171 | 5.31519 | -1.91386 | H | -2.20644 | -3.90773 | -2.18148 |
| H | 3.04960 | 4.17432 | -1.67203 | C | -1.91065 | -5.91447 | 0.64548 |
| H | -0.25455 | 0.31044 | -2.00154 | H | -1.19508 | -5.12688 | 2.53654 |
| C | -3.19673 | 3.46855 | -0.75562 | H | -0.04614 | -4.98259 | 1.21869 |
| C | -2.90121 | 4.98469 | -0.79593 | H | -2.46621 | -6.24740 | -1.42357 |
| H | -3.10276 | 3.03177 | -1.76533 | H | -0.82481 | -5.67245 | -1.20527 |
| H | -4.25406 | 3.32235 | -0.44676 | H | -1.52297 | -6.91856 | 0.80411 |
| C | -3.86229 | 5.75817 | -1.71907 | H | -2.94687 | -5.90746 | 0.97781 |
| | | | | P | 0.86707 | 0.22493 | 1.89576 |
| | | | | C | 2.03965 | -1.14848 | 1.33908 |
| | | | | H | 3.01328 | -1.21348 | 1.84775 |

| | | | | | | | |
|---|---------|----------|----------|----|----------|----------|--------------------------|
| H | 1.51388 | -2.10345 | 1.50246 | C | -0.04658 | -0.52662 | 3.43360 |
| C | 3.56106 | 0.19241 | -0.95827 | C | 0.79130 | -1.49368 | 4.30813 |
| C | 4.81366 | -0.01519 | -0.07063 | C | -0.71940 | 0.54156 | 4.32853 |
| C | 3.92693 | 0.08409 | -2.45850 | C | -0.10260 | -2.16614 | 5.37599 |
| H | 3.18783 | 1.19996 | -0.79258 | H | 1.59295 | -0.95656 | 4.80624 |
| C | 5.91272 | 1.00656 | -0.44444 | H | 1.24857 | -2.26716 | 3.69750 |
| H | 5.20971 | -1.01940 | -0.19268 | C | -1.62515 | -0.12863 | 5.38599 |
| H | 4.56661 | 0.11125 | 0.97974 | H | 0.03775 | 1.12369 | 4.84542 |
| C | 5.02476 | 1.10705 | -2.82331 | H | -1.30921 | 1.22631 | 3.72327 |
| H | 4.29623 | -0.91208 | -2.68442 | C | -0.82352 | -1.12151 | 6.25317 |
| H | 3.03471 | 0.27030 | -3.05694 | H | 0.50889 | -2.81466 | 6.00011 |
| C | 6.27758 | 0.92531 | -1.94106 | H | -0.84143 | -2.79325 | 4.88079 |
| H | 6.79609 | 0.82386 | 0.16449 | H | -2.07066 | 0.63745 | 6.01711 |
| H | 5.55990 | 2.01003 | -0.21434 | H | -2.43696 | -0.65394 | 4.88729 |
| H | 5.29178 | 0.99138 | -3.87161 | H | -1.48932 | -1.62469 | 6.95104 |
| H | 4.63589 | 2.11474 | -2.69533 | H | -0.08814 | -0.57481 | 6.84030 |
| H | 7.01481 | 1.68901 | -2.17976 | H | -0.84556 | -1.10894 | 2.98458 |
| H | 6.73113 | -0.04199 | -2.14916 | H | -0.65902 | 0.73072 | -4.24892 |
| C | 2.29328 | -2.68754 | -1.16834 | H | -1.63862 | -0.35748 | -5.24548 |
| C | 1.91753 | -2.83964 | -2.66241 | H | -1.96109 | 1.36929 | -5.25821 |
| C | 3.68979 | -3.29466 | -0.89000 | H | -4.19424 | -1.06031 | -4.78025 |
| H | 1.57825 | -3.26834 | -0.59030 | H | -4.74908 | 0.60473 | -4.78170 |
| C | 1.96870 | -4.32263 | -3.09416 | | | | |
| H | 2.60198 | -2.26708 | -3.28101 | | | | 7a_c-II |
| H | 0.92120 | -2.44014 | -2.83529 | | | | 144 |
| C | 3.72712 | -4.78123 | -1.31256 | | | | XYZ |
| H | 4.45253 | -2.75687 | -1.44528 | Ru | -0.13905 | 0.44380 | -0.57899 |
| H | 3.93313 | -3.21459 | 0.16749 | C | -2.41630 | 2.64453 | -0.35340 |
| C | 3.34820 | -4.94844 | -2.79912 | C | -1.51297 | 1.67974 | -0.52268 |
| H | 1.74976 | -4.39683 | -4.15723 | P | -1.76140 | -1.24744 | -1.07701 |
| H | 1.20021 | -4.88136 | -2.56388 | N | 1.08452 | 2.13096 | -1.26561 |
| H | 4.72338 | -5.18202 | -1.13677 | C | 1.46140 | 2.12236 | -2.57190 |
| H | 3.03377 | -5.34952 | -0.69535 | C | 1.89553 | 3.53535 | -3.01298 |
| H | 3.33789 | -6.00484 | -3.05916 | C | 2.05248 | 4.29890 | -1.68967 |
| H | 4.10263 | -4.46718 | -3.41837 | C | 1.13742 | 3.49817 | -0.72419 |
| C | 2.07192 | 1.60463 | 2.51443 | O | 1.45893 | 1.13514 | -3.35476 |
| C | 1.33800 | 2.92227 | 2.86762 | P | 2.03682 | -0.82795 | -0.32214 |
| C | 3.01927 | 1.21256 | 3.67443 | H | -2.59188 | 2.97982 | 0.68288 |
| H | 2.68474 | 1.79938 | 1.63649 | H | 0.11908 | 3.93594 | -0.67268 |
| C | 2.35826 | 4.05678 | 3.11195 | H | 1.54389 | 3.49892 | 0.30023 |
| H | 0.74606 | 2.79152 | 3.76750 | H | 2.80275 | 3.49574 | -3.63914 |
| H | 0.65825 | 3.20132 | 2.06738 | H | 1.08462 | 3.95308 | -3.64231 |
| C | 4.05302 | 2.33583 | 3.92046 | H | 1.77419 | 5.36626 | -1.74637 |
| H | 2.44816 | 1.06037 | 4.58612 | H | 3.10147 | 4.24758 | -1.34260 |
| H | 3.54295 | 0.28512 | 3.45619 | H | 0.07311 | 0.26570 | -2.16573 |
| C | 3.35779 | 3.67943 | 4.22603 | C | -3.21543 | 3.35747 | -1.43536 |
| H | 1.82803 | 4.96646 | 3.38558 | C | -2.93765 | 4.87672 | -1.48989 |
| H | 2.90144 | 4.26038 | 2.19162 | H | -3.00087 | 2.89533 | -2.41525 |
| H | 4.69936 | 2.05627 | 4.75008 | H | -4.29944 | 3.20192 | -1.24819 |
| H | 4.68191 | 2.44440 | 3.03898 | C | -3.79523 | 5.60613 | -2.54190 |
| H | 4.10510 | 4.46274 | 4.33323 | H | -3.12284 | 5.32344 | -0.49091 |
| H | 2.82897 | 3.60169 | 5.17412 | H | -1.86346 | 5.04164 | -1.70581 |

| | | | | | | | |
|---|----------|----------|----------|---|----------|----------|----------|
| C | -3.51952 | 7.11805 | -2.60197 | C | 5.79443 | 1.21815 | 0.33672 |
| H | -3.61118 | 5.15560 | -3.53759 | H | 5.13655 | -0.83129 | 0.50842 |
| H | -4.86814 | 5.43325 | -2.32195 | H | 4.27683 | 0.28482 | 1.54877 |
| H | -4.14800 | 7.61436 | -3.36345 | C | 5.28333 | 1.26197 | -2.15230 |
| H | -3.72680 | 7.60166 | -1.62900 | H | 4.61614 | -0.78246 | -2.09906 |
| H | -2.46243 | 7.32151 | -2.85540 | H | 3.38736 | 0.34773 | -2.67943 |
| C | -1.91479 | -1.32235 | -2.95039 | C | 6.38972 | 1.13673 | -1.08407 |
| H | -0.96236 | -1.72401 | -3.33401 | H | 6.57885 | 1.07586 | 1.07763 |
| H | -2.72373 | -2.00477 | -3.25561 | H | 5.37317 | 2.20921 | 0.49383 |
| P | -2.29283 | 0.34366 | -3.77034 | H | 5.71383 | 1.14688 | -3.14479 |
| C | -3.59276 | -0.81093 | -0.61334 | H | 4.84226 | 2.25485 | -2.10133 |
| C | -4.67961 | -1.81867 | -1.06052 | H | 7.12666 | 1.92590 | -1.21768 |
| C | -3.77269 | -0.48995 | 0.88820 | H | 6.90510 | 0.18565 | -1.20469 |
| H | -3.74962 | 0.11421 | -1.16370 | C | 2.46657 | -2.62230 | -0.88245 |
| C | -6.09098 | -1.24211 | -0.80341 | C | 2.34477 | -2.80288 | -2.41510 |
| H | -4.57905 | -2.74886 | -0.50705 | C | 3.81903 | -3.17641 | -0.37239 |
| H | -4.58275 | -2.05170 | -2.11720 | H | 1.68595 | -3.22144 | -0.41901 |
| C | -5.18033 | 0.08385 | 1.16429 | C | 2.51362 | -4.28781 | -2.80856 |
| H | -3.63437 | -1.38875 | 1.48416 | H | 3.10261 | -2.21425 | -2.92311 |
| H | -3.02625 | 0.23534 | 1.19629 | H | 1.37793 | -2.43951 | -2.75468 |
| C | -6.28556 | -0.87900 | 0.68313 | C | 3.97447 | -4.66504 | -0.75917 |
| H | -6.84044 | -1.97014 | -1.10770 | H | 4.64281 | -2.61714 | -0.80612 |
| H | -6.23165 | -0.35304 | -1.41485 | H | 3.88532 | -3.07630 | 0.70904 |
| H | -5.29411 | 0.27320 | 2.22981 | C | 3.84700 | -4.86152 | -2.28449 |
| H | -5.28112 | 1.03761 | 0.65063 | H | 2.47212 | -4.38134 | -3.89166 |
| H | -7.26249 | -0.42212 | 0.82657 | H | 1.68829 | -4.86729 | -2.39996 |
| H | -6.25985 | -1.78770 | 1.28183 | H | 4.94209 | -5.02792 | -0.41846 |
| C | -1.41802 | -3.13506 | -0.71302 | H | 3.20994 | -5.25130 | -0.25280 |
| C | -1.69234 | -3.51434 | 0.76183 | H | 3.91370 | -5.92037 | -2.52550 |
| C | -2.09328 | -4.16547 | -1.65439 | H | 4.67545 | -4.36075 | -2.78163 |
| H | -0.34770 | -3.21818 | -0.87739 | C | 1.47657 | 1.67505 | 2.67167 |
| C | -1.22466 | -4.95177 | 1.08240 | C | 0.64203 | 2.96407 | 2.87512 |
| H | -2.75613 | -3.44133 | 0.97222 | C | 2.21603 | 1.32174 | 3.98512 |
| H | -1.18223 | -2.82164 | 1.42360 | H | 2.22874 | 1.89035 | 1.91525 |
| C | -1.63225 | -5.60616 | -1.33141 | C | 1.55674 | 4.13760 | 3.29219 |
| H | -3.17400 | -4.11594 | -1.56262 | H | -0.09931 | 2.81125 | 3.65263 |
| H | -1.84271 | -3.95226 | -2.68875 | H | 0.11051 | 3.21603 | 1.96169 |
| C | -1.89338 | -5.97432 | 0.14264 | C | 3.14454 | 2.48529 | 4.40322 |
| H | -1.46116 | -5.18750 | 2.11812 | H | 1.49801 | 1.14741 | 4.78165 |
| H | -0.14361 | -5.01410 | 0.97293 | H | 2.80616 | 0.41584 | 3.87054 |
| H | -2.15331 | -6.30326 | -1.98445 | C | 2.35342 | 3.79981 | 4.57037 |
| H | -0.56868 | -5.69918 | -1.54100 | H | 0.95078 | 5.02544 | 3.45979 |
| H | -1.51213 | -6.97224 | 0.34875 | H | 2.24848 | 4.36309 | 2.48345 |
| H | -2.96541 | -5.98870 | 0.32914 | H | 3.64309 | 2.23170 | 5.33667 |
| P | 0.45425 | 0.24782 | 1.86117 | H | 3.91572 | 2.61894 | 3.64708 |
| C | 1.76543 | -1.07212 | 1.52785 | H | 3.03784 | 4.61225 | 4.80500 |
| H | 2.64580 | -1.08087 | 2.18806 | H | 1.66627 | 3.70030 | 5.40851 |
| H | 1.27030 | -2.05227 | 1.62132 | C | -0.67901 | -0.54405 | 3.22362 |
| C | 3.58319 | 0.30776 | -0.52235 | C | 0.03431 | -1.47738 | 4.23471 |
| C | 4.68933 | 0.15791 | 0.55160 | C | -1.53736 | 0.49521 | 3.98396 |
| C | 4.18035 | 0.20082 | -1.94633 | C | -1.00209 | -2.18642 | 5.13735 |
| H | 3.14831 | 1.30018 | -0.43326 | H | 0.71651 | -0.90904 | 4.85982 |

| | | | | | | | |
|----|----------|----------|----------|---|----------|----------|----------|
| H | 0.61997 | -2.23142 | 3.71650 | C | -2.96204 | 1.46188 | 1.86607 |
| C | -2.58327 | -0.21162 | 4.87515 | H | -3.56098 | 1.41860 | -0.18712 |
| H | -0.90356 | 1.10718 | 4.61891 | C | -5.85606 | 1.19036 | 1.27345 |
| H | -2.04182 | 1.15619 | 3.28283 | H | -4.77942 | -0.61771 | 1.73459 |
| C | -1.90321 | -1.17252 | 5.87240 | H | -5.21538 | -0.46528 | 0.04354 |
| H | -0.48141 | -2.81094 | 5.86046 | C | -3.96171 | 2.57453 | 2.25306 |
| H | -1.61983 | -2.84174 | 4.52634 | H | -2.85003 | 0.77989 | 2.70542 |
| H | -3.16006 | 0.53550 | 5.41627 | H | -1.99319 | 1.90754 | 1.66418 |
| H | -3.27646 | -0.76852 | 4.24824 | C | -5.37509 | 2.00399 | 2.49269 |
| H | -2.65815 | -1.70270 | 6.44902 | H | -6.82390 | 0.74096 | 1.48713 |
| H | -1.30133 | -0.59752 | 6.57348 | H | -5.98550 | 1.85572 | 0.42218 |
| H | -1.36472 | -1.15820 | 2.64739 | H | -3.61253 | 3.08279 | 3.14966 |
| H | -0.94270 | 0.75130 | -4.01448 | H | -3.99847 | 3.31155 | 1.45358 |
| H | -2.47076 | -0.22090 | -5.08513 | H | -6.07226 | 2.81473 | 2.69360 |
| | | | | H | -5.36146 | 1.36107 | 3.37093 |
| | | | | C | -2.31170 | -2.27289 | 0.71049 |
| | | | | C | -3.48322 | -2.32593 | 1.72027 |
| | | | | C | -2.38562 | -3.49296 | -0.24376 |
| Ru | 0.05848 | 0.43723 | -0.47687 | H | -1.39032 | -2.37721 | 1.27562 |
| C | -1.16546 | 3.36300 | -0.44433 | C | -3.50502 | -3.65354 | 2.51052 |
| C | -0.72478 | 2.10708 | -0.49441 | H | -4.42989 | -2.21916 | 1.19737 |
| P | -2.11290 | -0.50777 | -0.10624 | H | -3.40508 | -1.50075 | 2.42046 |
| N | 1.52032 | 1.32071 | -1.85726 | C | -2.41538 | -4.82287 | 0.54576 |
| C | 1.48978 | 0.89994 | -3.14247 | H | -3.27222 | -3.43778 | -0.86799 |
| C | 2.23072 | 1.90040 | -4.05380 | H | -1.52258 | -3.51009 | -0.90159 |
| C | 3.00642 | 2.78550 | -3.06714 | C | -3.57688 | -4.86332 | 1.55834 |
| C | 2.19054 | 2.62770 | -1.75596 | H | -4.35841 | -3.65944 | 3.18574 |
| O | 0.93931 | -0.14759 | -3.58911 | H | -2.60671 | -3.72738 | 3.12052 |
| P | 1.64296 | -1.55038 | -0.33590 | H | -2.50542 | -5.65150 | -0.15366 |
| H | -0.94887 | 3.92550 | 0.47957 | H | -1.47359 | -4.94758 | 1.07607 |
| H | 1.44137 | 3.43764 | -1.64052 | H | -3.53872 | -5.78831 | 2.12983 |
| H | 2.84635 | 2.66240 | -0.87155 | H | -4.52519 | -4.84718 | 1.02478 |
| H | 2.85193 | 1.37452 | -4.79811 | P | 1.27809 | 0.46003 | 1.73707 |
| H | 1.46436 | 2.47220 | -4.61390 | C | 1.87353 | -1.32108 | 1.52276 |
| H | 3.09988 | 3.84028 | -3.38118 | H | 2.84904 | -1.57820 | 1.96221 |
| H | 4.02926 | 2.38969 | -2.92369 | H | 1.11682 | -1.97196 | 1.98998 |
| H | -0.33678 | -0.05260 | -1.95637 | C | 3.35462 | -1.20390 | -1.15696 |
| C | -1.90638 | 4.11567 | -1.54037 | C | 4.60515 | -1.59720 | -0.33146 |
| C | -1.15342 | 5.37460 | -2.02585 | C | 3.42675 | -1.80145 | -2.58311 |
| H | -2.09229 | 3.42850 | -2.38445 | H | 3.34213 | -0.12221 | -1.26450 |
| H | -2.90314 | 4.42529 | -1.15876 | C | 5.89308 | -1.14103 | -1.05583 |
| C | -1.93658 | 6.16843 | -3.08922 | H | 4.64629 | -2.67261 | -0.18333 |
| H | -0.93668 | 6.03476 | -1.16031 | H | 4.57863 | -1.13457 | 0.65121 |
| H | -0.16933 | 5.07354 | -2.43657 | C | 4.71594 | -1.34231 | -3.29871 |
| C | -1.18996 | 7.42070 | -3.57889 | H | 3.42700 | -2.88667 | -2.53662 |
| H | -2.15452 | 5.50599 | -3.95063 | H | 2.55439 | -1.47617 | -3.15041 |
| H | -2.92133 | 6.46280 | -2.67309 | C | 5.97321 | -1.71478 | -2.48547 |
| H | -1.77471 | 7.96937 | -4.33930 | H | 6.76090 | -1.45566 | -0.47929 |
| H | -0.98731 | 8.11772 | -2.74426 | H | 5.90970 | -0.05390 | -1.10321 |
| H | -0.21723 | 7.15381 | -4.03230 | H | 4.76454 | -1.80096 | -4.28405 |
| C | -3.45055 | 0.69337 | 0.61664 | H | 4.68466 | -0.26459 | -3.44205 |
| C | -4.84338 | 0.08170 | 0.90505 | H | 6.86362 | -1.33552 | -2.98249 |

| | | | | | | | |
|---|----------|----------|----------|----|----------|----------|--------------------------|
| H | 6.06492 | -2.79813 | -2.43421 | C | -2.84483 | -0.86172 | -1.73455 |
| C | 1.24340 | -3.43450 | -0.43902 | C | -4.26646 | -1.35460 | -1.55621 |
| C | 0.61168 | -3.82370 | -1.79773 | C | -2.79997 | 0.38583 | -2.59371 |
| C | 2.40955 | -4.38880 | -0.08455 | H | -2.22821 | -1.66687 | -2.21380 |
| H | 0.48287 | -3.57022 | 0.32650 | C | -4.94313 | -1.58295 | -2.89244 |
| C | 0.13416 | -5.29340 | -1.78161 | H | -4.85100 | -0.60019 | -0.96669 |
| H | 1.33479 | -3.69549 | -2.59750 | H | -4.26174 | -2.30997 | -0.96981 |
| H | -0.22651 | -3.16688 | -2.01722 | C | -3.47595 | 0.15721 | -3.93027 |
| C | 1.91968 | -5.85479 | -0.05741 | H | -3.31125 | 1.22726 | -2.05618 |
| H | 3.20437 | -4.30217 | -0.81949 | H | -1.73388 | 0.68999 | -2.75920 |
| H | 2.82786 | -4.13075 | 0.88619 | C | -4.89716 | -0.33689 | -3.75291 |
| C | 1.28099 | -6.25460 | -1.40412 | H | -6.00960 | -1.88563 | -2.72653 |
| H | -0.25976 | -5.55575 | -2.76119 | H | -4.43318 | -2.42566 | -3.42926 |
| H | -0.67687 | -5.40319 | -1.06461 | H | -3.48110 | 1.11265 | -4.51649 |
| H | 2.75809 | -6.51194 | 0.16463 | H | -2.89036 | -0.59658 | -4.51963 |
| H | 1.18978 | -5.97685 | 0.74068 | H | -5.34629 | -0.55666 | -4.75620 |
| H | 0.90429 | -7.27353 | -1.34414 | H | -5.51527 | 0.46857 | -3.27593 |
| H | 2.04105 | -6.23287 | -2.18263 | | | | |
| C | 2.92993 | 1.45751 | 1.86241 | | | | 7a_c-IV |
| C | 2.70189 | 2.98974 | 1.86972 | | | | 142 |
| C | 3.87459 | 1.06888 | 3.02581 | | | | XYZ |
| H | 3.43230 | 1.20787 | 0.92993 | Ru | -0.01698 | 0.66136 | -0.56484 |
| C | 4.04738 | 3.73464 | 1.71933 | C | -1.45460 | 3.48887 | -0.66581 |
| H | 2.24156 | 3.29523 | 2.80354 | C | -0.88681 | 2.28563 | -0.59365 |
| H | 2.02907 | 3.27457 | 1.06565 | P | -2.11248 | -0.22778 | -1.31056 |
| C | 5.22951 | 1.79918 | 2.87834 | N | 1.77414 | 1.87188 | -0.85469 |
| H | 3.43011 | 1.35051 | 3.97637 | C | 2.32530 | 1.87165 | -2.09816 |
| H | 4.04675 | -0.00435 | 3.04881 | C | 3.26337 | 3.08723 | -2.26168 |
| C | 5.03812 | 3.32989 | 2.83163 | C | 3.45181 | 3.59723 | -0.82530 |
| H | 3.87186 | 4.80770 | 1.75511 | C | 2.17423 | 3.07823 | -0.11338 |
| H | 4.48107 | 3.50755 | 0.74785 | O | 2.12388 | 1.03438 | -3.01494 |
| H | 5.87615 | 1.53211 | 3.71183 | P | 1.57542 | -1.31830 | -0.49579 |
| H | 5.71945 | 1.46625 | 1.96542 | H | -1.84314 | 3.93344 | 0.26494 |
| H | 5.99798 | 3.81445 | 2.66613 | H | 1.36325 | 3.83606 | -0.13418 |
| H | 4.66125 | 3.67333 | 3.79317 | H | 2.37249 | 2.84347 | 0.94429 |
| C | 0.42668 | 0.46769 | 3.48143 | H | 4.19291 | 2.80451 | -2.78362 |
| C | 1.04909 | -0.47935 | 4.53874 | H | 2.74384 | 3.82792 | -2.90170 |
| C | 0.26542 | 1.88658 | 4.07769 | H | 3.56596 | 4.69290 | -0.74301 |
| C | 0.16811 | -0.52200 | 5.80904 | H | 4.34837 | 3.13397 | -0.37214 |
| H | 2.04479 | -0.14214 | 4.81091 | H | 0.26221 | 0.64420 | -2.14751 |
| H | 1.14358 | -1.48747 | 4.14515 | C | -1.56626 | 4.33260 | -1.93024 |
| C | -0.62727 | 1.84755 | 5.33841 | C | -0.90092 | 5.72018 | -1.79063 |
| H | 1.23621 | 2.28462 | 4.35770 | H | -1.11058 | 3.78647 | -2.77675 |
| H | -0.17006 | 2.55952 | 3.34248 | H | -2.63781 | 4.47792 | -2.18636 |
| C | -0.04805 | 0.88745 | 6.39816 | C | -1.05347 | 6.59156 | -3.05201 |
| H | 0.63766 | -1.16501 | 6.55072 | H | -1.33966 | 6.25158 | -0.92086 |
| H | -0.79619 | -0.96134 | 5.56107 | H | 0.17371 | 5.58436 | -1.55849 |
| H | -0.70964 | 2.84996 | 5.75324 | C | -0.39267 | 7.97344 | -2.91291 |
| H | -1.62906 | 1.52445 | 5.06334 | H | -0.61613 | 6.05740 | -3.91909 |
| H | -0.71993 | 0.82959 | 7.25182 | H | -2.13099 | 6.71725 | -3.28144 |
| H | 0.90241 | 1.27777 | 6.75685 | H | -0.51723 | 8.57551 | -3.83103 |
| H | -0.57299 | 0.10054 | 3.26951 | H | -0.83293 | 8.54499 | -2.07453 |

| | | | | | | | |
|---|----------|----------|----------|---|----------|----------|----------|
| H | 0.69181 | 7.87967 | -2.71804 | C | 6.40545 | -1.08678 | -0.68378 |
| C | -2.25044 | 0.23822 | -3.13880 | H | 6.31020 | -1.57613 | 1.42910 |
| H | -1.50426 | -0.29726 | -3.71142 | H | 5.68981 | 0.01619 | 1.03170 |
| H | -3.23286 | 0.02571 | -3.54143 | H | 6.01903 | -0.47215 | -2.72726 |
| C | -3.69637 | 0.70810 | -0.68995 | H | 5.50932 | 0.69478 | -1.52132 |
| C | -5.05890 | 0.20322 | -1.22348 | H | 7.39297 | -0.63349 | -0.62832 |
| C | -3.75279 | 0.83506 | 0.84861 | H | 6.54042 | -2.12858 | -0.96859 |
| H | -3.53248 | 1.70698 | -1.08738 | C | 1.36576 | -3.00102 | -1.40807 |
| C | -6.19527 | 1.16385 | -0.80301 | C | 1.34188 | -2.82879 | -2.94636 |
| H | -5.27637 | -0.78505 | -0.82658 | C | 2.35399 | -4.11882 | -0.99500 |
| H | -5.04674 | 0.12809 | -2.30722 | H | 0.37537 | -3.32823 | -1.09987 |
| C | -4.88812 | 1.78812 | 1.28433 | C | 0.98751 | -4.16202 | -3.64286 |
| H | -3.91683 | -0.14075 | 1.29977 | H | 2.31128 | -2.49150 | -3.30040 |
| H | -2.80425 | 1.21849 | 1.21322 | H | 0.61896 | -2.06423 | -3.22121 |
| C | -6.25228 | 1.32858 | 0.72961 | C | 1.98576 | -5.45059 | -1.68829 |
| H | -7.14594 | 0.78190 | -1.16989 | H | 3.36777 | -3.84947 | -1.27623 |
| H | -6.03306 | 2.13535 | -1.26558 | H | 2.33737 | -4.25810 | 0.08404 |
| H | -4.92799 | 1.83557 | 2.37073 | C | 1.95245 | -5.29092 | -3.22288 |
| H | -4.66911 | 2.79024 | 0.92155 | H | 1.02514 | -4.02709 | -4.72172 |
| H | -7.02166 | 2.05065 | 0.99483 | H | -0.03085 | -4.44654 | -3.38585 |
| H | -6.52656 | 0.37831 | 1.18410 | H | 2.70903 | -6.21481 | -1.41087 |
| C | -2.46281 | -2.13807 | -1.39349 | H | 1.01047 | -5.78257 | -1.33721 |
| C | -2.90224 | -2.71371 | -0.02574 | H | 1.64743 | -6.22838 | -3.68319 |
| C | -3.42356 | -2.62068 | -2.50976 | H | 2.95383 | -5.06163 | -3.58191 |
| H | -1.48564 | -2.55238 | -1.62399 | C | 1.67316 | 0.65849 | 2.90447 |
| C | -2.99259 | -4.25600 | -0.05751 | C | 1.29967 | 2.08788 | 3.37069 |
| H | -3.87385 | -2.31338 | 0.25214 | C | 2.18951 | -0.16031 | 4.11264 |
| H | -2.19748 | -2.41622 | 0.74511 | H | 2.49036 | 0.75206 | 2.19179 |
| C | -3.51319 | -4.16426 | -2.53817 | C | 2.52911 | 2.79106 | 3.98850 |
| H | -4.41969 | -2.21666 | -2.35883 | H | 0.51487 | 2.04434 | 4.11893 |
| H | -3.07425 | -2.27790 | -3.47921 | H | 0.92172 | 2.67009 | 2.53479 |
| C | -3.94428 | -4.73477 | -1.17203 | C | 3.42888 | 0.52694 | 4.73105 |
| H | -3.33830 | -4.61889 | 0.90841 | H | 1.41619 | -0.23029 | 4.87263 |
| H | -2.00145 | -4.67271 | -0.22618 | H | 2.45160 | -1.17297 | 3.81653 |
| H | -4.22199 | -4.46808 | -3.30573 | C | 3.10927 | 1.97388 | 5.16247 |
| H | -2.54385 | -4.57681 | -2.81010 | H | 2.24240 | 3.78151 | 4.33546 |
| H | -3.95151 | -5.82203 | -1.21019 | H | 3.29323 | 2.92143 | 3.22524 |
| H | -4.95769 | -4.40878 | -0.94611 | H | 3.77021 | -0.04841 | 5.58933 |
| P | 0.27783 | -0.15951 | 1.84803 | H | 4.23634 | 0.53521 | 4.00153 |
| C | 1.06126 | -1.77574 | 1.26021 | H | 4.01179 | 2.45297 | 5.53592 |
| H | 1.80868 | -2.23810 | 1.92193 | H | 2.38954 | 1.95369 | 5.97866 |
| H | 0.23712 | -2.49708 | 1.13737 | C | -1.12482 | -0.76898 | 3.04533 |
| C | 3.44541 | -0.84542 | -0.41219 | C | -0.80922 | -2.05443 | 3.85245 |
| C | 4.28762 | -1.58699 | 0.65614 | C | -1.63744 | 0.33384 | 4.00270 |
| C | 4.11944 | -0.93979 | -1.80253 | C | -2.06707 | -2.53697 | 4.61179 |
| H | 3.40502 | 0.20780 | -0.14485 | H | -0.01512 | -1.86720 | 4.56898 |
| C | 5.72562 | -1.01942 | 0.69911 | H | -0.47254 | -2.85047 | 3.19472 |
| H | 4.33380 | -2.65054 | 0.43819 | C | -2.90249 | -0.13956 | 4.75334 |
| H | 3.84463 | -1.47589 | 1.64164 | H | -0.87283 | 0.57091 | 4.73663 |
| C | 5.55272 | -0.36780 | -1.74987 | H | -1.85961 | 1.24407 | 3.45072 |
| H | 4.17397 | -1.97563 | -2.12436 | C | -2.62730 | -1.43849 | 5.53887 |
| H | 3.52230 | -0.37790 | -2.52171 | H | -1.81765 | -3.42127 | 5.19474 |

| | | | | | | | |
|----|----------|----------|----------|---|----------|----------|----------|
| H | -2.83059 | -2.82624 | 3.89222 | H | -2.77222 | 1.75494 | 0.16166 |
| H | -3.23132 | 0.64218 | 5.43486 | H | -2.05578 | 1.55648 | -1.45003 |
| H | -3.70564 | -0.30962 | 4.03949 | C | -2.42894 | -1.15247 | 1.39406 |
| H | -3.54366 | -1.78731 | 6.01018 | C | -3.64102 | -0.36012 | 1.94484 |
| H | -1.90965 | -1.23519 | 6.33134 | C | -2.71732 | -2.67302 | 1.41575 |
| H | -1.94009 | -1.00853 | 2.36849 | H | -1.58010 | -0.97340 | 2.05071 |
| H | -2.04918 | 1.29725 | -3.23128 | C | -3.98441 | -0.83036 | 3.37748 |
| | | | | H | -4.51056 | -0.50216 | 1.30941 |
| | | | | H | -3.42864 | 0.70421 | 1.97196 |
| | | | | C | -3.06035 | -3.13726 | 2.84768 |
| | | | | H | -3.55733 | -2.90211 | 0.76631 |
| | | | | H | -1.83154 | -3.20132 | 1.05544 |
| Ru | 0.75810 | -0.43535 | -0.56991 | C | -4.25357 | -2.34845 | 3.42666 |
| C | 3.93662 | -0.39632 | -0.55386 | H | -4.85589 | -0.28547 | 3.73542 |
| C | 2.60607 | -0.37440 | -0.56187 | H | -3.15517 | -0.59008 | 4.04005 |
| P | 0.95287 | -0.12740 | -2.88828 | H | -3.29196 | -4.20018 | 2.83636 |
| N | 0.94456 | -1.38113 | 1.35318 | H | -2.19190 | -3.00051 | 3.48855 |
| C | 0.66688 | -2.70628 | 1.46753 | H | -4.43942 | -2.65370 | 4.45430 |
| C | 1.24373 | -3.24499 | 2.79769 | H | -5.15045 | -2.57338 | 2.85252 |
| C | 1.58995 | -1.97190 | 3.58602 | C | -2.93115 | -1.17236 | -1.73152 |
| C | 1.81421 | -0.93707 | 2.45405 | C | -2.63494 | -2.62731 | -2.16887 |
| O | 0.04853 | -3.42684 | 0.64408 | C | -4.44510 | -0.97648 | -1.47651 |
| P | -1.75522 | -0.59315 | -0.32579 | H | -2.66293 | -0.52056 | -2.55927 |
| H | 4.47103 | 0.52708 | -0.27738 | C | -3.45040 | -2.99495 | -3.42911 |
| H | 2.87643 | -0.92267 | 2.13034 | H | -2.88777 | -3.31670 | -1.36869 |
| H | 1.56290 | 0.08948 | 2.77015 | H | -1.57225 | -2.74520 | -2.36674 |
| H | 0.52876 | -3.92318 | 3.29301 | C | -5.25627 | -1.33651 | -2.74240 |
| H | 2.14634 | -3.84140 | 2.55704 | H | -4.77408 | -1.61244 | -0.65965 |
| H | 2.46706 | -2.07160 | 4.25031 | H | -4.65221 | 0.05455 | -1.19667 |
| H | 0.72908 | -1.66575 | 4.21004 | C | -4.96204 | -2.77977 | -3.20330 |
| H | 0.71943 | -2.00112 | -0.96335 | H | -3.26126 | -4.03360 | -3.69176 |
| C | 4.78598 | -1.63044 | -0.83472 | H | -3.12132 | -2.38244 | -4.26656 |
| C | 5.69261 | -2.02230 | 0.35350 | H | -6.31860 | -1.22309 | -2.53582 |
| H | 4.12366 | -2.47802 | -1.09067 | H | -5.00396 | -0.64209 | -3.54164 |
| H | 5.42430 | -1.44440 | -1.72483 | H | -5.50677 | -2.99015 | -4.12132 |
| C | 6.58087 | -3.24510 | 0.05457 | H | -5.31594 | -3.47728 | -2.44667 |
| H | 6.33391 | -1.15899 | 0.62689 | C | -0.30281 | 2.27740 | 1.96606 |
| H | 5.05842 | -2.22845 | 1.23791 | C | 1.01270 | 2.91095 | 2.48014 |
| C | 7.48429 | -3.63631 | 1.23626 | H | -1.50039 | 3.16503 | 2.38759 |
| H | 5.93698 | -4.10448 | -0.21967 | H | -0.41921 | 1.31329 | 2.45722 |
| H | 7.20638 | -3.03388 | -0.83632 | C | 0.98526 | 3.04187 | 4.01929 |
| H | 8.10830 | -4.51552 | 0.99431 | H | 1.13525 | 3.90137 | 2.04945 |
| H | 8.16373 | -2.80822 | 1.51195 | H | 1.86671 | 2.30939 | 2.17783 |
| H | 6.88480 | -3.88664 | 2.13110 | C | -1.54687 | 3.29079 | 3.92828 |
| C | 1.46073 | -1.71858 | -3.76862 | H | -1.40691 | 4.15794 | 1.95908 |
| H | 0.69598 | -2.47289 | -3.63352 | H | -2.44025 | 2.74768 | 2.03960 |
| H | 1.60686 | -1.53859 | -4.82822 | C | -0.23004 | 3.87042 | 4.48625 |
| C | 2.33211 | 1.00297 | -3.52140 | H | 1.90547 | 3.51278 | 4.35857 |
| H | 3.23795 | 0.81036 | -2.96094 | H | 0.94254 | 2.04981 | 4.46402 |
| C | -0.41554 | 0.41921 | -4.08613 | H | -2.38134 | 3.92895 | 4.21202 |
| H | -1.17307 | -0.34991 | -4.15991 | H | -1.72420 | 2.30900 | 4.36288 |
| P | -0.18122 | 1.78191 | 0.09921 | H | -0.26894 | 3.88902 | 5.57326 |
| C | -1.93993 | 1.28970 | -0.38575 | | | | |

| | | | | | | | |
|----|----------|----------|----------|---|----------|----------|----------|
| H | -0.11785 | 4.89829 | 4.14638 | C | -3.73039 | -1.39451 | 0.18424 |
| C | 0.15790 | 3.33003 | -0.99658 | C | -4.88751 | -0.40279 | 0.43960 |
| C | -0.77510 | 4.54370 | -0.77251 | H | -3.41254 | -1.32651 | -0.87303 |
| C | 1.63767 | 3.78204 | -0.94372 | H | -4.10685 | -2.42868 | 0.33943 |
| C | -0.51605 | 5.62571 | -1.84556 | C | -6.12245 | -0.67960 | -0.43901 |
| H | -0.59030 | 4.97755 | 0.20591 | H | -5.17901 | -0.44537 | 1.50941 |
| H | -1.81853 | 4.23746 | -0.80770 | H | -4.52275 | 0.62738 | 0.25908 |
| C | 1.91176 | 4.87238 | -2.00465 | C | -7.27491 | 0.30766 | -0.18886 |
| H | 1.86874 | 4.18478 | 0.03793 | H | -5.82577 | -0.63918 | -1.50632 |
| H | 2.29556 | 2.93179 | -1.10839 | H | -6.47526 | -1.71527 | -0.25797 |
| C | 0.96026 | 6.07584 | -1.83443 | H | -8.14476 | 0.08699 | -0.83375 |
| H | -1.16459 | 6.47994 | -1.66216 | H | -7.61694 | 0.26528 | 0.86215 |
| H | -0.76846 | 5.22920 | -2.82717 | H | -6.96011 | 1.34763 | -0.39427 |
| H | 2.94465 | 5.20419 | -1.92308 | C | 0.04713 | -3.42743 | -1.81767 |
| H | 1.78317 | 4.45130 | -2.99967 | H | 0.19671 | -4.48430 | -1.74322 |
| H | 1.13132 | 6.79614 | -2.63158 | H | -1.00154 | -3.21676 | -1.84631 |
| H | 1.17565 | 6.57529 | -0.89183 | C | 0.17621 | -3.67804 | 1.03702 |
| H | -0.03226 | 2.95601 | -2.00121 | H | -0.89782 | -3.47678 | 1.18113 |
| H | 2.38291 | -2.08487 | -3.33493 | C | 2.55617 | -3.25060 | -0.44401 |
| H | -0.00495 | 0.58683 | -5.07490 | H | 3.07918 | -2.82470 | -1.31546 |
| H | -0.88308 | 1.33641 | -3.74988 | P | 2.02607 | 0.26750 | 1.51660 |
| H | 2.05425 | 2.04075 | -3.39346 | C | 3.42471 | 0.33207 | 0.26031 |
| H | 2.51649 | 0.81986 | -4.57350 | H | 4.22711 | 1.07012 | 0.45574 |
| | | | | H | 3.87368 | -0.67513 | 0.18806 |
| | | | | C | 2.53139 | 2.46927 | -1.47980 |
| | | | | H | 2.02752 | 3.00313 | -0.65879 |
| | | | | C | 3.26003 | 0.02387 | -2.73487 |
| Ru | 0.30512 | -0.30919 | -0.12646 | H | 3.28993 | -1.07711 | -2.75655 |
| C | -2.52265 | -1.15302 | 1.08140 | C | 2.07370 | 1.95131 | 2.31215 |
| C | -1.31011 | -0.81327 | 0.64417 | H | 1.74336 | 2.70521 | 1.57943 |
| P | 0.81395 | -2.58162 | -0.33108 | C | 2.66077 | -0.77770 | 2.92576 |
| N | -0.49101 | 1.68067 | -0.30940 | H | 2.80059 | -1.81946 | 2.59102 |
| C | -0.41455 | 2.56186 | 0.72260 | H | 3.61833 | -0.39312 | 3.32200 |
| C | -0.73499 | 3.98724 | 0.20573 | H | 1.91278 | -0.77846 | 3.73826 |
| C | -1.36214 | 3.73849 | -1.17632 | H | 2.54503 | -4.35112 | -0.54999 |
| C | -0.74801 | 2.37152 | -1.57734 | H | 3.11664 | -2.99524 | 0.47192 |
| O | -0.13863 | 2.30688 | 1.92141 | H | 0.69743 | -3.42506 | 1.97703 |
| P | 2.32931 | 0.63845 | -1.25086 | H | 0.33469 | -4.74794 | 0.81067 |
| H | -2.68077 | -1.21978 | 2.17044 | H | 2.70445 | 0.35684 | -3.62851 |
| H | 0.19382 | 2.50802 | -2.15048 | H | 4.28504 | 0.43487 | -2.77219 |
| H | -1.42169 | 1.77267 | -2.22148 | H | 2.02340 | 2.75126 | -2.41495 |
| H | -1.37883 | 4.53153 | 0.91772 | H | 3.60201 | 2.74246 | -1.51011 |
| H | 0.21752 | 4.54935 | 0.13185 | H | 1.36573 | 1.96954 | 3.15910 |
| H | -1.15864 | 4.53155 | -1.91831 | H | 3.08398 | 2.20721 | 2.68093 |
| H | -2.46109 | 3.64459 | -1.08121 | H | 0.50848 | -3.06404 | -2.71210 |
| H | -0.35654 | -0.47995 | -1.59246 | | | | |