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Coordination of *o*-benzosemiquinonate, *o*-iminobenzosemiquinonate and aldimine anion radicals to oxidovanadium(IV)

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Table of Content

	Page No.
Crystallographic parameters of 1 , 4 , 5 and 6 ·½CH ₂ Cl ₂ ,	S2
Selected experimental bond lengths (Å) of 1 and the calculated bond lengths of 1 and 1 ⁻	S3
Selected experimental bond lengths (Å) of 4 and 5 and the corresponding calculated bond lengths	S4
Selected experimental bond lengths (Å) of 6 ·½CH ₂ Cl ₂	S4
Fluid solution ⁵¹ V NMR of 3 , 4 and 5	S5
ESI-MS spectrum of 1-6	S6-S8
FT-IR spectra of 1-6	S9-S10
Gas phase optimized coordinates of 1	S11
Gas phase optimized coordinates of 1 ⁻	S12
Gas phase optimized coordinates of 2	S13
Gas phase optimized coordinates of 2 ⁻	S14
Gas phase optimized coordinates of 4	S15
Gas phase optimized coordinates of 5	S17

Table S1 Crystallographic parameters of **1**, **4**, **5** and **6**·½CH₂Cl₂,

CCDC	1 (1506825)	4 (1506827)	5 (1506828)	6 ·½CH ₂ Cl ₂ (1506826)
formula	C ₂₁ H ₁₈ N ₂ O ₄ V	C ₃₀ H ₃₁ N ₂ O ₄ V	C ₂₂ H ₁₅ N ₄ O ₅ V	C _{32.50} H ₂₃ ClN ₄ O ₈ SV ₂
fw	413.31	534.51	466.32	766.94
crystal syst.	monoclinic	monoclinic	monoclinic	monoclinic
crystal color	black	green	brown	yellow
space group	P2 ₁ /c	P2 ₁ /c	P2 ₁ /c	C2/c
a (Å)	15.213(3)	15.194(2)	10.4417(3)	29.889(2)
b (Å)	9.5292(12)	19.427(2)	17.7670(5)	14.1920(8)
c (Å)	12.588(2)	9.3109(5)	10.7908(3)	20.219(2)
α (deg)	90.00	90.00	90.00	90.00
β (deg)	99.66(2)	106.744(6)	101.367(2)	129.985(4)
γ (deg)	90.00	90.00	90.00	90.00
V (Å ³)	1799.0(5)	2631.8(5)	1962.6(5)	6571.4(8)
Z	4	4	4	8
T (K)	100(2)	100(2)	295(2)	293(2)
2θ	66.14	66.18	56.04	56.60
ρ calcd (g.cm ⁻³)	1.526	1.349	1.578	1.550
refl. collected	31861	82107	16585	51619
unique refl.	6823	10053	4857	8166
reflection	4923	8523	3424	6169
(I>2σ(I))				
F(000)	852	1120	952	3112
no. of	255/0	340/0	289/0	438/0
params/restr				
λ (Å)/μ(mm ⁻¹)	0.71073 /0.583	0.71073 /0.415	0.71073 /0.551	0.71073 /0.771
R1a[I > 2σ (I)]/GOFb	0.0479/ 1.060	0.0336/ 0.0841	0.0557/1.022	0.0569/ 1.054
wR2c [I > 2σ (I)]	0.0819	0.0437	0.0872	0.0781
residual density (eÅ ⁻³)	0.484	0.429	0.508	1.320

observation criterion: ^aR1 = Σ||Fo|-|Fc||/Σ|Fo|. ^bGOF = {Σ[w(Fo2-Fc2)2]/(n-p)} 1/2, cwR2 = [Σ[w(Fo2-Fc2)2]/Σ[w(Fo2)2]] 1/2 where w = 1/[σ2(Fo2)+(aP)2+bP], P = (Fo2+2Fc2)/3.

Table S2 Selected experimental bond lengths (Å) of **1** and the calculated bond lengths of **1**, **2**, **1⁻** and **2⁻**

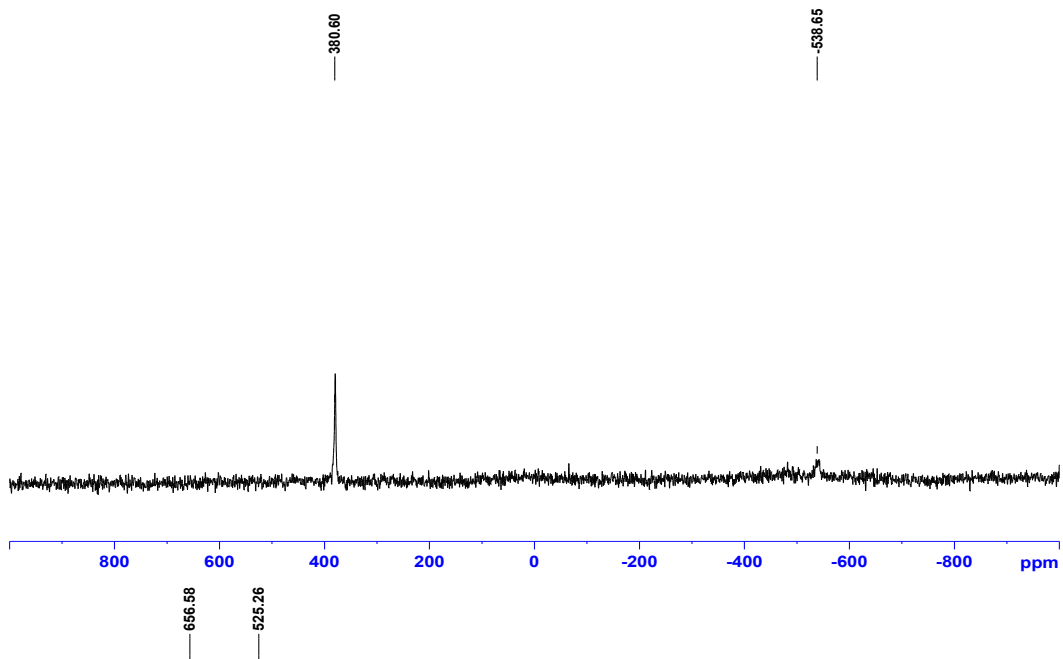
	exp.	calc.			
	1	1	1⁻	2	2⁻
V(1)-O(1) _{phenolato}	1.951(2))	1.95 9	1.99 2	1.941	1.963
V(1)-N(9) _{imine}	2.076(2))	2.10 1	2.06 7	2.110	2.038
V(1)-N(18) _{py}	2.129(2))	2.15 7	2.18 6	2.168	2.204
V(1)-O(21) _{acac}	2.144(2))	2.24 4	2.33 3	2.243	2.338
V(1)-O(25) _{acac}	1.989(2))	2.00 2	2.02 6	2.001	2.024
V(1)-O(30) _{oxo}	1.614(2))	1.58 9	1.59 8	1.589	1.595
O(1)-C(2)	1.320(2))	1.29 6	1.29 9	1.305	1.307
C(2)-C(7)	1.427(2))	1.44 4	1.44 8	1.456	1.465
C(7)-C(8)	1.428(2))	1.42 5	1.43 5	1.433	1.437
C(8)-N(9)	1.299(2))	1.30 9	1.32 4	1.303	1.329
N(9)-C(10)	1.423(2))	1.40 8	1.38 1	1.409	1.377
C(10)-C(19)	1.420(2))	1.43 3	1.43 6	1.433	1.435
N(18)-C(19)	1.369(2))	1.36 5	1.36 1	1.364	1.359
O(21)-C(22)	1.261(2))	1.26 3	1.25 9	1.263	1.257
C(22)-C(23)	1.411(3))	1.41 9	1.41 9	1.418	1.420
C(23)-C(24)	1.382(3))	1.39 8	1.40 6	1.398	1.403
C(24)-O(25)	1.285(2))	1.28 5	1.27 4	1.285	1.276

Table S3 Selected experimental bond lengths (Å) of **4** and **5** and the corresponding calculated bond lengths

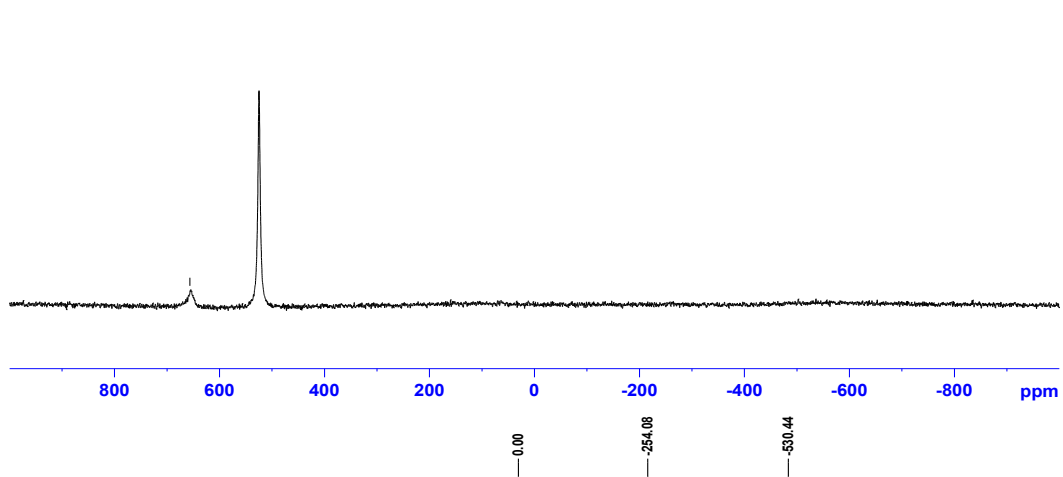
bonds	exp.		calc.	
	4	5	4	5
V(1)-O(1) _{phenolato}	1.929(2)	1.924(2)	1.911	1.908
V(1)-N(9) _{imine}	2.106(2)	2.130(2)	2.138	2.153
V(1)-N(18) _{py}	2.104(2)	2.116(2)	2.145	2.153
V(1)-O(21)	1.917(2)	2.158(2)	1.847	2.160
V(1)-O(28)	2.130(2)		2.149	
V(1)-N(28)		1.907(2)		1.883
V(1)-O(40) _{oxo}	1.623(2)	1.594(2)	1.589	1.587
O(1)-C(2)	1.310(2)	1.304(4)	1.303	1.306
C(8)-N(9)	1.310(2)	1.289(4)	1.308	1.308
O(21)-C(22)	1.318(2)	1.293(3)	1.330	1.289
C(22)-C(23)	1.428(2)	1.402(4)	1.420	1.421
C(23)-C(24)	1.388(2)	1.375(4)	1.393	1.383
C(24)-C(25)	1.429(2)	1.385(5)	1.426	1.413
C(25)-C(26)	1.381(2)	1.384(4)	1.389	1.395
C(26)-C(27)	1.420(2)	1.395(4)	1.415	1.398
C(22)-C(27)	1.435(2)	1.433(4)	1.433	1.442
C(27)-O(28)	1.292(2)		1.298	
C(27)-N(28)		1.359(4)		1.371

Table S4 Selected experimental bond lengths (Å) of $6 \cdot \frac{1}{2} \text{CH}_2\text{Cl}_2$

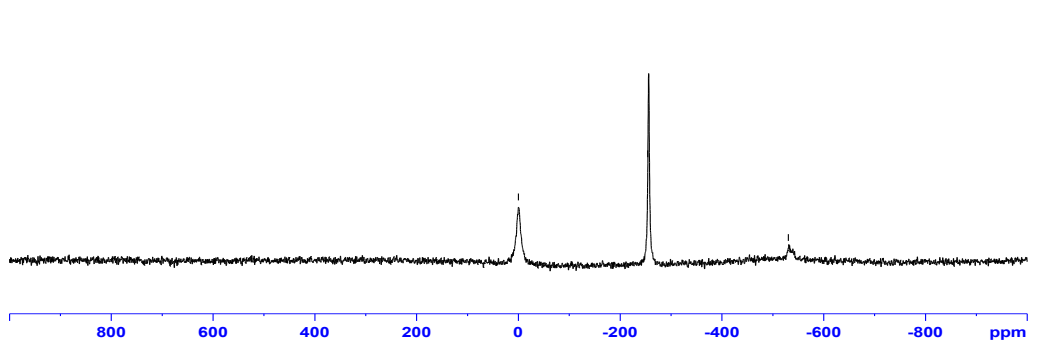
V(1)-O(1) _{oxo}	1.591(2)	V(2)-O(2)	1.586(3)
))))
V(1)-N(1) _{py}	2.104(3)	V(2)-N(29)	2.100(3)
))))
V(1)-N(11) _{imine}	2.072(2)	V(2)-N(31)	2.080(3)
))))
V(1)-	1.972(2)	V(2)-O(39)	1.956(2)
O(19) _{phenolato})))
V(1)-O(41) _{sulfato}	1.963(2)	V(2)-O(42)	1.985(2)
))))
V(1)-O(39)	2.436(2)	V(2)-O(19)	2.482(2)
))))
N(11)-C(12)	1.292(4)	N(31)-	1.301(4)
))	C(32))
N(1)-C(10)	1.370(4)	N(21)-	1.368(4)
))	C(30))
C(9)-C(10)	1.418(5)	C(29)-C(30)	1.425(4)
))))
C(9)-N(11)	1.422(4)	C(29)-	1.419(4)
))	N(31))
C(12)-C(13)	1.439(4)	C(32)-C(33)	1.438(5)
))))
C(13)-C(18)	1.421(4)	C(33)-C(38)	1.409(5)
))))
C(18)-O(19)	1.334(4)	C(38)-	1.348(4)
))	O(39))



(a)



(b)



(c)

Fig. S1 Fluid solution ^{51}V NMR of (a) **3**, (b) **4** and (c) **5**

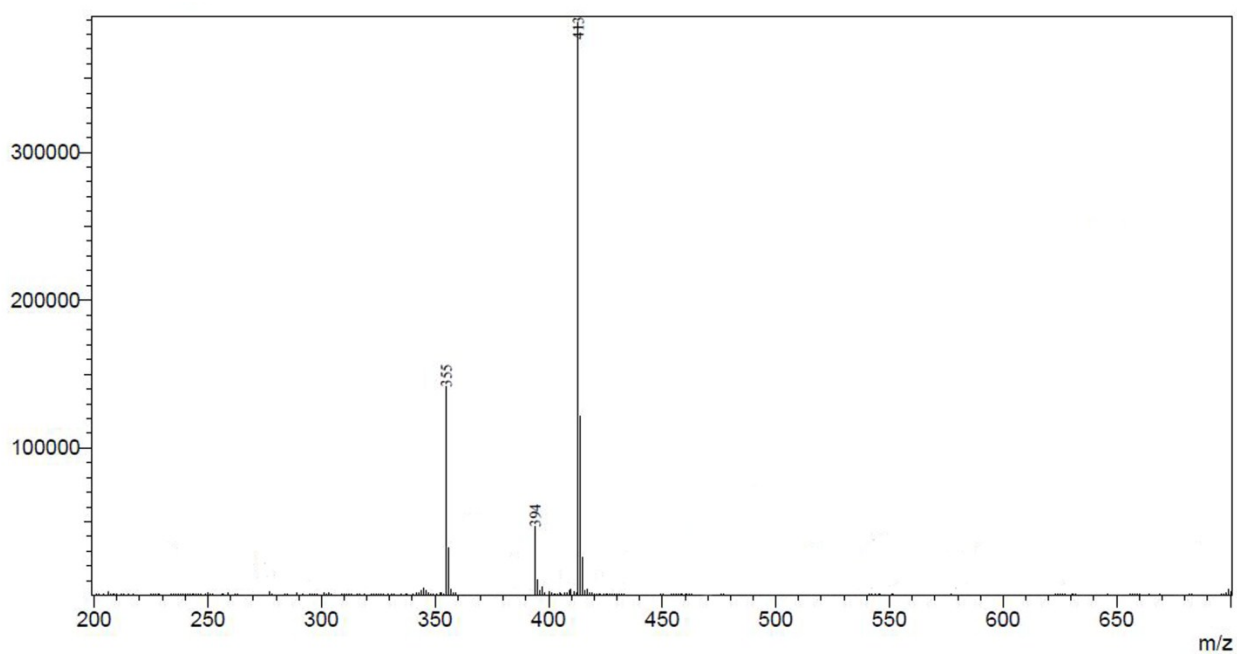


Fig. S2 ESI mass spectrum of **1**.

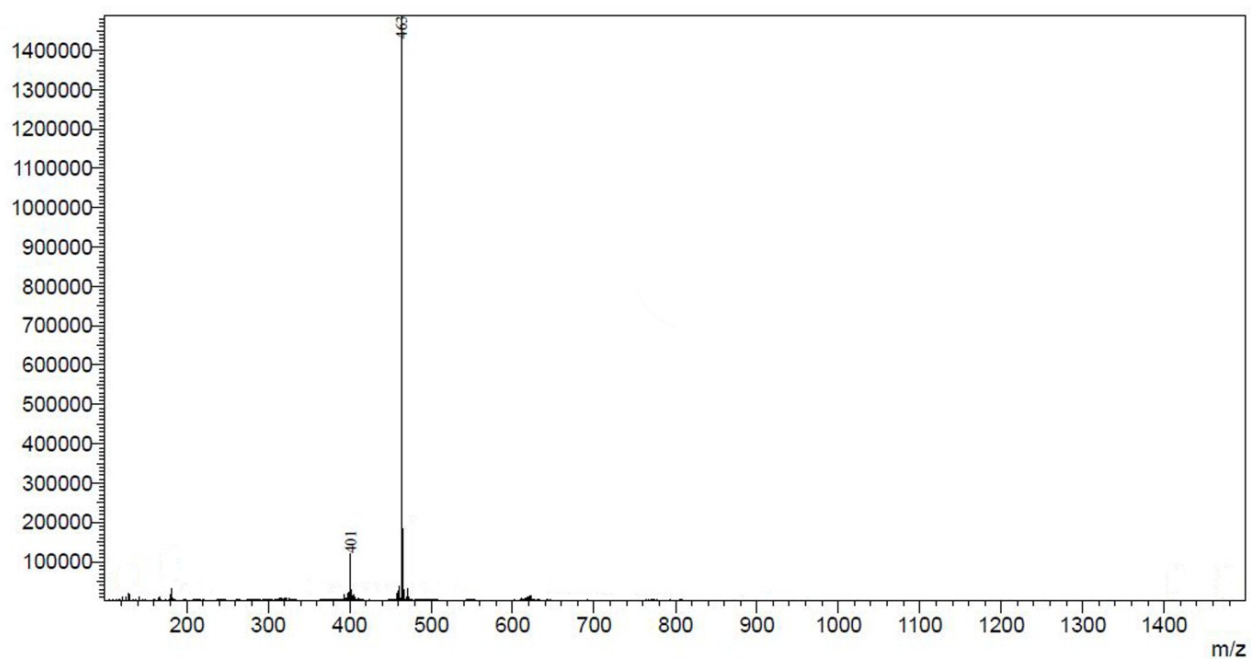


Fig. S3 ESI mass spectrum of **2**.

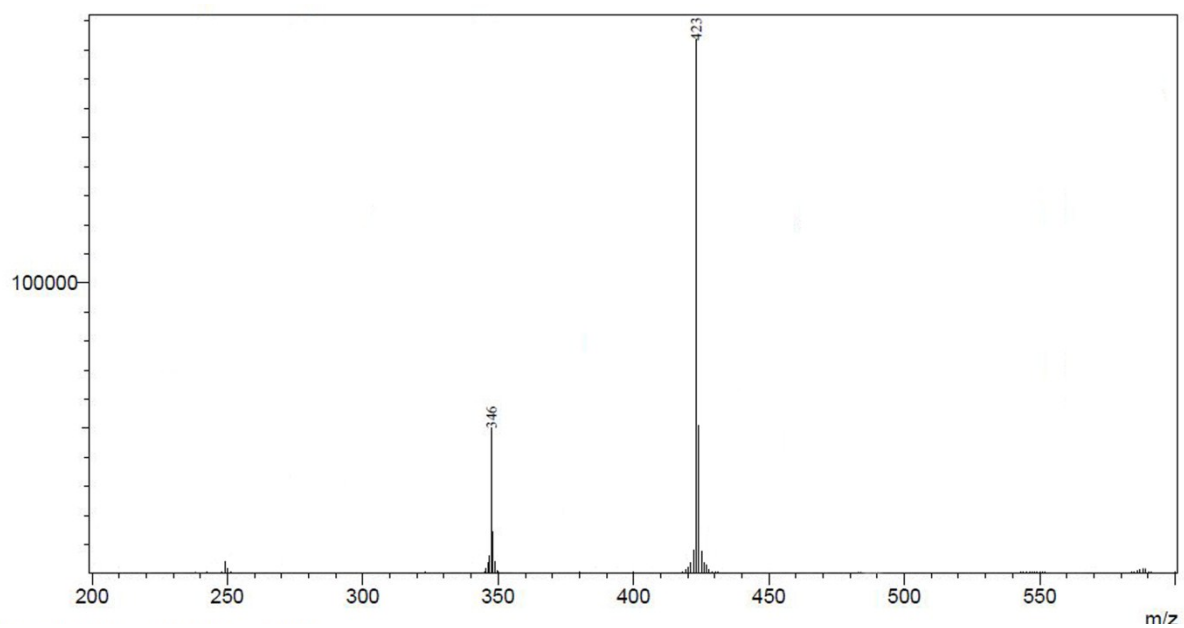


Fig. S4 ESI mass spectrum of **3**.

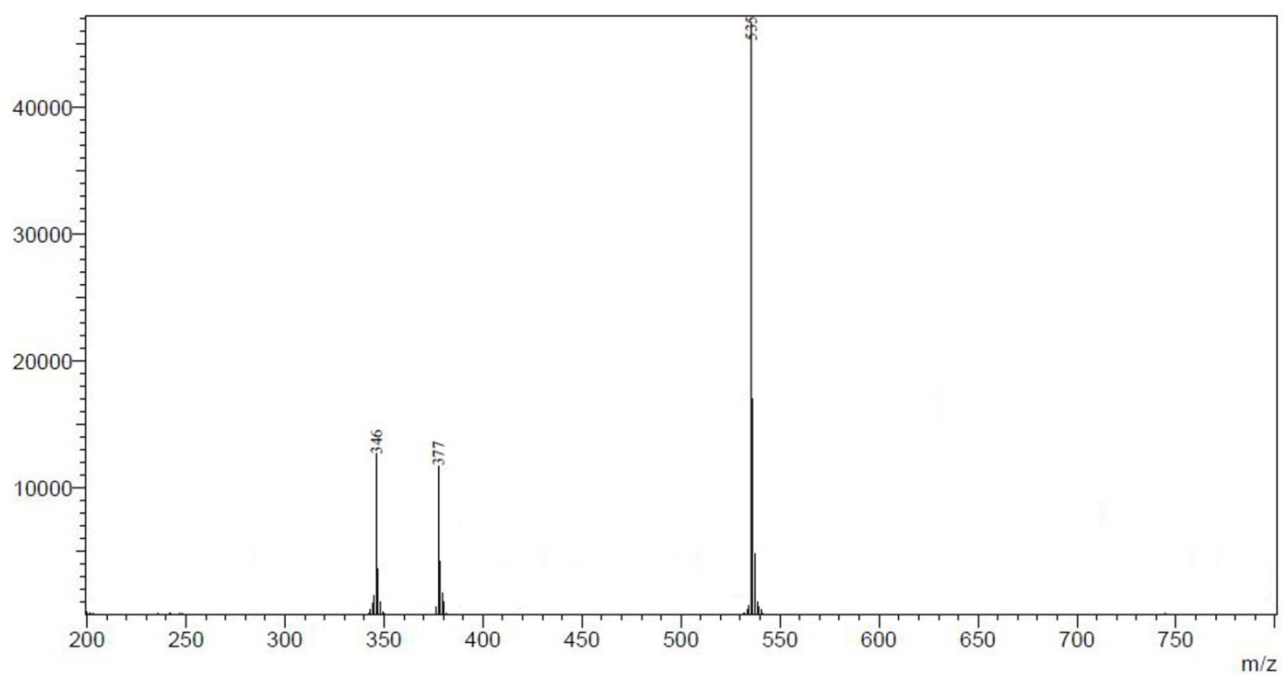


Fig. S5 ESI mass spectrum of **4**.

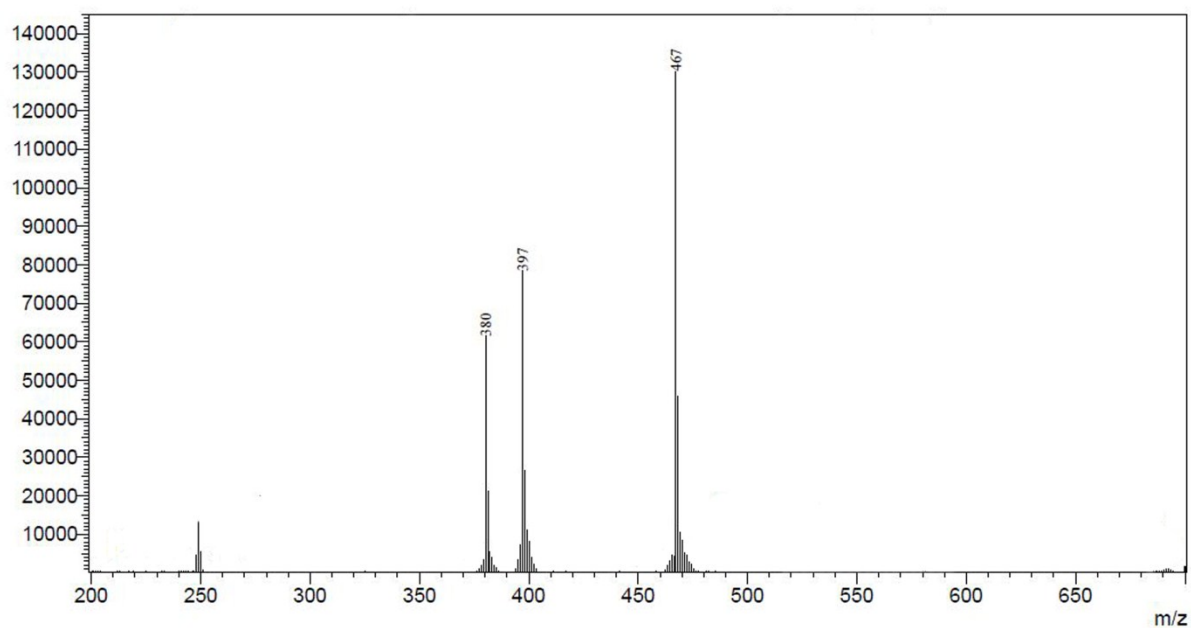


Fig. S6 ESI mass spectrum of **5**.

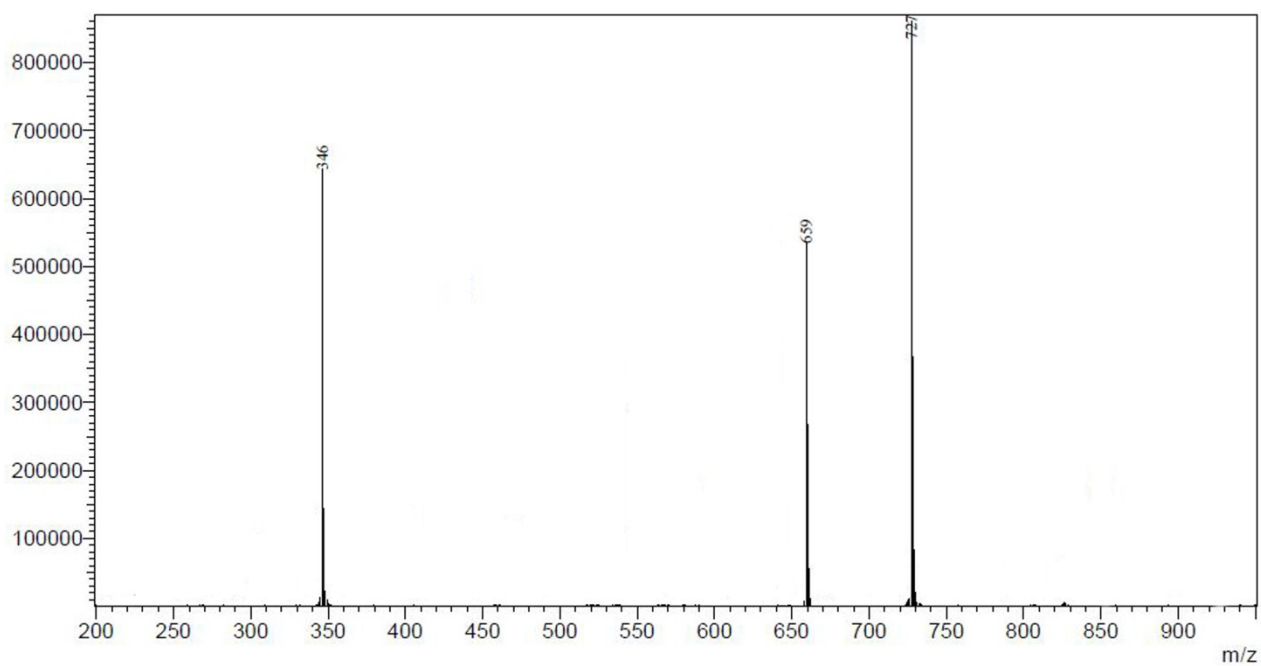


Fig. S7 ESI mass spectrum of **6**.

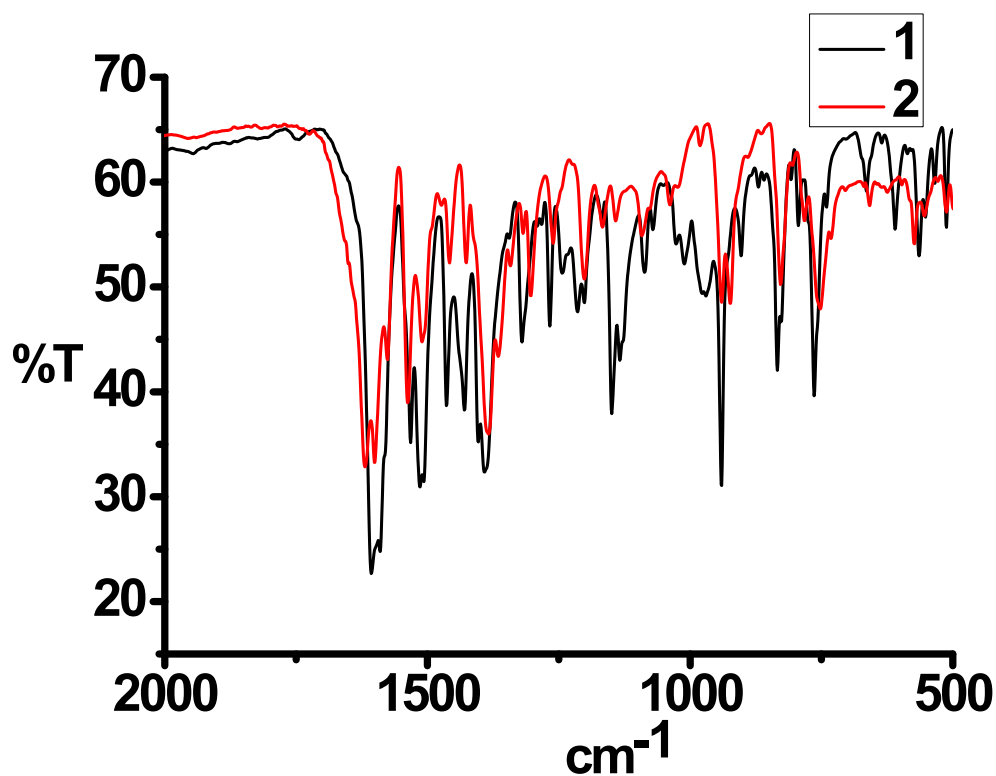


Fig. S8 FT-IR spectra of 1 and 2.

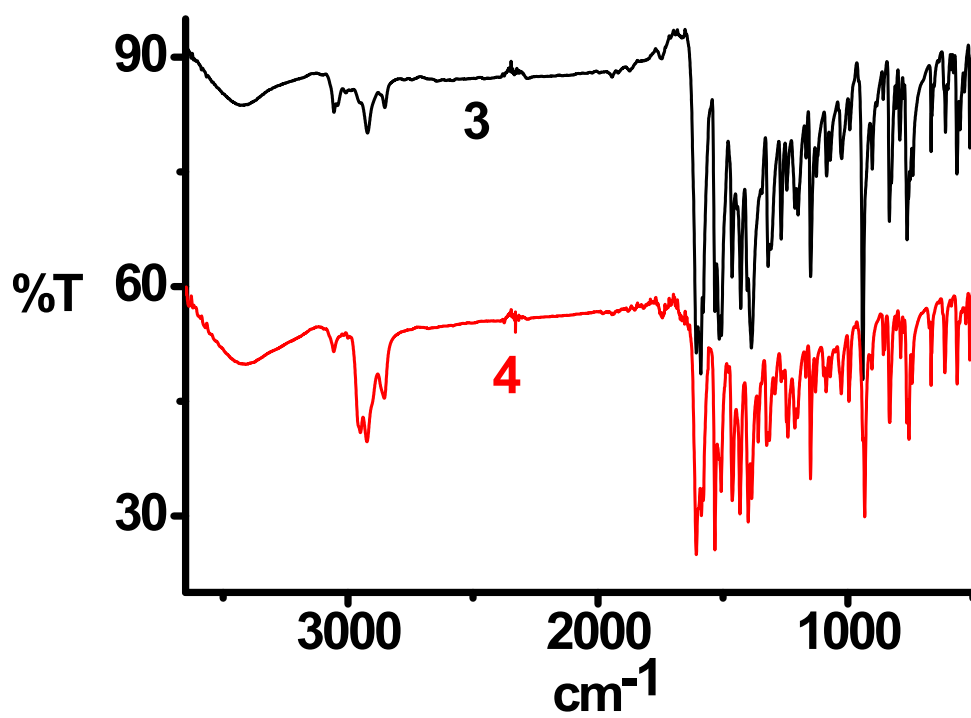


Fig. S9 FT-IR spectra of 3 and 4.

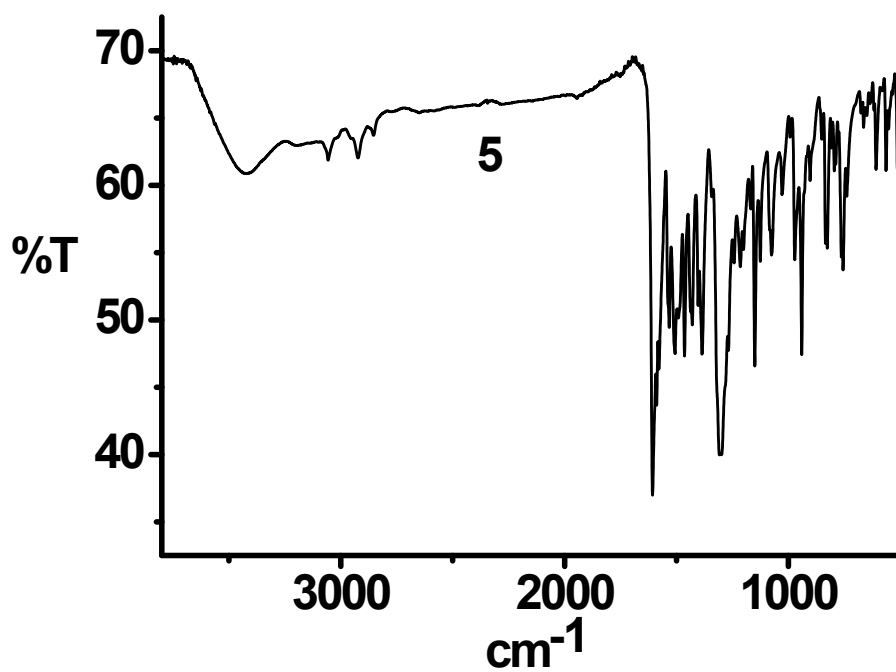


Fig. S10 FT-IR spectrum of 5.

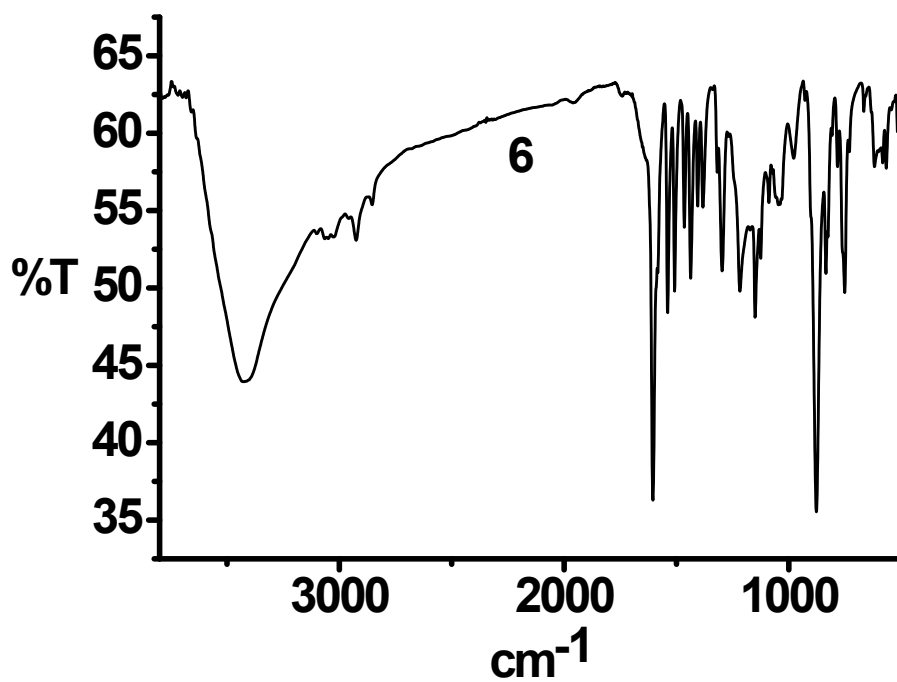


Fig. S11 FT-IR spectrum of 6.

Table S5 Gas phase optimized coordinates of **1** (doublet)

Center Number	Atomic Number	Atomic Type	Coordinates (Angstroms)		
			X	Y	Z
1	23	0	3.620896	1.029631	4.882894
2	8	0	4.542908	2.302148	5.115847
3	8	0	1.818518	1.787321	5.001148
4	6	0	1.191028	2.529442	4.143611
5	6	0	0.033709	3.243322	4.571364
6	1	0	-0.258975	3.130691	5.610916
7	6	0	-0.674299	4.053727	3.706011
8	1	0	-1.545948	4.591524	4.072745
9	6	0	-0.286477	4.198054	2.352062
10	1	0	-0.851949	4.839086	1.682532
11	6	0	0.816529	3.505938	1.900651
12	1	0	1.124443	3.595021	0.860114
13	6	0	1.580075	2.664166	2.759878
14	6	0	2.661577	1.944851	2.173353
15	1	0	2.767685	2.082359	1.094524
16	7	0	3.502029	1.152190	2.788423
17	6	0	4.473440	0.408020	2.092539
18	6	0	4.587192	0.282341	0.713003
19	1	0	3.873560	0.764281	0.053474
20	6	0	5.622368	-0.483455	0.130906
21	1	0	5.676585	-0.550191	-0.952286
22	6	0	6.549885	-1.144990	0.908865
23	1	0	7.342173	-1.734283	0.454987
24	6	0	6.460005	-1.068403	2.322885
25	6	0	7.354566	-1.731690	3.203475
26	1	0	8.165097	-2.325614	2.787500
27	6	0	7.188532	-1.620501	4.566287
28	1	0	7.858570	-2.116084	5.261516
29	6	0	6.118096	-0.842707	5.062957
30	1	0	5.943261	-0.728184	6.128794
31	7	0	5.271491	-0.214455	4.266503
32	6	0	5.414196	-0.297936	2.911618
33	8	0	2.571853	-0.900772	4.425994
34	6	0	1.972150	-1.666390	5.232421
35	6	0	2.044526	-1.555640	6.644895
36	1	0	1.483760	-2.263748	7.244702
37	6	0	2.827207	-0.607128	7.309964
38	8	0	3.550924	0.290211	6.742520
39	6	0	1.132481	-2.773682	4.621004
40	1	0	0.338796	-2.326356	4.010314
41	1	0	0.678692	-3.426742	5.372220

42	1	0	1.756076	-3.375017	3.948870
43	6	0	2.882616	-0.598500	8.823032
44	1	0	3.923944	-0.689597	9.154736
45	1	0	2.291256	-1.403812	9.267911
46	1	0	2.512753	0.365950	9.191522

Table S6 Gas phase optimized coordinates of **1⁻** (singlet)

Center Number	Atomic Number	Atomic Type	Coordinates (Angstroms)		
			X	Y	Z
1	23	0	3.639870	1.125661	4.853353
2	8	0	4.610654	2.367002	5.117533
3	8	0	1.823053	1.920752	5.035257
4	6	0	1.142760	2.540494	4.118732
5	6	0	-0.090998	3.158659	4.472560
6	1	0	-0.420344	3.032762	5.500977
7	6	0	-0.834867	3.901245	3.565941
8	1	0	-1.771962	4.356573	3.884084
9	6	0	-0.376609	4.084018	2.245604
10	1	0	-0.950801	4.672572	1.533540
11	6	0	0.822352	3.495531	1.868764
12	1	0	1.183810	3.622118	0.847919
13	6	0	1.598479	2.702589	2.753625
14	6	0	2.805578	2.125805	2.233048
15	1	0	3.124701	2.515768	1.259904
16	7	0	3.523796	1.163233	2.790342
17	6	0	4.508890	0.484315	2.100179
18	6	0	4.691690	0.470840	0.706983
19	1	0	4.003464	1.008933	0.063568
20	6	0	5.729113	-0.282186	0.126815
21	1	0	5.841247	-0.268516	-0.956114
22	6	0	6.585694	-1.062018	0.890046
23	1	0	7.369657	-1.654982	0.424051
24	6	0	6.421092	-1.104803	2.301857
25	6	0	7.194566	-1.912960	3.172347
26	1	0	7.979051	-2.542458	2.755730
27	6	0	6.941694	-1.903266	4.535094
28	1	0	7.519514	-2.518339	5.219799
29	6	0	5.938792	-1.054619	5.039226
30	1	0	5.730233	-0.982809	6.102461
31	7	0	5.212739	-0.267863	4.252421
32	6	0	5.403478	-0.299157	2.904833
33	8	0	2.507934	-0.874948	4.453067
34	6	0	1.991165	-1.649677	5.300003

35	6	0	2.147788	-1.541185	6.706356
36	1	0	1.648175	-2.269992	7.337461
37	6	0	2.923799	-0.548460	7.330065
38	8	0	3.572032	0.371559	6.732703
39	6	0	1.138369	-2.788320	4.747639
40	1	0	0.292771	-2.364225	4.191560
41	1	0	0.754374	-3.453474	5.529370
42	1	0	1.731711	-3.374051	4.034647
43	6	0	3.043722	-0.538383	8.846994
44	1	0	4.100996	-0.594164	9.136782
45	1	0	2.500495	-1.366038	9.316108
46	1	0	2.654098	0.410868	9.235980

Table S7 Gas phase optimized coordinates of **2** (doublet)

Center Number	Atomic Number	Atomic Type	Coordinates (Angstroms)		
			X	Y	Z
1	23	0	3.594613	1.037845	4.882609
2	8	0	4.521524	2.310616	5.102253
3	8	0	1.798841	1.766250	4.986441
4	6	0	1.177441	2.546210	4.144712
5	6	0	0.050356	3.265242	4.564906
6	1	0	-0.256653	3.149710	5.600733
7	6	0	0.861797	3.539126	1.901791
8	1	0	1.177311	3.632910	0.863255
9	6	0	1.584914	2.689883	2.753867
10	6	0	2.665864	1.957467	2.163111
11	1	0	2.780154	2.104376	1.086113
12	7	0	3.486077	1.152602	2.778301
13	6	0	4.456866	0.398768	2.087825
14	6	0	4.557077	0.254012	0.709967
15	1	0	3.833598	0.722565	0.051326
16	6	0	5.589827	-0.516163	0.129240
17	1	0	5.635207	-0.599045	-0.953149
18	6	0	6.525640	-1.162253	0.910103
19	1	0	7.317050	-1.754323	0.458168
20	6	0	6.446443	-1.068424	2.323787
21	6	0	7.350278	-1.718454	3.205023
22	1	0	8.160444	-2.313525	2.790044
23	6	0	7.192273	-1.592905	4.567295
24	1	0	7.868716	-2.077931	5.263763
25	6	0	6.119797	-0.816014	5.062184
26	1	0	5.949670	-0.694084	6.128072

27	7	0	5.265465	-0.199298	4.265682
28	6	0	5.402105	-0.295026	2.911255
29	8	0	2.585980	-0.911007	4.414834
30	6	0	1.977663	-1.672014	5.219426
31	6	0	2.031330	-1.552181	6.631876
32	1	0	1.466144	-2.259932	7.227951
33	6	0	2.801625	-0.597779	7.303312
34	8	0	3.526677	0.302329	6.742174
35	6	0	1.148623	-2.785740	4.605022
36	1	0	0.355271	-2.343961	3.989765
37	1	0	0.694370	-3.440231	5.354699
38	1	0	1.779411	-3.384238	3.937136
39	6	0	2.840373	-0.585949	8.816873
40	1	0	3.878582	-0.670185	9.159988
41	1	0	2.249018	-1.393898	9.256942
42	1	0	2.460704	0.377017	9.179203
43	6	0	-0.253874	4.268838	2.334551
44	6	0	-0.668506	4.118620	3.708525
45	6	0	-0.986226	5.137759	1.469485
46	6	0	-2.079263	5.831459	1.929666
47	1	0	-2.631652	6.491728	1.266675
48	6	0	-2.491756	5.685422	3.286545
49	6	0	-1.810649	4.857269	4.147743
50	1	0	-3.357743	6.238906	3.641618
51	1	0	-2.132326	4.753036	5.181268
52	1	0	-0.660611	5.240979	0.436213

Table S8 Gas phase optimized coordinates of **2⁻** (singlet)

Center Number	Atomic Number	Atomic Type	Coordinates (Angstroms)		
			X	Y	Z
1	23	0	3.581895	1.130258	4.848881
2	8	0	4.518079	2.391600	5.126452
3	8	0	1.748116	1.814201	4.994925
4	6	0	1.123403	2.570252	4.130663
5	6	0	-0.068358	3.208174	4.488049
6	1	0	-0.446957	3.025547	5.491262
7	6	0	0.970694	3.696275	1.944448
8	1	0	1.368700	3.875380	0.944977
9	6	0	1.655502	2.813769	2.787618
10	6	0	2.851721	2.198097	2.283019
11	1	0	3.246299	2.625006	1.354309

12	7	0	3.488625	1.158007	2.812634
13	6	0	4.430462	0.440031	2.110184
14	6	0	4.559664	0.381208	0.714750
15	1	0	3.849620	0.907918	0.085192
16	6	0	5.567283	-0.404408	0.121931
17	1	0	5.635771	-0.432156	-0.964117
18	6	0	6.450634	-1.159846	0.878575
19	1	0	7.214060	-1.772054	0.403808
20	6	0	6.346500	-1.144781	2.296751
21	6	0	7.166437	-1.902966	3.170592
22	1	0	7.938128	-2.546186	2.751185
23	6	0	6.977618	-1.824782	4.539473
24	1	0	7.592839	-2.399140	5.226736
25	6	0	5.982789	-0.965062	5.047322
26	1	0	5.813622	-0.850580	6.113894
27	7	0	5.210864	-0.232008	4.256538
28	6	0	5.350268	-0.321865	2.906849
29	8	0	2.549638	-0.928717	4.446887
30	6	0	2.035539	-1.704479	5.292246
31	6	0	2.181792	-1.583613	6.700107
32	1	0	1.691699	-2.316512	7.333518
33	6	0	2.934363	-0.574062	7.319596
34	8	0	3.564740	0.360333	6.721144
35	6	0	1.201701	-2.857032	4.741861
36	1	0	0.344405	-2.446386	4.193890
37	1	0	0.835275	-3.531455	5.523813
38	1	0	1.800921	-3.428475	4.022524
39	6	0	3.052084	-0.553815	8.835800
40	1	0	4.110048	-0.585292	9.126196
41	1	0	2.526101	-1.390283	9.308366
42	1	0	2.642050	0.389173	9.218466
43	6	0	-0.231114	4.340999	2.310035
44	6	0	-0.768824	4.078574	3.621228
45	6	0	-0.930396	5.223452	1.440263
46	6	0	-2.107841	5.834230	1.830709
47	1	0	-2.628354	6.507095	1.152144
48	6	0	-2.637095	5.580718	3.122681
49	6	0	-1.982554	4.724976	3.990441
50	1	0	-3.563509	6.062394	3.430460
51	1	0	-2.391891	4.532255	4.981003
52	1	0	-0.517201	5.412414	0.449872

Table S9 Gas phase optimized coordinates of **4** (singlet)

Center Number	Atomic Number	Atomic Type	Coordinates (Angstroms)		
			X	Y	Z
1	23	0	3.843062	7.490158	5.003366
2	8	0	5.136932	7.210676	4.123488
3	8	0	2.583080	6.293543	4.206779
4	6	0	2.587909	4.993839	4.106421
5	6	0	1.881183	4.374415	3.043543
6	6	0	1.862729	2.996689	2.914699
7	6	0	2.526301	2.161834	3.843154
8	6	0	3.198584	2.740129	4.900908
9	6	0	3.250045	4.151170	5.059829
10	6	0	3.882857	4.687941	6.218530
11	7	0	4.059070	5.957503	6.478696
12	6	0	4.577511	6.377542	7.716465
13	6	0	4.614713	5.643902	8.893747
14	6	0	5.208138	6.183637	10.058852
15	6	0	5.753328	7.451612	10.065187
16	6	0	5.700402	8.248388	8.891021
17	6	0	6.209318	9.570816	8.800622
18	6	0	6.089598	10.269008	7.619364
19	6	0	5.444056	9.660334	6.518614
20	7	0	4.959994	8.429437	6.576149
21	6	0	5.089731	7.707211	7.725577
22	8	0	3.337358	9.073679	4.197582
23	6	0	2.342558	9.823326	4.664238
24	6	0	1.897286	11.035243	4.072087
25	6	0	0.851127	11.678990	4.729438
26	6	0	0.240127	11.193348	5.923393
27	6	0	0.699708	10.007339	6.482332
28	6	0	1.753134	9.296222	5.859246
29	8	0	2.267048	8.184419	6.288594
30	6	0	2.522677	11.567283	2.769774
31	6	0	4.035315	11.830857	2.977328
32	6	0	2.333691	10.524130	1.639345
33	6	0	1.874445	12.888348	2.308507
34	6	0	-0.910935	12.006263	6.547739
35	6	0	-0.401081	13.417407	6.932051
36	6	0	-2.067835	12.141586	5.526706
37	6	0	-1.477784	11.343965	7.819064
38	1	0	1.370470	5.019171	2.335121
39	1	0	1.325905	2.548456	2.081802
40	1	0	2.499823	1.082632	3.727397
41	1	0	3.702622	2.115377	5.636121

42	1	0	4.235412	3.954206	6.948457
43	1	0	4.171061	4.654760	8.943054
44	1	0	5.223613	5.583221	10.964176
45	1	0	6.206822	7.858269	10.965145
46	1	0	6.686224	10.019655	9.668580
47	1	0	6.468983	11.280633	7.518005
48	1	0	5.312362	10.188356	5.580213
49	1	0	0.471594	12.601826	4.309351
50	1	0	0.274628	9.582791	7.384481
51	1	0	4.196230	12.565875	3.776776
52	1	0	4.477379	12.233085	2.056514
53	1	0	4.567098	10.910439	3.232038
54	1	0	2.812988	9.573734	1.887050
55	1	0	2.773448	10.898063	0.705336
56	1	0	1.267859	10.336149	1.460297
57	1	0	0.804139	12.771035	2.101085
58	1	0	2.354215	13.221804	1.380531
59	1	0	1.996202	13.688839	3.048554
60	1	0	-1.213204	14.008229	7.375776
61	1	0	-0.024126	13.967770	6.063377
62	1	0	0.411716	13.351684	7.665525
63	1	0	-2.447435	11.155444	5.234041
64	1	0	-1.753124	12.662087	4.615941
65	1	0	-2.897910	12.710426	5.965614
66	1	0	-0.717509	11.245184	8.602818
67	1	0	-1.886811	10.348147	7.612082
68	1	0	-2.291055	11.959467	8.222305

Table S10 Gas phase optimized coordinates of **5** (singlet)

Center Number	Atomic Number	Atomic Type	Coordinates (Angstroms)		
			X	Y	Z
1	6	0	1.663544	14.388748	3.315039
2	6	0	0.867745	15.561370	3.278448
3	1	0	1.141067	16.377951	3.939374
4	6	0	-0.227260	15.645954	2.435533
5	1	0	-0.830194	16.550956	2.437700
6	6	0	-0.575790	14.581299	1.573428
7	1	0	-1.437462	14.665669	0.918438
8	6	0	0.201140	13.440353	1.571142
9	1	0	-0.039368	12.615582	0.902895
10	6	0	1.325490	13.313050	2.430353
11	6	0	2.144281	12.151848	2.322710
12	1	0	1.877284	11.454384	1.524015

13	6	0	3.989765	10.758591	2.793437
14	6	0	4.101674	10.103263	1.575552
15	1	0	3.568650	10.466283	0.702693
16	6	0	4.933992	8.967259	1.443458
17	1	0	4.999060	8.475380	0.477055
18	6	0	5.663827	8.486302	2.511118
19	1	0	6.300603	7.612613	2.402044
20	6	0	5.605739	9.152725	3.763803
21	6	0	6.334967	8.749073	4.911999
22	1	0	6.974338	7.871418	4.857727
23	6	0	6.227820	9.475190	6.077636
24	1	0	6.770943	9.193152	6.973677
25	6	0	5.407033	10.624744	6.100807
26	1	0	5.322155	11.232316	6.994841
27	6	0	4.780850	10.306308	3.888677
28	6	0	6.207325	14.107745	4.764144
29	6	0	7.482604	14.620829	4.403861
30	1	0	7.828898	14.492708	3.382863
31	6	0	8.253814	15.279784	5.344109
32	1	0	9.226017	15.683526	5.086736
33	6	0	7.783428	15.436294	6.667382
34	6	0	6.541286	14.945605	7.070675
35	1	0	6.207910	15.087825	8.093187
36	6	0	5.754234	14.287383	6.121662
37	7	0	3.173618	11.866835	3.077949
38	7	0	4.714802	11.028106	5.045467
39	7	0	4.517030	13.730736	6.322350
40	1	0	4.151154	13.794487	7.270136
41	7	0	8.615777	16.122054	7.638878
42	8	0	2.692699	14.339445	4.117573
43	8	0	5.403628	13.472891	3.981793
44	8	0	8.188221	16.241706	8.796264
45	8	0	9.716171	16.553684	7.268507
46	8	0	2.417527	12.309876	5.888418
47	23	0	3.569464	12.861803	4.946347