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# Supporting Information

# Facile assembly of 1D multinuclear $Ag_n$ ($n$ = 11, 11, 12) alkynly chains with $CF_3COO^-$/$CH_3COO^-$ as auxiliary ligand

**Kun Zhou,[a] Chao Qin,*[a] Li-Kai Yan,[a] Fang-Ming Wang,*[b] and Zhong-Min Su*[a]**

[a] *Institute of Functional Material Chemistry, Key Lab of Polyoxometalate Science of Ministry of Education, Faculty of Chemistry, Northeast Normal University; Changchun, 130024, Jilin, China. Fax: (+86) 431-85684009; Tel: (+86) 431-85099108. E-mail: qinc703@nenu.edu.cn; zmsu@nenu.edu.cn.*

[b] *School of Biology and Chemistry Engineering, Jiangsu University of Science and Technology, Zhenjiang, 212003, Jiangsu, China. E-mail: wangfmzj@just.edu.cn.*

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## 1. Synthetic procedures

In order to understand and confirm what role the three POMs play in constructing compounds **1**–**3**, comparative experiments were performed in the absence of POMs as shown in Table S1 below.

**$[Ag_{11}(C{\equiv}C^tBu)_6(CF_3COO)_5(CH_3OH)]_n$ (1)**

$[AgC{\equiv}C^tBu]_n$ (0.0759 g, 0.4016 mmol) was dissolved in methanol (10 mL) under stir. Then $CF_3COOH$ (0.2 mL, 0.0027 mmol) was added under stir to form a colorless solution. After stir for 10 h, the solution (pH ≈ 1.0) evaporated slowly at room temperature in an Erlenmeyer flask. A few weeks later, we have achieved compound **1**. They were deposited as colorless block crystals. Yield: *ca.* 15% (based on Ag).

**$[Ag_{11}(C{\equiv}C^tBu)_7(CH_3COO)_4]_n$ (2)**

**Method 1:** $[AgC{\equiv}C^tBu]_n$ (0.0588 g, 0.3111 mmol), $Ni(CH_3COO)_2{\cdot}4H_2O$ (0.0175 g, 0.0703 mmol), $NaClO_4{\cdot}H_2O$ (0.0083 g, 0.0591 mmol) and $AgBF_4$ (0.0173 g, 0.0889 mmol) were in turn added into ethanol-acetonitrile-dimethylformamide (v : v : v=1 : 1 : 1) (15 mL) under ultrasonication. The mixture was stirred for 28 h to give a colorless solution (pH ≈ 8.0). The solution evaporated slowly at room temperature in an Erlenmeyer flask. A few days later, we have successfully achieved compound **2**. They were deposited as colorless block crystals. Yield: *ca.* 27% (based on Ag).

**$[Ag_{12}(C{\equiv}C^tBu)_7(CF_3COO)_5{\cdot}H_2O]_n$ (3)**

$[AgC{\equiv}C^tBu]_n$ (0.0565 g, 0.2989 mmol) was dissolved in a solution of $CF_3COOAg$ (0.1099 g, 0.4975 mmol) in methanol (10 mL) under ultrasonication. Then $H_2O$ (2 mL) was added to the above resulting solution. The mixture was stirred for 3 h to give a white suspension. The reaction mixture was transferred to a Teflon-lined stainless autoclave (25 mL) and kept at 85 ºC for 22 h. After cooling to room temperature, the solution (pH ≈ 3.7) was filtered and the filtrate evaporated slowly at room temperature in an Erlenmeyer flask. A few days later, we have successfully achieved compound **3**. They were deposited as colorless rectangle crystals. Yield: *ca.* 23% (based on Ag).

**Table S1** Synthesis methods contrasted

| | Compound **1** | Compound **2** | Compound **3** |
|---|---|---|---|
| with $[Mn_{12}(CH_3COO)_{16}(H_2O)_4O_{12}]{\cdot}2CH_3COOH{\cdot}4H_2O$ in reaction system | pH ≈ 1.2 | | |
| without $[Mn_{12}(CH_3COO)_{16}(H_2O)_4O_{12}]{\cdot}2CH_3COOH{\cdot}4H_2O$ in reaction system | pH ≈ 1.0 | | |
| with $(NH_4)_3[CrMo_6H_6O_{24}]{\cdot}7H_2O$ in reaction system | | pH ≈ 7.4 | |
| without $(NH_4)_3[CrMo_6H_6O_{24}]{\cdot}7H_2O$ in reaction system | | pH ≈ 8.0 | |
| with $\alpha$-$K_6P_2W_{18}O_{62}{\cdot}14H_2O$ in reaction system | | | pH ≈ 4.7 |
| without $\alpha$-$K_6P_2W_{18}O_{62}{\cdot}14H_2O$ in reaction system | | | pH ≈ 3.7 |

## 2. Crystallographic studies

Crystal data for **1**: $C_{47}H_{58}F_{15}O_{11}Ag_{11}$; triclinic, space group *P*-1, M = 2266.47, *a* = 14.551(4) Å, *b* = 14.805(4) Å, *c* = 18.520(7) Å, *α* = 110.957(4) °, *β* = 92.602(4) °, *γ* = 117.093(3) °, V = 3211.2(17) Å$^3$, *Z* = 2, 15742 reflns measured, 11016 unique reflections ($R_{int}$= 0.0573), $R_1$ = 0.0781, $wR_2$ = 0.1667, goodness-of-fit = 0.950 for 4624 observed reflections with $I > 2\sigma(I)$. CCDC-926484 (**1**) contains the supplementary crystallographic data for this paper. These data can be obtained free of charge from the Cambridge Crystallographic Data Centre via www.ccdc.cam.ac.uk/ data_request/cif for **1**.

Crystal data for **2**: $C_{50}H_{75}O_8Ag_{11}$; triclinic, space group *P*-1, M = 1990.67, *a* = 13.983(5) Å, *b* = 14.005(5) Å, *c* = 18.653(5) Å, *α* = 99.434(5) °, *β* = 99.090(5) °, *γ* = 116.326(5) °, V = 3117.9(18) Å$^3$, *Z* = 2, 15420 reflns measured, 10520 unique reflections ($R_{int}$= 0.0523), $R_1$ = 0.0639, $wR_2$ = 0.1314, goodness-of-fit = 0.993 for 5005 observed reflections with $I > 2\sigma(I)$. CCDC-926485 (**2**) contains the supplementary crystallographic data for this paper. These data can be obtained free of charge from the Cambridge Crystallographic Data Centre via www.ccdc.cam.ac.uk/ data_request/cif for **2**.

Crystal data for **3**: $C_{52}H_{65}F_{15}O_{11}Ag_{12}$; monoclinic, space group $P2_1$, M = 2445.48, *a* = 11.490(5) Å, *b* = 23.129(5) Å, *c* = 14.609(5) Å, *α* = 90.000(5) °, *β* = 106.035(5) °, *γ* = 90.000(5) °, V = 3731(2) Å$^3$, *Z* = 2, 18864 reflns measured, 9684 unique reflections ($R_{int}$= 0.0385), $R_1$ = 0.0607, $wR_2$ = 0.1453, goodness-of-fit = 1.036 for 6599 observed reflections with $I > 2\sigma(I)$. CCDC-926482 (**3**) contains the supplementary crystallographic data for this paper. These data can be obtained free of charge from the Cambridge Crystallographic Data Centre via www.ccdc.cam.ac.uk/ data_request/cif for **3**.

## 3. Selected bond lengths (Å) and bond angles (º) for compounds 1–3

**Table S2** Selected bond lengths (Å) and bond angles (º) for compound **1**

| | | | | | |
|---|---|---|---|---|---|
| Ag(1)-C(29) | 2.072(16) | | Ag(10)-C(23) | 2.33(2) | |
| Ag(1)-C(35) | 2.14(2) | | Ag(10)-O(10)$^{\#2}$ | 2.364(17) | |
| Ag(1)-Ag(6) | 2.885(2) | | Ag(10)-C(17) | 2.369(17) | |
| Ag(1)-Ag(5) | 2.893(2) | | Ag(10)-O(8)$^{\#2}$ | 2.490(13) | |
| Ag(1)-Ag(9) | 2.986(2) | | Ag(10)-C(24) | 2.67(2) | |
| Ag(1)-Ag(9)$^{\#1}$ | 3.074(2) | | Ag(10)-C(18) | 2.707(15) | |
| Ag(1)-Ag(8) | 3.175(2) | | Ag(10)-Ag(3)$^{\#2}$ | 3.065(2) | |
| Ag(2)-C(23) | 2.07(2) | | Ag(10)-Ag(11)$^{\#2}$ | 3.119(5) | |
| Ag(2)-C(11) | 2.085(16) | | Ag(11)-O(6)$^{\#2}$ | 2.274(15) | |
| Ag(2)-Ag(11) | 2.850(4) | | Ag(11)-C(11) | 2.317(19) | |
| Ag(2)-Ag(11) | 2.874(4) | | Ag(11)-C(23)$^{\#2}$ | 2.69(2) | |
| Ag(2)-Ag(11)$^{\#2}$ | 3.083(4) | | Ag(11)-Ag(7)$^{\#2}$ | 2.862(4) | |
| Ag(2)-Ag(10) | 3.084(2) | | Ag(11)-Ag(3)$^{\#2}$ | 3.170(4) | |
| Ag(2)-Ag(4) | 3.129(2) | | Ag(11)-Ag(2)$^{\#2}$ | 3.268(5) | |
| Ag(2)-Ag(7) | 3.170(2) | | Ag(11)-C(11) | 2.115(19) | |
| Ag(2)-Ag(11)$^{\#2}$ | 3.268(5) | | Ag(11)-C(23)$^{\#2}$ | 2.12(2) | |
| Ag(3)-C(17)$^{\#2}$ | 2.063(15) | | Ag(11)-O(6)$^{\#2}$ | 2.513(16) | |
| Ag(3)-C(41) | 2.124(19) | | Ag(11)-Ag(2)$^{\#2}$ | 3.083(4) | |
| Ag(3)-Ag(8) | 2.849(2) | | Ag(11)-Ag(10)$^{\#2}$ | 3.119(5) | |
| Ag(3)-Ag(7) | 2.879(2) | | Ag(11)-Ag(7)$^{\#2}$ | 3.122(5) | |
| Ag(3)-Ag(4) | 3.058(2) | | C(17)-Ag(3)$^{\#2}$ | 2.063(15) | |
| Ag(3)-Ag(10)$^{\#2}$ | 3.065(2) | | C(17)-Ag(8)$^{\#2}$ | 2.364(17) | |
| Ag(3)-Ag(6) | 3.082(2) | | C(23)-Ag(11)$^{\#2}$ | 2.12(2) | |
| Ag(3)-Ag(11)$^{\#2}$ | 3.170(4) | | C(23)-Ag(11)$^{\#2}$ | 2.69(2) | |
| Ag(3)-Ag(5) | 3.368(2) | | C(29)-Ag(9)$^{\#1}$ | 2.245(19) | |
| Ag(4)-O(3) | 2.255(15) | | C(30)-Ag(9)$^{\#1}$ | 2.555(18) | |
| Ag(4)-C(11) | 2.285(18) | | O(6)-Ag(11)$^{\#2}$ | 2.274(15) | |
| Ag(4)-C(41) | 2.382(17) | | O(6)-Ag(11)$^{\#2}$ | 2.513(16) | |
| Ag(4)-C(12) | 2.423(19) | | O(8)-Ag(10)$^{\#2}$ | 2.490(13) | |
| Ag(4)-O(8) | 2.561(13) | | O(10)-Ag(10)$^{\#2}$ | 2.364(17) | |
| Ag(4)-C(42) | 2.689(17) | | C(29)-Ag(1)-Ag(6) | 50.2(5) | |
| Ag(5)-C(35) | 2.17(2) | | C(35)-Ag(1)-Ag(6) | 137.7(5) | |
| Ag(5)-O(9) | 2.212(13) | | C(29)-Ag(1)-Ag(5) | 131.0(5) | |
| Ag(5)-Ag(8) | 2.983(2) | | C(35)-Ag(1)-Ag(5) | 48.3(5) | |
| Ag(5)-Ag(9) | 3.157(3) | | Ag(6)-Ag(1)-Ag(5) | 94.26(7) | |
| Ag(6)-C(29) | 2.230(18) | | C(29)-Ag(1)-Ag(9) | 118.2(5) | |
| Ag(6)-O(4) | 2.285(14) | | C(35)-Ag(1)-Ag(9) | 49.6(5) | |
| Ag(6)-C(41) | 2.291(17) | | Ag(6)-Ag(1)-Ag(9) | 140.34(7) | |
| Ag(7)-O(1) | 2.250(13) | | Ag(5)-Ag(1)-Ag(9) | 64.94(6) | |
| Ag(7)-C(23) | 2.41(2) | | C(29)-Ag(1)-Ag(9)$^{\#1}$ | 46.9(5) | |
| Ag(7)-C(41) | 2.441(17) | | C(35)-Ag(1)-Ag(9)$^{\#1}$ | 121.2(5) | |
| Ag(7)-C(24) | 2.70(2) | | Ag(6)-Ag(1)-Ag(9)$^{\#1}$ | 82.66(6) | |
| Ag(7)-Ag(11)$^{\#2}$ | 2.862(4) | | Ag(5)-Ag(1)-Ag(9)$^{\#1}$ | 105.06(7) | |
| Ag(7)-Ag(11)$^{\#2}$ | 3.122(5) | | Ag(9)-Ag(1)-Ag(9)$^{\#1}$ | 71.93(7) | |
| Ag(8)-O(5) | 2.250(14) | | C(29)-Ag(1)-Ag(8) | 141.5(5) | |
| Ag(8)-C(17)$^{\#2}$ | 2.364(17) | | C(35)-Ag(1)-Ag(8) | 50.5(5) | |
| Ag(8)-O(2) | 2.438(14) | | Ag(6)-Ag(1)-Ag(8) | 96.45(6) | |
| Ag(8)-C(35) | 2.453(19) | | Ag(5)-Ag(1)-Ag(8) | 58.68(6) | |
| Ag(9)-C(29)$^{\#1}$ | 2.245(19) | | Ag(9)-Ag(1)-Ag(8) | 99.74(7) | |
| Ag(9)-C(35) | 2.284(19) | | Ag(9)$^{\#1}$-Ag(1)-Ag(8) | 163.68(7) | |
| Ag(9)-C(30)$^{\#1}$ | 2.555(18) | | C(23)-Ag(2)-Ag(11) | 130.7(6) | |
| Ag(9)-O(11) | 2.561(15) | | C(11)-Ag(2)-Ag(11) | 53.3(5) | |
| Ag(9)-C(36) | 2.679(19) | | C(23)-Ag(2)-Ag(11) | 141.0(6) | |
| Ag(9)-Ag(1)$^{\#1}$ | 3.074(2) | | C(11)-Ag(2)-Ag(11) | 47.3(5) | |

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|---|---|
| Ag(11)-Ag(2)-Ag(11) | 20.82(9) |
| C(23)-Ag(2)-Ag(11)$^{\#2}$ | 43.3(6) |
| C(11)-Ag(2)-Ag(11)$^{\#2}$ | 147.6(5) |
| Ag(11)-Ag(2)-Ag(11)$^{\#2}$ | 102.38(12) |
| Ag(11)-Ag(2)-Ag(11)$^{\#2}$ | 101.93(11) |
| C(23)-Ag(2)-Ag(10) | 49.1(6) |
| C(11)-Ag(2)-Ag(10) | 127.6(5) |
| Ag(11)-Ag(2)-Ag(10) | 85.74(10) |
| Ag(11)-Ag(2)-Ag(10) | 103.72(11) |
| Ag(11)$^{\#2}$-Ag(2)-Ag(10) | 60.77(10) |
| C(23)-Ag(2)-Ag(4) | 133.8(6) |
| C(11)-Ag(2)-Ag(4) | 46.9(5) |
| Ag(11)-Ag(2)-Ag(4) | 94.50(10) |
| Ag(11)-Ag(2)-Ag(4) | 78.84(10) |
| Ag(11)$^{\#2}$-Ag(2)-Ag(4) | 129.59(11) |
| Ag(10)-Ag(2)-Ag(4) | 169.01(7) |
| C(23)-Ag(2)-Ag(7) | 49.4(6) |
| C(11)-Ag(2)-Ag(7) | 132.9(5) |
| Ag(11)-Ag(2)-Ag(7) | 154.99(12) |
| Ag(11)-Ag(2)-Ag(7) | 138.48(11) |
| Ag(11)$^{\#2}$-Ag(2)-Ag(7) | 59.89(9) |
| Ag(10)-Ag(2)-Ag(7) | 98.38(6) |
| Ag(4)-Ag(2)-Ag(7) | 86.05(6) |
| C(23)-Ag(2)-Ag(11)$^{\#2}$ | 55.1(6) |
| C(11)-Ag(2)-Ag(11)$^{\#2}$ | 136.1(6) |
| Ag(11)-Ag(2)-Ag(11)$^{\#2}$ | 104.62(11) |
| Ag(11)-Ag(2)-Ag(11)$^{\#2}$ | 97.51(11) |
| Ag(11)$^{\#2}$-Ag(2)-Ag(11)$^{\#2}$ | 18.46(8) |
| Ag(10)-Ag(2)-Ag(11)$^{\#2}$ | 79.20(9) |
| Ag(4)-Ag(2)-Ag(11)$^{\#2}$ | 111.26(10) |
| Ag(7)-Ag(2)-Ag(11)$^{\#2}$ | 52.76(8) |
| C(17)$^{\#2}$-Ag(3)-Ag(8) | 54.8(5) |
| C(41)-Ag(3)-Ag(8) | 116.1(5) |
| C(17)$^{\#2}$-Ag(3)-Ag(7) | 110.4(5) |
| C(41)-Ag(3)-Ag(7) | 56.0(5) |
| Ag(8)-Ag(3)-Ag(7) | 79.57(6) |
| C(17)$^{\#2}$-Ag(3)-Ag(4) | 138.5(5) |
| C(41)-Ag(3)-Ag(4) | 50.9(5) |
| Ag(8)-Ag(3)-Ag(4) | 166.75(7) |
| Ag(7)-Ag(3)-Ag(4) | 92.73(6) |
| C(17)$^{\#2}$-Ag(3)-Ag(10)$^{\#2}$ | 50.5(5) |
| C(41)-Ag(3)-Ag(10)$^{\#2}$ | 138.7(5) |
| Ag(8)-Ag(3)-Ag(10)$^{\#2}$ | 104.85(7) |
| Ag(7)-Ag(3)-Ag(10)$^{\#2}$ | 132.34(7) |
| Ag(4)-Ag(3)-Ag(10)$^{\#2}$ | 88.32(6) |
| C(17)$^{\#2}$-Ag(3)-Ag(6) | 138.5(5) |
| C(41)-Ag(3)-Ag(6) | 48.0(5) |
| Ag(8)-Ag(3)-Ag(6) | 99.35(7) |
| Ag(7)-Ag(3)-Ag(6) | 92.87(6) |
| Ag(4)-Ag(3)-Ag(6) | 70.06(5) |
| Ag(10)$^{\#2}$-Ag(3)-Ag(6) | 131.41(7) |
| C(17)$^{\#2}$-Ag(3)-Ag(11)$^{\#2}$ | 59.3(5) |
| C(41)-Ag(3)-Ag(11)$^{\#2}$ | 108.9(5) |
| Ag(8)-Ag(3)-Ag(11)$^{\#2}$ | 68.61(9) |
| Ag(7)-Ag(3)-Ag(11)$^{\#2}$ | 56.23(9) |
| Ag(4)-Ag(3)-Ag(11)$^{\#2}$ | 115.97(10) |
| Ag(10)$^{\#2}$-Ag(3)-Ag(11)$^{\#2}$ | 80.77(9) |
| Ag(6)-Ag(3)-Ag(11)$^{\#2}$ | 147.76(9) |
| C(17)$^{\#2}$-Ag(3)-Ag(5) | 57.0(5) |
| C(41)-Ag(3)-Ag(5) | 129.3(5) |
| Ag(8)-Ag(3)-Ag(5) | 56.61(5) |
| Ag(7)-Ag(3)-Ag(5) | 133.93(7) |
| Ag(4)-Ag(3)-Ag(5) | 126.92(6) |
| Ag(10)$^{\#2}$-Ag(3)-Ag(5) | 77.47(6) |
| Ag(6)-Ag(3)-Ag(5) | 81.95(6) |
| Ag(11)$^{\#2}$-Ag(3)-Ag(5) | 111.75(10) |
| O(3)-Ag(4)-Ag(3) | 120.4(4) |
| C(11)-Ag(4)-Ag(3) | 99.8(4) |
| C(41)-Ag(4)-Ag(3) | 43.8(5) |
| C(12)-Ag(4)-Ag(3) | 127.1(4) |
| O(8)-Ag(4)-Ag(3) | 60.2(3) |
| C(42)-Ag(4)-Ag(3) | 70.2(4) |
| O(3)-Ag(4)-Ag(2) | 167.6(5) |
| C(11)-Ag(4)-Ag(2) | 41.8(4) |
| C(41)-Ag(4)-Ag(2) | 74.7(4) |
| C(12)-Ag(4)-Ag(2) | 72.5(4) |
| O(8)-Ag(4)-Ag(2) | 101.1(3) |
| C(42)-Ag(4)-Ag(2) | 79.6(3) |
| Ag(3)-Ag(4)-Ag(2) | 67.81(5) |
| C(35)-Ag(5)-Ag(1) | 47.4(5) |
| O(9)-Ag(5)-Ag(1) | 144.5(4) |
| C(35)-Ag(5)-Ag(8) | 54.1(5) |
| O(9)-Ag(5)-Ag(8) | 149.5(4) |
| Ag(1)-Ag(5)-Ag(8) | 65.39(6) |
| C(35)-Ag(5)-Ag(9) | 46.4(5) |
| O(9)-Ag(5)-Ag(9) | 103.5(4) |
| Ag(1)-Ag(5)-Ag(9) | 58.95(5) |
| Ag(8)-Ag(5)-Ag(9) | 100.21(6) |
| C(35)-Ag(5)-Ag(3) | 99.7(5) |
| O(9)-Ag(5)-Ag(3) | 117.1(4) |
| Ag(1)-Ag(5)-Ag(3) | 75.32(6) |
| Ag(8)-Ag(5)-Ag(3) | 52.87(5) |
| Ag(9)-Ag(5)-Ag(3) | 134.08(7) |
| C(29)-Ag(6)-Ag(1) | 45.6(4) |
| O(4)-Ag(6)-Ag(1) | 137.8(4) |
| C(41)-Ag(6)-Ag(1) | 110.7(4) |
| C(29)-Ag(6)-Ag(3) | 125.5(4) |
| O(4)-Ag(6)-Ag(3) | 124.1(4) |
| C(41)-Ag(6)-Ag(3) | 43.5(5) |
| Ag(1)-Ag(6)-Ag(3) | 80.13(6) |
| O(1)-Ag(7)-Ag(11)$^{\#2}$ | 129.9(4) |
| C(23)-Ag(7)-Ag(11)$^{\#2}$ | 60.7(5) |
| C(41)-Ag(7)-Ag(11)$^{\#2}$ | 110.0(5) |
| C(24)-Ag(7)-Ag(11)$^{\#2}$ | 74.1(5) |
| O(1)-Ag(7)-Ag(3) | 112.3(4) |
| C(23)-Ag(7)-Ag(3) | 104.0(5) |
| C(41)-Ag(7)-Ag(3) | 46.1(4) |
| C(24)-Ag(7)-Ag(3) | 129.8(5) |
| Ag(11)$^{\#2}$-Ag(7)-Ag(3) | 67.04(10) |
| O(1)-Ag(7)-Ag(11)$^{\#2}$ | 136.3(4) |
| C(23)-Ag(7)-Ag(11)$^{\#2}$ | 42.7(5) |
| C(41)-Ag(7)-Ag(11)$^{\#2}$ | 119.9(4) |
| C(24)-Ag(7)-Ag(11)$^{\#2}$ | 54.9(5) |
| Ag(11)$^{\#2}$-Ag(7)-Ag(11)$^{\#2}$ | 19.29(10) |
| Ag(3)-Ag(7)-Ag(11)$^{\#2}$ | 82.60(10) |
| O(1)-Ag(7)-Ag(2) | 164.6(4) |

| | | | |
|---|---|---|---|
| C(23)-Ag(7)-Ag(2) | 40.8(5) | O(8)$^{\#2}$-Ag(10)-Ag(2) | 133.4(3) |
| C(41)-Ag(7)-Ag(2) | 73.2(4) | C(24)-Ag(10)-Ag(2) | 67.9(4) |
| C(24)-Ag(7)-Ag(2) | 66.1(4) | C(18)-Ag(10)-Ag(2) | 77.8(3) |
| Ag(11)$^{\#2}$-Ag(7)-Ag(2) | 65.38(10) | Ag(3)$^{\#2}$-Ag(10)-Ag(2) | 93.38(7) |
| Ag(3)-Ag(7)-Ag(2) | 69.39(6) | C(23)-Ag(10)-Ag(11)$^{\#2}$ | 42.9(5) |
| Ag(11)$^{\#2}$-Ag(7)-Ag(2) | 58.67(8) | O(10)$^{\#2}$-Ag(10)-Ag(11)$^{\#2}$ | 140.7(4) |
| O(5)-Ag(8)-Ag(3) | 130.7(4) | C(17)-Ag(10)-Ag(11)$^{\#2}$ | 118.5(4) |
| C(17)$^{\#2}$-Ag(8)-Ag(3) | 45.5(4) | O(8)$^{\#2}$-Ag(10)-Ag(11)$^{\#2}$ | 81.9(3) |
| O(2)-Ag(8)-Ag(3) | 87.4(4) | C(24)-Ag(10)-Ag(11)$^{\#2}$ | 55.2(5) |
| C(35)-Ag(8)-Ag(3) | 108.3(5) | C(18)-Ag(10)-Ag(11)$^{\#2}$ | 133.1(3) |
| O(5)-Ag(8)-Ag(5) | 153.9(5) | Ag(3)$^{\#2}$-Ag(10)-Ag(11)$^{\#2}$ | 92.24(9) |
| C(17)$^{\#2}$-Ag(8)-Ag(5) | 62.8(4) | Ag(2)-Ag(10)-Ag(11)$^{\#2}$ | 59.61(9) |
| O(2)-Ag(8)-Ag(5) | 108.7(3) | O(6)$^{\#2}$-Ag(11)-Ag(2) | 160.1(4) |
| C(35)-Ag(8)-Ag(5) | 45.8(5) | C(11)-Ag(11)-Ag(2) | 46.2(4) |
| Ag(3)-Ag(8)-Ag(5) | 70.52(6) | C(23)$^{\#2}$-Ag(11)-Ag(2) | 101.3(5) |
| O(5)-Ag(8)-Ag(1) | 134.2(4) | O(6)$^{\#2}$-Ag(11)-Ag(7)$^{\#2}$ | 62.6(4) |
| C(17)$^{\#2}$-Ag(8)-Ag(1) | 107.4(4) | C(11)-Ag(11)-Ag(7)$^{\#2}$ | 160.5(5) |
| O(2)-Ag(8)-Ag(1) | 53.6(3) | C(23)$^{\#2}$-Ag(11)-Ag(7)$^{\#2}$ | 51.3(4) |
| C(35)-Ag(8)-Ag(1) | 42.3(5) | Ag(2)-Ag(11)-Ag(7)$^{\#2}$ | 135.69(15) |
| Ag(3)-Ag(8)-Ag(1) | 79.10(6) | O(6)$^{\#2}$-Ag(11)-Ag(3)$^{\#2}$ | 102.7(4) |
| Ag(5)-Ag(8)-Ag(1) | 55.93(5) | C(11)-Ag(11)-Ag(3)$^{\#2}$ | 138.4(5) |
| C(29)$^{\#1}$-Ag(9)-Ag(1) | 149.4(4) | C(23)$^{\#2}$-Ag(11)-Ag(3)$^{\#2}$ | 90.5(4) |
| C(35)-Ag(9)-Ag(1) | 45.6(5) | Ag(2)-Ag(11)-Ag(3)$^{\#2}$ | 95.85(12) |
| C(30)$^{\#1}$-Ag(9)-Ag(1) | 161.8(4) | Ag(7)$^{\#2}$-Ag(11)-Ag(3)$^{\#2}$ | 56.74(8) |
| O(11)-Ag(9)-Ag(1) | 74.3(3) | O(6)$^{\#2}$-Ag(11)-Ag(2)$^{\#2}$ | 119.0(5) |
| C(36)-Ag(9)-Ag(1) | 64.9(4) | C(11)-Ag(11)-Ag(2)$^{\#2}$ | 109.8(5) |
| C(29)$^{\#1}$-Ag(9)-Ag(1)$^{\#1}$ | 42.4(4) | C(23)$^{\#2}$-Ag(11)-Ag(2)$^{\#2}$ | 39.2(5) |
| C(35)-Ag(9)-Ag(1)$^{\#1}$ | 152.9(5) | Ag(2)-Ag(11)-Ag(2)$^{\#2}$ | 75.38(11) |
| C(30)$^{\#1}$-Ag(9)-Ag(1)$^{\#1}$ | 71.4(4) | Ag(7)$^{\#2}$-Ag(11)-Ag(2)$^{\#2}$ | 61.86(9) |
| O(11)-Ag(9)-Ag(1)$^{\#1}$ | 74.2(3) | Ag(3)$^{\#2}$-Ag(11)-Ag(2)$^{\#2}$ | 64.81(8) |
| C(36)-Ag(9)-Ag(1)$^{\#1}$ | 164.4(4) | C(11)-Ag(11)-Ag(2) | 46.4(4) |
| Ag(1)-Ag(9)-Ag(1)$^{\#1}$ | 108.07(7) | C(23)$^{\#2}$-Ag(11)-Ag(2) | 117.3(6) |
| C(29)$^{\#1}$-Ag(9)-Ag(5) | 125.8(5) | O(6)$^{\#2}$-Ag(11)-Ag(2) | 139.1(4) |
| C(35)-Ag(9)-Ag(5) | 43.4(5) | C(11)-Ag(11)-Ag(2)$^{\#2}$ | 123.5(5) |
| C(30)$^{\#1}$-Ag(9)-Ag(5) | 108.0(4) | C(23)$^{\#2}$-Ag(11)-Ag(2)$^{\#2}$ | 42.1(6) |
| O(11)-Ag(9)-Ag(5) | 130.2(3) | O(6)$^{\#2}$-Ag(11)-Ag(2)$^{\#2}$ | 117.8(4) |
| C(36)-Ag(9)-Ag(5) | 66.8(4) | Ag(2)-Ag(11)-Ag(2)$^{\#2}$ | 78.07(11) |
| Ag(1)-Ag(9)-Ag(5) | 56.11(5) | C(11)-Ag(11)-Ag(10)$^{\#2}$ | 105.6(5) |
| Ag(1)$^{\#1}$-Ag(9)-Ag(5) | 122.10(8) | C(23)$^{\#2}$-Ag(11)-Ag(10)$^{\#2}$ | 48.3(5) |
| C(23)-Ag(10)-Ag(3)$^{\#2}$ | 125.1(6) | O(6)$^{\#2}$-Ag(11)-Ag(10)$^{\#2}$ | 129.2(4) |
| O(10)$^{\#2}$-Ag(10)-Ag(3)$^{\#2}$ | 110.8(4) | Ag(2)-Ag(11)-Ag(10)$^{\#2}$ | 91.73(12) |
| C(17)-Ag(10)-Ag(3)#2 | 42.2(4) | Ag(2)$^{\#2}$-Ag(11)-Ag(10)$^{\#2}$ | 59.62(9) |
| O(8)$^{\#2}$-Ag(10)-Ag(3)$^{\#2}$ | 60.7(3) | C(11)-Ag(11)-Ag(7)$^{\#2}$ | 153.6(5) |
| C(24)-Ag(10)-Ag(3)$^{\#2}$ | 147.2(5) | C(23)$^{\#2}$-Ag(11)-Ag(7)$^{\#2}$ | 50.3(5) |
| C(18)-Ag(10)-Ag(3)$^{\#2}$ | 70.3(3) | O(6)$^{\#2}$-Ag(11)-Ag(7)$^{\#2}$ | 56.4(4) |
| C(23)-Ag(10)-Ag(2) | 42.2(5) | Ag(2)-Ag(11)-Ag(7)$^{\#2}$ | 123.78(15) |
| O(10)$^{\#2}$-Ag(10)-Ag(2) | 144.0(4) | Ag(2)$^{\#2}$-Ag(11)-Ag(7)$^{\#2}$ | 61.44(9) |
| C(17)-Ag(10)-Ag(2) | 80.7(4) | Ag(10)$^{\#2}$-Ag(11)-Ag(7)$^{\#2}$ | 98.65(12) |

Symmetry transformations used to generate equivalent atoms: #1 -x,-y,-z+1; #2 -x,-y,-z.

**Table S3** Selected bond lengths (Å) and bond angles (º) for compound **2**

| | | | |
|---|---|---|---|
| Ag(1)-C(21) | 2.046(15) | Ag(1)-Ag(6) | 3.142(2) |
| Ag(1)-C(18)$^{\#1}$ | 2.057(14) | Ag(1)-Ag(11)$^{\#1}$ | 3.210(2) |
| Ag(1)-Ag(6)$^{\#1}$ | 2.9086(19) | Ag(1)-Ag(9)$^{\#1}$ | 3.321(2) |
| Ag(1)-Ag(2) | 3.0042(19) | Ag(2)-C(24) | 2.145(15) |
| Ag(1)-Ag(9) | 3.043(2) | Ag(2)-C(27) | 2.146(16) |

| | | | | | |
|---|---|---|---|---|---|
| Ag(2)-O(1) | 2.503(11) | | Ag(10)-Ag(4)#1 | 3.148(2) | |
| Ag(2)-Ag(4)#1 | 2.8986(18) | | Ag(10)-Ag(3)#4 | 3.198(2) | |
| Ag(2)-Ag(6) | 2.9173(19) | | Ag(11)-C(18) | 2.272(17) | |
| Ag(2)-Ag(7)#1 | 2.928(2) | | Ag(11)-O(5) | 2.299(11) | |
| Ag(2)-Ag(10) | 3.107(2) | | Ag(11)-O(3) | 2.596(14) | |
| Ag(2)-Ag(11)#1 | 3.143(2) | | Ag(11)-C(19) | 2.631(16) | |
| Ag(2)-Ag(9)#1 | 3.154(2) | | Ag(11)-Ag(2)#1 | 3.143(2) | |
| Ag(3)-C(12) | 2.075(15) | | Ag(11)-Ag(1)#1 | 3.210(2) | |
| Ag(3)-C(9) | 2.125(16) | | C(9)-Ag(5)#2 | 2.395(15) | |
| Ag(3)-Ag(5) | 2.9159(19) | | C(12)-Ag(10)#3 | 2.213(15) | |
| Ag(3)-Ag(4)#2 | 2.9841(18) | | C(13)-Ag(10)#3 | 2.562(15) | |
| Ag(3)-Ag(8) | 3.048(2) | | C(18)-Ag(1)#1 | 2.057(14) | |
| Ag(3)-Ag(5)#2 | 3.146(2) | | C(24)-Ag(9)#1 | 2.343(14) | |
| Ag(3)-Ag(10)#3 | 3.198(2) | | C(24)-Ag(7)#1 | 2.499(14) | |
| Ag(3)-Ag(8)#2 | 3.312(2) | | C(25)-Ag(7)#1 | 2.703(15) | |
| Ag(4)-C(15) | 2.109(16) | | C(27)-Ag(4)#1 | 2.186(16) | |
| Ag(4)-C(27)#1 | 2.186(16) | | C(21)-Ag(1)-Ag(6)#1 | 127.9(4) | |
| Ag(4)-O(5) | 2.509(11) | | C(18)#1-Ag(1)-Ag(6)#1 | 54.8(5) | |
| Ag(4)-Ag(2)#1 | 2.8986(18) | | C(21)-Ag(1)-Ag(2) | 83.5(4) | |
| Ag(4)-Ag(7) | 2.919(2) | | C(18)#1-Ag(1)-Ag(2) | 104.7(5) | |
| Ag(4)-Ag(5) | 2.9207(19) | | Ag(6)#1-Ag(1)-Ag(2) | 125.18(6) | |
| Ag(4)-Ag(3)#2 | 2.9841(18) | | C(21)-Ag(1)-Ag(9) | 50.6(4) | |
| Ag(4)-Ag(11) | 3.113(2) | | C(18)#1-Ag(1)-Ag(9) | 127.4(5) | |
| Ag(4)-Ag(10)#1 | 3.148(2) | | Ag(6)#1-Ag(1)-Ag(9) | 78.14(5) | |
| Ag(4)-Ag(8) | 3.163(2) | | Ag(2)-Ag(1)-Ag(9) | 122.39(6) | |
| Ag(5)-O(6) | 2.282(11) | | C(21)-Ag(1)-Ag(6) | 49.4(4) | |
| Ag(5)-C(9)#2 | 2.395(15) | | C(18)#1-Ag(1)-Ag(6) | 143.1(5) | |
| Ag(5)-C(12) | 2.447(15) | | Ag(6)#1-Ag(1)-Ag(6) | 106.89(5) | |
| Ag(5)-C(15) | 2.611(16) | | Ag(2)-Ag(1)-Ag(6) | 56.62(4) | |
| Ag(5)-Ag(3)#2 | 3.146(2) | | Ag(9)-Ag(1)-Ag(6) | 66.54(5) | |
| Ag(5)-Ag(8)#2 | 3.376(2) | | C(21)-Ag(1)-Ag(11)#1 | 140.2(4) | |
| Ag(6)-O(2) | 2.277(11) | | C(18)#1-Ag(1)-Ag(11)#1 | 44.8(5) | |
| Ag(6)-C(21) | 2.384(15) | | Ag(6)#1-Ag(1)-Ag(11)#1 | 89.15(6) | |
| Ag(6)-C(18) | 2.406(16) | | Ag(2)-Ag(1)-Ag(11)#1 | 60.66(5) | |
| Ag(6)-C(24) | 2.563(14) | | Ag(9)-Ag(1)-Ag(11)#1 | 165.89(6) | |
| Ag(6)-Ag(1)#1 | 2.9086(18) | | Ag(6)-Ag(1)-Ag(11)#1 | 112.33(5) | |
| Ag(7)-C(15) | 2.419(15) | | C(21)-Ag(1)-Ag(9)#1 | 120.3(4) | |
| Ag(7)-O(4) | 2.452(14) | | C(18)#1-Ag(1)-Ag(9)#1 | 72.2(5) | |
| Ag(7)-O(7) | 2.469(15) | | Ag(6)#1-Ag(1)-Ag(9)#1 | 65.64(5) | |
| Ag(7)-C(24)#1 | 2.499(14) | | Ag(2)-Ag(1)-Ag(9)#1 | 59.56(4) | |
| Ag(7)-C(25)#1 | 2.703(15) | | Ag(9)-Ag(1)-Ag(9)#1 | 111.09(5) | |
| Ag(7)-Ag(2)#1 | 2.928(2) | | Ag(6)-Ag(1)-Ag(9)#1 | 70.93(5) | |
| Ag(8)-C(9) | 2.287(15) | | Ag(11)#1-Ag(1)-Ag(9)#1 | 57.15(5) | |
| Ag(8)-C(15) | 2.328(15) | | C(24)-Ag(2)-Ag(4)#1 | 115.5(4) | |
| Ag(8)-O(8) | 2.374(14) | | C(27)-Ag(2)-Ag(4)#1 | 48.6(4) | |
| Ag(8)-Ag(10)#1 | 3.142(2) | | O(1)-Ag(2)-Ag(4)#1 | 108.7(3) | |
| Ag(8)-Ag(3)#2 | 3.312(2) | | C(24)-Ag(2)-Ag(6) | 58.5(4) | |
| Ag(8)-Ag(5)#2 | 3.376(2) | | C(27)-Ag(2)-Ag(6) | 137.8(4) | |
| Ag(9)-C(24)#1 | 2.343(15) | | O(1)-Ag(2)-Ag(6) | 71.6(3) | |
| Ag(9)-C(21) | 2.353(15) | | Ag(4)#1-Ag(2)-Ag(6) | 173.44(6) | |
| Ag(9)-O(3) | 2.374(13) | | C(24)-Ag(2)-Ag(7)#1 | 56.5(4) | |
| Ag(9)-Ag(11) | 3.126(2) | | C(27)-Ag(2)-Ag(7)#1 | 108.7(4) | |
| Ag(9)-Ag(2)#1 | 3.154(2) | | O(1)-Ag(2)-Ag(7)#1 | 110.0(3) | |
| Ag(9)-Ag(1)#1 | 3.321(2) | | Ag(4)#1-Ag(2)-Ag(7)#1 | 60.12(5) | |
| Ag(10)-C(12)#4 | 2.213(15) | | Ag(6)-Ag(2)-Ag(7)#1 | 113.44(6) | |
| Ag(10)-O(1) | 2.247(13) | | C(24)-Ag(2)-Ag(1) | 97.3(4) | |
| Ag(10)-C(13)#4 | 2.562(15) | | C(27)-Ag(2)-Ag(1) | 86.5(4) | |
| Ag(10)-Ag(8)#1 | 3.142(2) | | O(1)-Ag(2)-Ag(1) | 110.0(3) | |

| | |
|---|---|
| Ag(4)#1-Ag(2)-Ag(1) | 121.05(6) |
| Ag(6)-Ag(2)-Ag(1) | 64.06(5) |
| Ag(7)#1-Ag(2)-Ag(1) | 135.98(6) |
| C(24)-Ag(2)-Ag(10) | 124.6(4) |
| C(27)-Ag(2)-Ag(10) | 61.2(4) |
| O(1)-Ag(2)-Ag(10) | 45.7(3) |
| Ag(4)#1-Ag(2)-Ag(10) | 63.10(5) |
| Ag(6)-Ag(2)-Ag(10) | 117.23(6) |
| Ag(7)#1-Ag(2)-Ag(10) | 89.33(6) |
| Ag(1)-Ag(2)-Ag(10) | 132.60(6) |
| C(24)-Ag(2)-Ag(11)#1 | 105.4(4) |
| C(27)-Ag(2)-Ag(11)#1 | 60.1(4) |
| O(1)-Ag(2)-Ag(11)#1 | 151.9(3) |
| Ag(4)#1-Ag(2)-Ag(11)#1 | 61.86(5) |
| Ag(6)-Ag(2)-Ag(11)#1 | 121.00(6) |
| Ag(7)#1-Ag(2)-Ag(11)#1 | 88.67(6) |
| Ag(1)-Ag(2)-Ag(11)#1 | 62.91(5) |
| Ag(10)-Ag(2)-Ag(11)#1 | 116.92(6) |
| C(24)-Ag(2)-Ag(9)#1 | 48.0(4) |
| C(27)-Ag(2)-Ag(9)#1 | 119.6(4) |
| O(1)-Ag(2)-Ag(9)#1 | 145.4(3) |
| Ag(4)#1-Ag(2)-Ag(9)#1 | 101.78(6) |
| Ag(6)-Ag(2)-Ag(9)#1 | 76.25(5) |
| Ag(7)#1-Ag(2)-Ag(9)#1 | 71.52(6) |
| Ag(1)-Ag(2)-Ag(9)#1 | 65.23(5) |
| Ag(10)-Ag(2)-Ag(9)#1 | 160.26(6) |
| Ag(11)#1-Ag(2)-Ag(9)#1 | 59.52(5) |
| C(12)-Ag(3)-Ag(5) | 55.7(4) |
| C(9)-Ag(3)-Ag(5) | 125.8(4) |
| C(12)-Ag(3)-Ag(4)#2 | 103.8(4) |
| C(9)-Ag(3)-Ag(4)#2 | 85.0(4) |
| Ag(5)-Ag(3)-Ag(4)#2 | 125.32(6) |
| C(12)-Ag(3)-Ag(8) | 128.5(4) |
| C(9)-Ag(3)-Ag(8) | 48.6(4) |
| Ag(5)-Ag(3)-Ag(8) | 77.90(5) |
| Ag(4)#2-Ag(3)-Ag(8) | 122.07(6) |
| C(12)-Ag(3)-Ag(5)#2 | 142.6(4) |
| C(9)-Ag(3)-Ag(5)#2 | 49.5(4) |
| Ag(5)-Ag(3)-Ag(5)#2 | 106.48(5) |
| Ag(4)#2-Ag(3)-Ag(5)#2 | 56.83(4) |
| Ag(8)-Ag(3)-Ag(5)#2 | 66.04(5) |
| C(12)-Ag(3)-Ag(10)#3 | 43.5(4) |
| C(9)-Ag(3)-Ag(10)#3 | 142.4(4) |
| Ag(5)-Ag(3)-Ag(10)#3 | 89.22(6) |
| Ag(4)#2-Ag(3)-Ag(10)#3 | 61.11(5) |
| Ag(8)-Ag(3)-Ag(10)#3 | 165.77(6) |
| Ag(5)#2-Ag(3)-Ag(10)#3 | 112.89(5) |
| C(12)-Ag(3)-Ag(8)#2 | 71.7(4) |
| C(9)-Ag(3)-Ag(8)#2 | 120.5(4) |
| Ag(5)-Ag(3)-Ag(8)#2 | 65.29(5) |
| Ag(4)#2-Ag(3)-Ag(8)#2 | 60.04(4) |
| Ag(8)-Ag(3)-Ag(8)#2 | 110.48(5) |
| Ag(5)#2-Ag(3)-Ag(8)#2 | 70.95(5) |
| Ag(10)#3-Ag(3)-Ag(8)#2 | 57.69(5) |
| C(15)-Ag(4)-Ag(2)#1 | 113.9(4) |
| C(27)#1-Ag(4)-Ag(2)#1 | 47.4(4) |
| O(5)-Ag(4)-Ag(2)#1 | 109.6(3) |
| C(15)-Ag(4)-Ag(7) | 54.7(4) |
| C(27)#1-Ag(4)-Ag(7) | 107.9(4) |
| O(5)-Ag(4)-Ag(7) | 110.4(3) |
| Ag(2)#1-Ag(4)-Ag(7) | 60.45(5) |
| C(15)-Ag(4)-Ag(5) | 60.0(4) |
| C(27)#1-Ag(4)-Ag(5) | 139.1(4) |
| O(5)-Ag(4)-Ag(5) | 70.8(3) |
| Ag(2)#1-Ag(4)-Ag(5) | 173.34(6) |
| Ag(7)-Ag(4)-Ag(5) | 113.01(6) |
| C(15)-Ag(4)-Ag(3)#2 | 98.2(4) |
| C(27)#1-Ag(4)-Ag(3)#2 | 87.4(4) |
| O(5)-Ag(4)-Ag(3)#2 | 109.5(3) |
| Ag(2)#1-Ag(4)-Ag(3)#2 | 120.75(6) |
| Ag(7)-Ag(4)-Ag(3)#2 | 135.79(6) |
| Ag(5)-Ag(4)-Ag(3)#2 | 64.39(5) |
| C(15)-Ag(4)-Ag(11) | 124.5(4) |
| C(27)#1-Ag(4)-Ag(11) | 60.5(4) |
| O(5)-Ag(4)-Ag(11) | 46.8(3) |
| Ag(2)#1-Ag(4)-Ag(11) | 62.93(5) |
| Ag(7)-Ag(4)-Ag(11) | 89.43(6) |
| Ag(5)-Ag(4)-Ag(11) | 117.47(6) |
| Ag(3)#2-Ag(4)-Ag(11) | 132.62(6) |
| C(15)-Ag(4)-Ag(10)#1 | 104.5(4) |
| C(27)#1-Ag(4)-Ag(10)#1 | 60.2(4) |
| O(5)-Ag(4)-Ag(10)#1 | 152.2(3) |
| Ag(2)#1-Ag(4)-Ag(10)#1 | 61.69(5) |
| Ag(7)-Ag(4)-Ag(10)#1 | 88.73(6) |
| Ag(5)-Ag(4)-Ag(10)#1 | 121.15(6) |
| Ag(3)#2-Ag(4)-Ag(10)#1 | 62.79(5) |
| Ag(11)-Ag(4)-Ag(10)#1 | 116.63(6) |
| C(15)-Ag(4)-Ag(8) | 47.4(4) |
| C(27)#1-Ag(4)-Ag(8) | 119.9(4) |
| O(5)-Ag(4)-Ag(8) | 144.5(3) |
| Ag(2)#1-Ag(4)-Ag(8) | 101.94(6) |
| Ag(7)-Ag(4)-Ag(8) | 71.44(6) |
| Ag(5)-Ag(4)-Ag(8) | 76.00(5) |
| Ag(3)#2-Ag(4)-Ag(8) | 65.13(5) |
| Ag(11)-Ag(4)-Ag(8) | 160.25(6) |
| Ag(10)#1-Ag(4)-Ag(8) | 59.72(5) |
| O(6)-Ag(5)-Ag(3) | 153.9(3) |
| C(9)#2-Ag(5)-Ag(3) | 98.4(4) |
| C(12)-Ag(5)-Ag(3) | 44.5(4) |
| C(15)-Ag(5)-Ag(3) | 81.9(3) |
| O(6)-Ag(5)-Ag(4) | 89.4(3) |
| C(9)#2-Ag(5)-Ag(4) | 82.0(4) |
| C(12)-Ag(5)-Ag(4) | 149.2(4) |
| C(15)-Ag(5)-Ag(4) | 44.4(4) |
| Ag(3)-Ag(5)-Ag(4) | 106.56(6) |
| O(6)-Ag(5)-Ag(3)#2 | 132.4(3) |
| C(9)#2-Ag(5)-Ag(3)#2 | 42.5(4) |
| C(12)-Ag(5)-Ag(3)#2 | 109.6(3) |
| C(15)-Ag(5)-Ag(3)#2 | 84.5(3) |
| Ag(3)-Ag(5)-Ag(3)#2 | 73.52(5) |
| Ag(4)-Ag(5)-Ag(3)#2 | 58.78(4) |
| O(6)-Ag(5)-Ag(8)#2 | 129.5(3) |
| C(9)#2-Ag(5)-Ag(8)#2 | 42.6(4) |
| C(12)-Ag(5)-Ag(8)#2 | 67.1(3) |
| C(15)-Ag(5)-Ag(8)#2 | 131.9(3) |
| Ag(3)-Ag(5)-Ag(8)#2 | 63.03(5) |

| | |
|---|---|
| Ag(4)-Ag(5)-Ag(8)$^{\#2}$ | 113.68(6) |
| Ag(3)$^{\#2}$-Ag(5)-Ag(8)$^{\#2}$ | 55.58(4) |
| O(2)-Ag(6)-Ag(1)$^{\#1}$ | 152.5(3) |
| C(21)-Ag(6)-Ag(1)$^{\#1}$ | 98.3(4) |
| C(18)-Ag(6)-Ag(1)$^{\#1}$ | 44.3(3) |
| C(24)-Ag(6)-Ag(1)$^{\#1}$ | 81.2(3) |
| O(2)-Ag(6)-Ag(2) | 90.2(3) |
| C(21)-Ag(6)-Ag(2) | 80.2(4) |
| C(18)-Ag(6)-Ag(2) | 148.4(4) |
| C(24)-Ag(6)-Ag(2) | 45.5(3) |
| Ag(1)$^{\#1}$-Ag(6)-Ag(2) | 106.28(6) |
| O(2)-Ag(6)-Ag(1) | 134.2(3) |
| C(21)-Ag(6)-Ag(1) | 40.6(4) |
| C(18)-Ag(6)-Ag(1) | 109.4(4) |
| C(24)-Ag(6)-Ag(1) | 85.8(3) |
| Ag(1)$^{\#1}$-Ag(6)-Ag(1) | 73.11(5) |
| Ag(2)-Ag(6)-Ag(1) | 59.31(4) |
| C(15)-Ag(7)-Ag(4) | 45.4(4) |
| O(4)-Ag(7)-Ag(4) | 105.0(3) |
| O(7)-Ag(7)-Ag(4) | 111.0(4) |
| C(24)$^{\#1}$-Ag(7)-Ag(4) | 104.3(3) |
| C(25)$^{\#1}$-Ag(7)-Ag(4) | 130.4(3) |
| C(15)-Ag(7)-Ag(2)$^{\#1}$ | 103.8(4) |
| O(4)-Ag(7)-Ag(2)$^{\#1}$ | 111.5(4) |
| O(7)-Ag(7)-Ag(2)$^{\#1}$ | 105.5(4) |
| C(24)$^{\#1}$-Ag(7)-Ag(2)$^{\#1}$ | 45.7(3) |
| C(25)$^{\#1}$-Ag(7)-Ag(2)$^{\#1}$ | 71.8(3) |
| Ag(4)-Ag(7)-Ag(2)$^{\#1}$ | 59.43(4) |
| C(9)-Ag(8)-Ag(3) | 44.1(4) |
| C(15)-Ag(8)-Ag(3) | 83.8(4) |
| O(8)-Ag(8)-Ag(3) | 160.0(4) |
| C(9)-Ag(8)-Ag(10)$^{\#1}$ | 124.8(4) |
| C(15)-Ag(8)-Ag(10)$^{\#1}$ | 99.4(4) |
| O(8)-Ag(8)-Ag(10)$^{\#1}$ | 54.6(4) |
| Ag(3)-Ag(8)-Ag(10)$^{\#1}$ | 128.14(7) |
| C(9)-Ag(8)-Ag(4) | 138.5(4) |
| C(15)-Ag(8)-Ag(4) | 41.8(4) |
| O(8)-Ag(8)-Ag(4) | 99.3(3) |
| Ag(3)-Ag(8)-Ag(4) | 97.74(6) |
| Ag(10)$^{\#1}$-Ag(8)-Ag(4) | 59.90(5) |
| C(9)-Ag(8)-Ag(3)$^{\#2}$ | 90.3(4) |
| C(15)-Ag(8)-Ag(3)$^{\#2}$ | 85.4(4) |
| O(8)-Ag(8)-Ag(3)$^{\#2}$ | 112.6(4) |
| Ag(3)-Ag(8)-Ag(3)$^{\#2}$ | 69.52(5) |
| Ag(10)$^{\#1}$-Ag(8)-Ag(3)$^{\#2}$ | 59.32(5) |
| Ag(4)-Ag(8)-Ag(3)$^{\#2}$ | 54.82(4) |
| C(9)-Ag(8)-Ag(5)$^{\#2}$ | 45.1(4) |
| C(15)-Ag(8)-Ag(5)$^{\#2}$ | 129.1(4) |
| O(8)-Ag(8)-Ag(5)$^{\#2}$ | 106.2(4) |
| Ag(3)-Ag(8)-Ag(5)$^{\#2}$ | 58.38(5) |
| Ag(10)$^{\#1}$-Ag(8)-Ag(5)$^{\#2}$ | 82.41(6) |
| Ag(4)-Ag(8)-Ag(5)$^{\#2}$ | 106.50(6) |
| Ag(3)$^{\#2}$-Ag(8)-Ag(5)$^{\#2}$ | 51.68(4) |
| C(24)$^{\#1}$-Ag(9)-Ag(1) | 82.0(4) |
| C(21)-Ag(9)-Ag(1) | 42.2(4) |
| O(3)-Ag(9)-Ag(1) | 160.2(3) |
| C(24)$^{\#1}$-Ag(9)-Ag(11) | 101.0(4) |
| C(21)-Ag(9)-Ag(11) | 124.9(4) |
| O(3)-Ag(9)-Ag(11) | 54.3(3) |
| Ag(1)-Ag(9)-Ag(11) | 127.86(7) |
| C(24)$^{\#1}$-Ag(9)-Ag(2)$^{\#1}$ | 42.8(4) |
| C(21)-Ag(9)-Ag(2)$^{\#1}$ | 136.5(4) |
| O(3)-Ag(9)-Ag(2)$^{\#1}$ | 98.9(3) |
| Ag(1)-Ag(9)-Ag(2)$^{\#1}$ | 97.54(6) |
| Ag(11)-Ag(9)-Ag(2)$^{\#1}$ | 60.08(5) |
| C(24)$^{\#1}$-Ag(9)-Ag(1)$^{\#1}$ | 85.4(4) |
| C(21)-Ag(9)-Ag(1)$^{\#1}$ | 88.4(4) |
| O(3)-Ag(9)-Ag(1)$^{\#1}$ | 112.6(3) |
| Ag(1)-Ag(9)-Ag(1)$^{\#1}$ | 68.91(5) |
| Ag(11)-Ag(9)-Ag(1)$^{\#1}$ | 59.64(5) |
| Ag(2)$^{\#1}$-Ag(9)-Ag(1)$^{\#1}$ | 55.22(4) |
| C(12)$^{\#4}$-Ag(10)-Ag(2) | 148.1(4) |
| O(1)-Ag(10)-Ag(2) | 52.8(3) |
| C(13)$^{\#4}$-Ag(10)-Ag(2) | 166.8(4) |
| C(12)$^{\#4}$-Ag(10)-Ag(8)$^{\#1}$ | 74.1(4) |
| O(1)-Ag(10)-Ag(8)$^{\#1}$ | 126.5(3) |
| C(13)$^{\#4}$-Ag(10)-Ag(8)$^{\#1}$ | 91.1(3) |
| Ag(2)-Ag(10)-Ag(8)$^{\#1}$ | 97.85(6) |
| C(12)$^{\#4}$-Ag(10)-Ag(4)$^{\#1}$ | 95.6(4) |
| O(1)-Ag(10)-Ag(4)$^{\#1}$ | 107.9(3) |
| C(13)$^{\#4}$-Ag(10)-Ag(4)$^{\#1}$ | 123.1(3) |
| Ag(2)-Ag(10)-Ag(4)$^{\#1}$ | 55.21(4) |
| Ag(8)$^{\#1}$-Ag(10)-Ag(4)$^{\#1}$ | 60.38(5) |
| C(12)$^{\#4}$-Ag(10)-Ag(3)$^{\#4}$ | 40.2(4) |
| O(1)-Ag(10)-Ag(3)$^{\#4}$ | 157.3(3) |
| C(13)$^{\#4}$-Ag(10)-Ag(3)$^{\#4}$ | 67.2(3) |
| Ag(2)-Ag(10)-Ag(3)$^{\#4}$ | 108.39(6) |
| Ag(8)$^{\#1}$-Ag(10)-Ag(3)$^{\#4}$ | 62.99(5) |
| Ag(4)$^{\#1}$-Ag(10)-Ag(3)$^{\#4}$ | 56.10(4) |
| C(18)-Ag(11)-Ag(4) | 147.9(4) |
| O(5)-Ag(11)-Ag(4) | 52.7(3) |
| O(3)-Ag(11)-Ag(4) | 93.1(3) |
| C(19)-Ag(11)-Ag(4) | 166.4(3) |
| C(18)-Ag(11)-Ag(9) | 74.3(4) |
| O(5)-Ag(11)-Ag(9) | 126.4(3) |
| O(3)-Ag(11)-Ag(9) | 47.9(3) |
| C(19)-Ag(11)-Ag(9) | 92.4(3) |
| Ag(4)-Ag(11)-Ag(9) | 97.75(6) |
| C(18)-Ag(11)-Ag(2)$^{\#1}$ | 95.4(4) |
| O(5)-Ag(11)-Ag(2)$^{\#1}$ | 107.8(3) |
| O(3)-Ag(11)-Ag(2)$^{\#1}$ | 94.5(3) |
| C(19)-Ag(11)-Ag(2)$^{\#1}$ | 124.4(3) |
| Ag(4)-Ag(11)-Ag(2)$^{\#1}$ | 55.20(4) |
| Ag(9)-Ag(11)-Ag(2)$^{\#1}$ | 60.40(5) |
| C(18)-Ag(11)-Ag(1)$^{\#1}$ | 39.6(4) |
| O(5)-Ag(11)-Ag(1)$^{\#1}$ | 157.3(3) |
| O(3)-Ag(11)-Ag(1)$^{\#1}$ | 109.9(3) |
| C(19)-Ag(11)-Ag(1)$^{\#1}$ | 68.1(3) |
| Ag(4)-Ag(11)-Ag(1)$^{\#1}$ | 108.72(6) |
| Ag(9)-Ag(11)-Ag(1)$^{\#1}$ | 63.21(5) |
| Ag(2)$^{\#1}$-Ag(11)-Ag(1)$^{\#1}$ | 56.43(4) |

Symmetry transformations used to generate equivalent atoms: #1 -x+1,-y,-z+1; #2 -x+1,-y,-z+2; #3 x,y,z+1; #4 x,y,z-1.

**Table S4** Selected bond lengths (Å) and bond angles (°) for compound **3**

| | | | | | |
|---|---|---|---|---|---|
| | Ag(1)-C(41) | 1.986(14) | | Ag(11)-C(47)$^{\#2}$ | 2.290(16) |
| | Ag(1)-C(35) | 2.028(17) | | Ag(11)-C(41) | 2.430(16) |
| 5 | Ag(1)-Ag(5) | 2.886(2) | 60 | Ag(11)-Ag(9)$^{\#2}$ | 2.988(2) |
| | Ag(1)-Ag(11) | 2.918(2) | | Ag(11)-Ag(2)$^{\#2}$ | 3.270(2) |
| | Ag(1)-Ag(4) | 2.931(2) | | Ag(12)-C(11) | 2.26(2) |
| | Ag(1)-Ag(7) | 3.162(2) | | Ag(12)-C(23) | 2.31(2) |
| | Ag(2)-C(47) | 2.130(16) | | Ag(12)-O(11W) | 2.52(3) |
| 10 | Ag(2)-C(29) | 2.365(17) | 65 | C(11)-Ag(10)$^{\#1}$ | 2.20(2) |
| | Ag(2)-C(30) | 2.708(18) | | C(17)-Ag(4)$^{\#1}$ | 2.316(19) |
| | Ag(2)-Ag(3) | 2.894(2) | | C(18)-Ag(4)$^{\#1}$ | 2.69(2) |
| | Ag(2)-Ag(9) | 2.988(2) | | C(47)-Ag(11)$^{\#1}$ | 2.290(16) |
| | Ag(2)-Ag(6) | 3.108(2) | | O(10)-Ag(11)$^{\#1}$ | 2.287(17) |
| 15 | Ag(2)-Ag(11)$^{\#1}$ | 3.270(2) | 70 | C(41)-Ag(1)-Ag(5) | 54.2(5) |
| | Ag(3)-C(29) | 2.049(14) | | C(35)-Ag(1)-Ag(5) | 120.2(5) |
| | Ag(3)-C(23) | 2.066(19) | | C(41)-Ag(1)-Ag(11) | 55.6(5) |
| | Ag(3)-O(7) | 2.325(18) | | C(35)-Ag(1)-Ag(11) | 132.5(5) |
| | Ag(3)-Ag(6) | 2.800(2) | | Ag(5)-Ag(1)-Ag(11) | 106.01(6) |
| 20 | Ag(3)-Ag(5) | 2.945(2) | 75 | C(41)-Ag(1)-Ag(4) | 136.5(5) |
| | Ag(3)-Ag(12) | 3.015(2) | | C(35)-Ag(1)-Ag(4) | 50.4(5) |
| | Ag(3)-Ag(7) | 3.061(2) | | Ag(5)-Ag(1)-Ag(4) | 103.72(7) |
| | Ag(4)-C(35) | 2.264(19) | | Ag(11)-Ag(1)-Ag(4) | 110.86(7) |
| | Ag(4)-O(1) | 2.270(14) | | C(41)-Ag(1)-Ag(7) | 125.3(5) |
| 25 | Ag(4)-C(17)$^{\#2}$ | 2.316(19) | 80 | C(35)-Ag(1)-Ag(7) | 47.8(5) |
| | Ag(4)-C(18)$^{\#2}$ | 2.69(2) | | Ag(5)-Ag(1)-Ag(7) | 72.45(6) |
| | Ag(4)-Ag(7) | 3.160(2) | | Ag(11)-Ag(1)-Ag(7) | 171.73(8) |
| | Ag(4)-Ag(9)$^{\#2}$ | 3.241(2) | | Ag(4)-Ag(1)-Ag(7) | 62.35(5) |
| | Ag(4)-Ag(8)$^{\#2}$ | 3.334(2) | | C(47)-Ag(2)-Ag(3) | 155.5(5) |
| 30 | Ag(5)-O(5) | 2.243(13) | 85 | C(29)-Ag(2)-Ag(3) | 44.5(3) |
| | Ag(5)-C(29) | 2.249(17) | | C(30)-Ag(2)-Ag(3) | 78.8(3) |
| | Ag(5)-C(41) | 2.361(16) | | C(47)-Ag(2)-Ag(9) | 45.2(5) |
| | Ag(5)-Ag(10) | 3.043(2) | | C(29)-Ag(2)-Ag(9) | 148.2(4) |
| | Ag(6)-C(23) | 1.991(19) | | C(30)-Ag(2)-Ag(9) | 153.2(4) |
| 35 | Ag(6)-O(4) | 2.128(16) | 90 | Ag(3)-Ag(2)-Ag(9) | 110.42(7) |
| | Ag(6)-Ag(9) | 3.046(2) | | C(47)-Ag(2)-Ag(6) | 102.4(5) |
| | Ag(7)-O(2) | 2.320(19) | | C(29)-Ag(2)-Ag(6) | 88.6(4) |
| | Ag(7)-C(35) | 2.346(17) | | C(30)-Ag(2)-Ag(6) | 113.2(4) |
| | Ag(7)-C(29) | 2.373(16) | | Ag(3)-Ag(2)-Ag(6) | 55.48(5) |
| 40 | Ag(7)-O(3) | 2.584(17) | 95 | Ag(9)-Ag(2)-Ag(6) | 59.93(5) |
| | Ag(7)-C(36) | 2.687(19) | | C(47)-Ag(2)-Ag(11)$^{\#1}$ | 44.2(4) |
| | Ag(8)-C(11) | 1.959(15) | | C(29)-Ag(2)-Ag(11)$^{\#1}$ | 149.7(4) |
| | Ag(8)-C(17) | 1.996(16) | | C(30)-Ag(2)-Ag(11)$^{\#1}$ | 137.6(4) |
| | Ag(8)-Ag(9) | 2.788(2) | | Ag(3)-Ag(2)-Ag(11)$^{\#1}$ | 127.57(8) |
| 45 | Ag(8)-Ag(12) | 2.870(3) | 100 | Ag(9)-Ag(2)-Ag(11)$^{\#1}$ | 56.82(5) |
| | Ag(8)-Ag(10)$^{\#1}$ | 2.983(2) | | Ag(6)-Ag(2)-Ag(11)$^{\#1}$ | 109.11(7) |
| | Ag(8)-Ag(4)$^{\#1}$ | 3.334(2) | | C(29)-Ag(3)-Ag(6) | 104.4(5) |
| | Ag(9)-C(17) | 2.029(18) | | C(23)-Ag(3)-Ag(6) | 45.3(5) |
| | Ag(9)-C(47) | 2.119(17) | | O(7)-Ag(3)-Ag(6) | 123.4(5) |
| 50 | Ag(9)-Ag(11)$^{\#1}$ | 2.988(2) | 105 | C(29)-Ag(3)-Ag(2) | 53.9(5) |
| | Ag(9)-Ag(4)$^{\#1}$ | 3.241(2) | | C(23)-Ag(3)-Ag(2) | 91.2(6) |
| | Ag(10)-C(11)$^{\#2}$ | 2.20(2) | | O(7)-Ag(3)-Ag(2) | 170.1(5) |
| | Ag(10)-C(41) | 2.239(18) | | Ag(6)-Ag(3)-Ag(2) | 66.14(5) |
| | Ag(10)-O(6) | 2.340(17) | | C(29)-Ag(3)-Ag(5) | 49.7(5) |
| 55 | Ag(10)-Ag(11) | 2.941(3) | 110 | C(23)-Ag(3)-Ag(5) | 163.3(5) |
| | Ag(10)-Ag(8)$^{\#2}$ | 2.983(2) | | O(7)-Ag(3)-Ag(5) | 74.3(5) |
| | Ag(11)-O(10)$^{\#2}$ | 2.287(17) | | Ag(6)-Ag(3)-Ag(5) | 151.43(7) |

| | |
|---|---|
| Ag(2)-Ag(3)-Ag(5) | 98.23(6) |
| C(29)-Ag(3)-Ag(12) | 114.7(5) |
| C(23)-Ag(3)-Ag(12) | 49.8(6) |
| O(7)-Ag(3)-Ag(12) | 107.7(4) |
| Ag(6)-Ag(3)-Ag(12) | 77.70(7) |
| Ag(2)-Ag(3)-Ag(12) | 70.28(7) |
| Ag(5)-Ag(3)-Ag(12) | 121.04(7) |
| C(29)-Ag(3)-Ag(7) | 50.8(5) |
| C(23)-Ag(3)-Ag(7) | 122.2(6) |
| O(7)-Ag(3)-Ag(7) | 102.7(4) |
| Ag(6)-Ag(3)-Ag(7) | 80.54(7) |
| Ag(2)-Ag(3)-Ag(7) | 80.89(6) |
| Ag(5)-Ag(3)-Ag(7) | 73.17(6) |
| Ag(12)-Ag(3)-Ag(7) | 149.04(7) |
| C(35)-Ag(4)-Ag(1) | 43.6(4) |
| O(1)-Ag(4)-Ag(1) | 138.5(3) |
| C(17)$^{\#2}$-Ag(4)-Ag(1) | 96.6(4) |
| C(18)$^{\#2}$-Ag(4)-Ag(1) | 129.9(4) |
| C(35)-Ag(4)-Ag(7) | 47.8(4) |
| O(1)-Ag(4)-Ag(7) | 78.5(4) |
| C(17)$^{\#2}$-Ag(4)-Ag(7) | 158.8(4) |
| C(18)$^{\#2}$-Ag(4)-Ag(7) | 166.1(4) |
| Ag(1)-Ag(4)-Ag(7) | 62.40(5) |
| C(35)-Ag(4)-Ag(9)$^{\#2}$ | 81.0(4) |
| O(1)-Ag(4)-Ag(9)$^{\#2}$ | 155.0(3) |
| C(17)$^{\#2}$-Ag(4)-Ag(9)$^{\#2}$ | 38.5(4) |
| C(18)$^{\#2}$-Ag(4)-Ag(9)$^{\#2}$ | 64.6(4) |
| Ag(1)-Ag(4)-Ag(9)$^{\#2}$ | 66.47(5) |
| Ag(7)-Ag(4)-Ag(9)$^{\#2}$ | 124.89(7) |
| C(35)-Ag(4)-Ag(8)$^{\#2}$ | 113.9(4) |
| O(1)-Ag(4)-Ag(8)$^{\#2}$ | 125.9(6) |
| C(17)$^{\#2}$-Ag(4)-Ag(8)$^{\#2}$ | 36.0(4) |
| C(18)$^{\#2}$-Ag(4)-Ag(8)$^{\#2}$ | 66.7(4) |
| Ag(1)-Ag(4)-Ag(8)$^{\#2}$ | 74.22(6) |
| Ag(7)-Ag(4)-Ag(8)$^{\#2}$ | 126.91(7) |
| Ag(9)$^{\#2}$-Ag(4)-Ag(8)$^{\#2}$ | 50.16(5) |
| O(5)-Ag(5)-Ag(1) | 150.8(4) |
| C(29)-Ag(5)-Ag(1) | 91.5(4) |
| C(41)-Ag(5)-Ag(1) | 43.0(3) |
| O(5)-Ag(5)-Ag(3) | 93.3(4) |
| C(29)-Ag(5)-Ag(3) | 44.0(4) |
| C(41)-Ag(5)-Ag(3) | 152.2(3) |
| Ag(1)-Ag(5)-Ag(3) | 109.46(6) |
| O(5)-Ag(5)-Ag(10) | 81.5(4) |
| C(29)-Ag(5)-Ag(10) | 158.1(4) |
| C(41)-Ag(5)-Ag(10) | 46.9(4) |
| Ag(1)-Ag(5)-Ag(10) | 69.86(6) |
| Ag(3)-Ag(5)-Ag(10) | 130.52(8) |
| C(23)-Ag(6)-Ag(3) | 47.5(6) |
| O(4)-Ag(6)-Ag(3) | 130.5(5) |
| C(23)-Ag(6)-Ag(9) | 106.6(6) |
| O(4)-Ag(6)-Ag(9) | 63.1(5) |
| Ag(3)-Ag(6)-Ag(9) | 111.38(6) |
| C(23)-Ag(6)-Ag(2) | 86.6(6) |
| O(4)-Ag(6)-Ag(2) | 84.4(5) |
| Ag(3)-Ag(6)-Ag(2) | 58.38(5) |
| Ag(9)-Ag(6)-Ag(2) | 58.10(5) |
| O(2)-Ag(7)-Ag(3) | 70.1(4) |
| C(35)-Ag(7)-Ag(3) | 136.5(4) |
| C(29)-Ag(7)-Ag(3) | 42.0(3) |
| O(3)-Ag(7)-Ag(3) | 95.9(4) |
| C(36)-Ag(7)-Ag(3) | 163.1(4) |
| O(2)-Ag(7)-Ag(4) | 77.1(4) |
| C(35)-Ag(7)-Ag(4) | 45.6(5) |
| C(29)-Ag(7)-Ag(4) | 122.5(4) |
| O(3)-Ag(7)-Ag(4) | 143.6(4) |
| C(36)-Ag(7)-Ag(4) | 60.2(4) |
| Ag(3)-Ag(7)-Ag(4) | 103.74(7) |
| O(2)-Ag(7)-Ag(1) | 127.9(5) |
| C(35)-Ag(7)-Ag(1) | 39.9(4) |
| C(29)-Ag(7)-Ag(1) | 82.7(4) |
| O(3)-Ag(7)-Ag(1) | 150.1(4) |
| C(36)-Ag(7)-Ag(1) | 67.4(4) |
| Ag(3)-Ag(7)-Ag(1) | 99.82(7) |
| Ag(4)-Ag(7)-Ag(1) | 55.25(5) |
| C(11)-Ag(8)-C(17) | 167.4(9) |
| C(11)-Ag(8)-Ag(9) | 123.6(7) |
| C(17)-Ag(8)-Ag(9) | 46.7(5) |
| C(11)-Ag(8)-Ag(12) | 51.8(6) |
| C(17)-Ag(8)-Ag(12) | 116.7(6) |
| Ag(9)-Ag(8)-Ag(12) | 91.41(8) |
| C(11)-Ag(8)-Ag(10)$^{\#1}$ | 47.6(7) |
| C(17)-Ag(8)-Ag(10)$^{\#1}$ | 137.5(5) |
| Ag(9)-Ag(8)-Ag(10)$^{\#1}$ | 107.67(7) |
| Ag(12)-Ag(8)-Ag(10)$^{\#1}$ | 93.11(7) |
| C(11)-Ag(8)-Ag(4)$^{\#1}$ | 145.6(7) |
| C(17)-Ag(8)-Ag(4)$^{\#1}$ | 43.0(5) |
| Ag(9)-Ag(8)-Ag(4)$^{\#1}$ | 63.19(6) |
| Ag(12)-Ag(8)-Ag(4)$^{\#1}$ | 154.30(8) |
| Ag(10)$^{\#1}$-Ag(8)-Ag(4)$^{\#1}$ | 98.18(7) |
| C(17)-Ag(9)-Ag(8) | 45.7(5) |
| C(47)-Ag(9)-Ag(8) | 118.6(4) |
| C(17)-Ag(9)-Ag(2) | 129.7(5) |
| C(47)-Ag(9)-Ag(2) | 45.5(4) |
| Ag(8)-Ag(9)-Ag(2) | 99.48(7) |
| C(17)-Ag(9)-Ag(11)$^{\#1}$ | 114.9(5) |
| C(47)-Ag(9)-Ag(11)$^{\#1}$ | 49.8(4) |
| Ag(8)-Ag(9)-Ag(11)$^{\#1}$ | 71.61(7) |
| Ag(2)-Ag(9)-Ag(11)$^{\#1}$ | 66.34(5) |
| C(17)-Ag(9)-Ag(6) | 78.5(5) |
| C(47)-Ag(9)-Ag(6) | 104.6(4) |
| Ag(8)-Ag(9)-Ag(6) | 86.76(7) |
| Ag(2)-Ag(9)-Ag(6) | 61.98(5) |
| Ag(11)$^{\#1}$-Ag(9)-Ag(6) | 118.89(7) |
| C(17)-Ag(9)-Ag(4)$^{\#1}$ | 45.3(5) |
| C(47)-Ag(9)-Ag(4)$^{\#1}$ | 133.8(4) |
| Ag(8)-Ag(9)-Ag(4)$^{\#1}$ | 66.65(6) |
| Ag(2)-Ag(9)-Ag(4)$^{\#1}$ | 164.41(7) |
| Ag(11)$^{\#1}$-Ag(9)-Ag(4)$^{\#1}$ | 101.22(6) |
| Ag(6)-Ag(9)-Ag(4)$^{\#1}$ | 121.57(7) |
| C(11)$^{\#2}$-Ag(10)-Ag(11) | 79.8(6) |
| C(41)-Ag(10)-Ag(11) | 53.9(4) |
| O(6)-Ag(10)-Ag(11) | 148.1(5) |
| C(11)$^{\#2}$-Ag(10)-Ag(8)$^{\#2}$ | 41.0(4) |
| C(41)-Ag(10)-Ag(8)$^{\#2}$ | 103.4(4) |
| O(6)-Ag(10)-Ag(8)$^{\#2}$ | 140.8(5) |

| | | | | | |
|---|---|---|---|---|---|
| Ag(11)-Ag(10)-Ag(8)#2 | 69.65(6) | | Ag(1)-Ag(11)-Ag(9)#2 | 70.11(6) |
| C(11)#2-Ag(10)-Ag(5) | 149.8(5) | | Ag(10)-Ag(11)-Ag(9)#2 | 103.61(8) |
| C(41)-Ag(10)-Ag(5) | 50.3(4) | | O(10)#2-Ag(11)-Ag(2)#2 | 82.9(4) |
| O(6)-Ag(10)-Ag(5) | 78.3(5) | | C(47)#2-Ag(11)-Ag(2)#2 | 40.4(4) |
| Ag(11)-Ag(10)-Ag(5) | 101.53(7) | | C(41)-Ag(11)-Ag(2)#2 | 167.2(3) |
| Ag(8)#2-Ag(10)-Ag(5) | 110.62(8) | | Ag(1)-Ag(11)-Ag(2)#2 | 125.26(7) |
| O(10)#2-Ag(11)-Ag(1) | 151.7(4) | | Ag(10)-Ag(11)-Ag(2)#2 | 131.17(10) |
| C(47)#2-Ag(11)-Ag(1) | 92.4(4) | | Ag(9)#2-Ag(11)-Ag(2)#2 | 56.83(5) |
| C(41)-Ag(11)-Ag(1) | 42.4(3) | | C(11)-Ag(12)-Ag(8) | 42.9(4) |
| O(10)#2-Ag(11)-Ag(10) | 93.3(6) | | C(23)-Ag(12)-Ag(8) | 91.6(6) |
| C(47)#2-Ag(11)-Ag(10) | 148.6(4) | | O(11W)-Ag(12)-Ag(8) | 164.6(6) |
| C(41)-Ag(11)-Ag(10) | 48.1(4) | | C(11)-Ag(12)-Ag(3) | 162.5(5) |
| Ag(1)-Ag(11)-Ag(10) | 70.87(6) | | C(23)-Ag(12)-Ag(3) | 43.2(5) |
| O(10)#2-Ag(11)-Ag(9)#2 | 137.8(4) | | O(11W)-Ag(12)-Ag(3) | 67.6(6) |
| C(47)#2-Ag(11)-Ag(9)#2 | 45.0(4) | | Ag(8)-Ag(12)-Ag(3) | 122.85(9) |
| C(41)-Ag(11)-Ag(9)#2 | 110.4(3) | | | |

Symmetry transformations used to generate equivalent atoms: #1 x+1,y,z; #2 x-1,y,z.

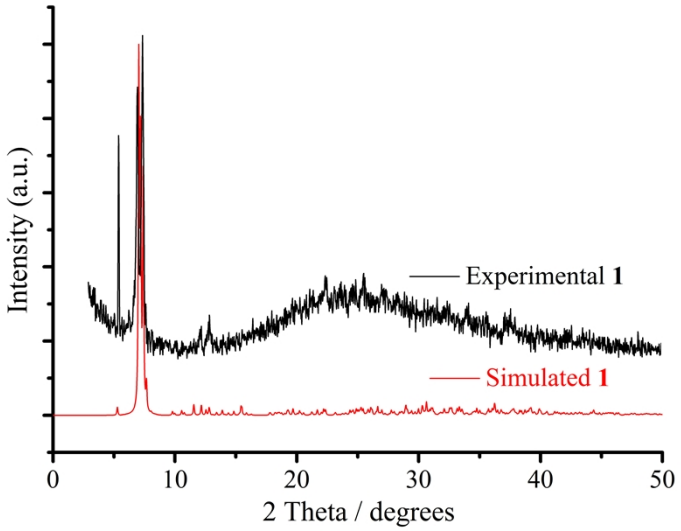


**Fig. S1** Simulated and experimental X-ray powder diffraction patterns of **1**.

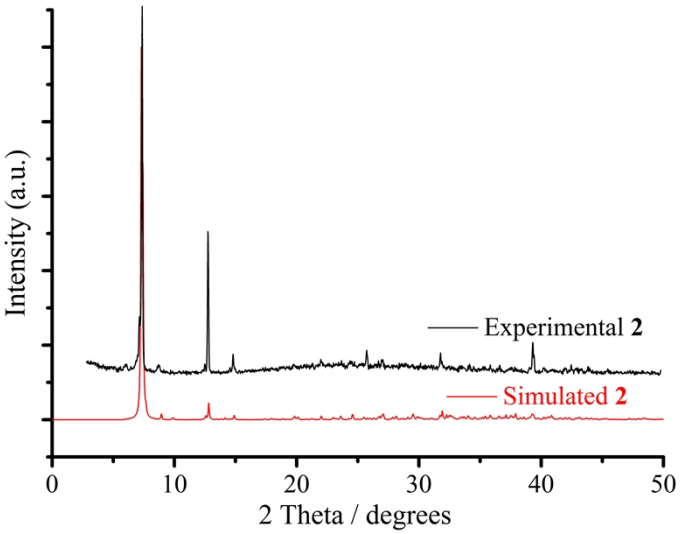


**Fig. S2** Simulated and experimental X-ray powder diffraction patterns of **2**.

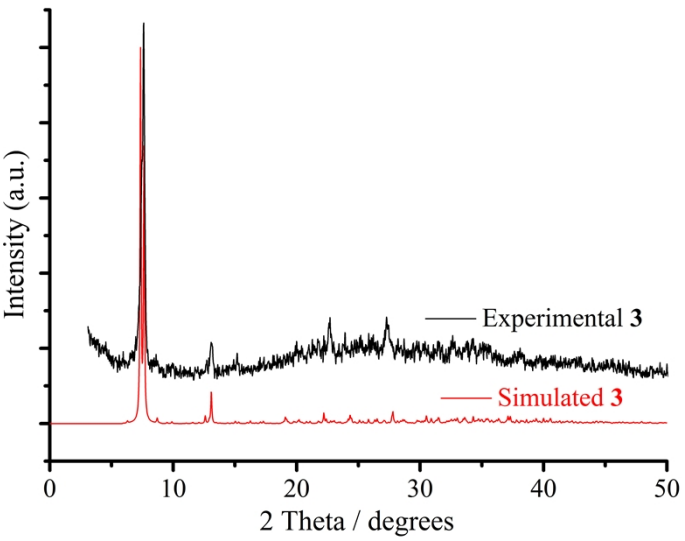


**Fig. S3** Simulated and experimental X-ray powder diffraction patterns of **3**.

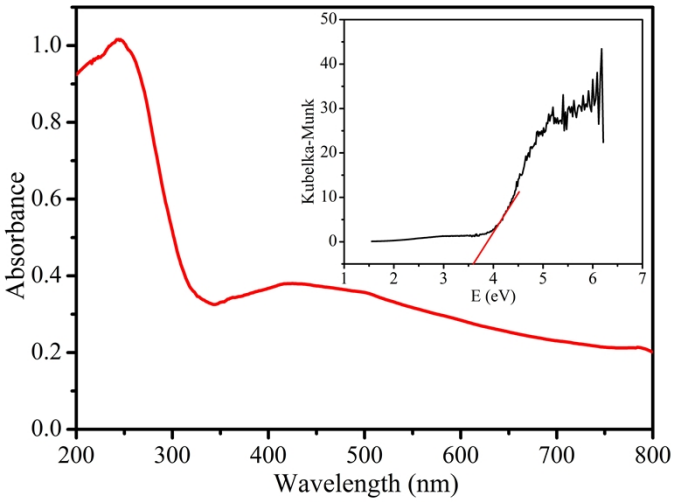


**Fig. S4** UV-Vis-NIR absorption spectrum of **1**; (inset) diffuse reflectance UV-Vis-NIR spectrum of K-M function *vs* energy (eV) of **1**.

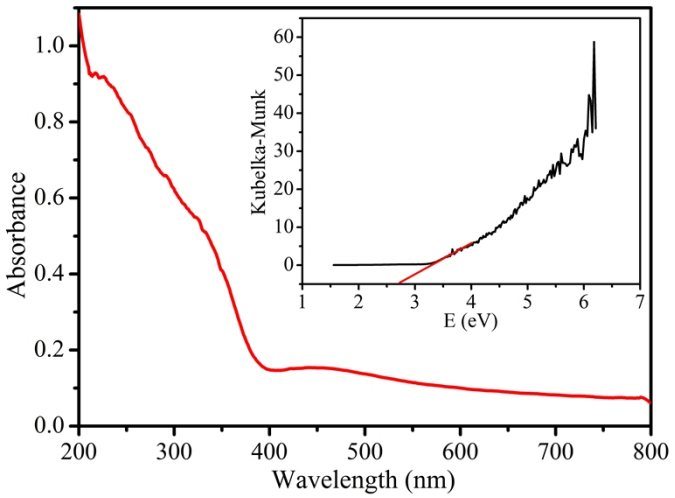


**Fig. S5** UV-Vis-NIR absorption spectrum of **2**; (inset) diffuse reflectance UV-Vis-NIR spectrum of K-M function *vs* energy (eV) of **2**.

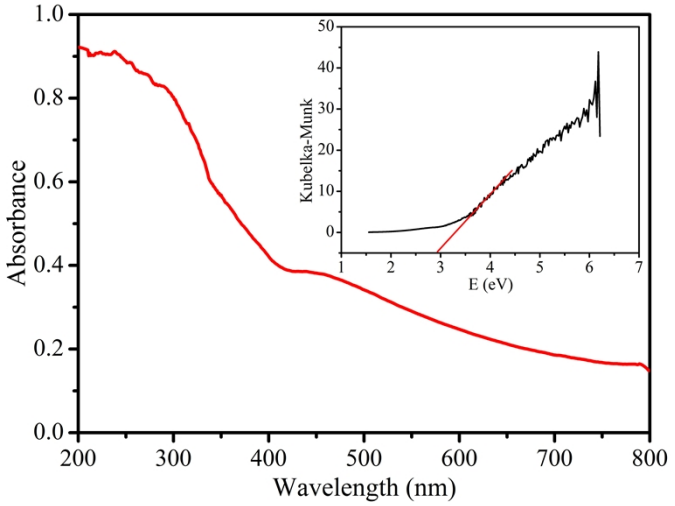


**Fig. S6** UV-Vis-NIR absorption spectrum of **3**; (inset) diffuse reflectance UV-Vis-NIR spectrum of K-M function *vs* energy (eV) of **3**.

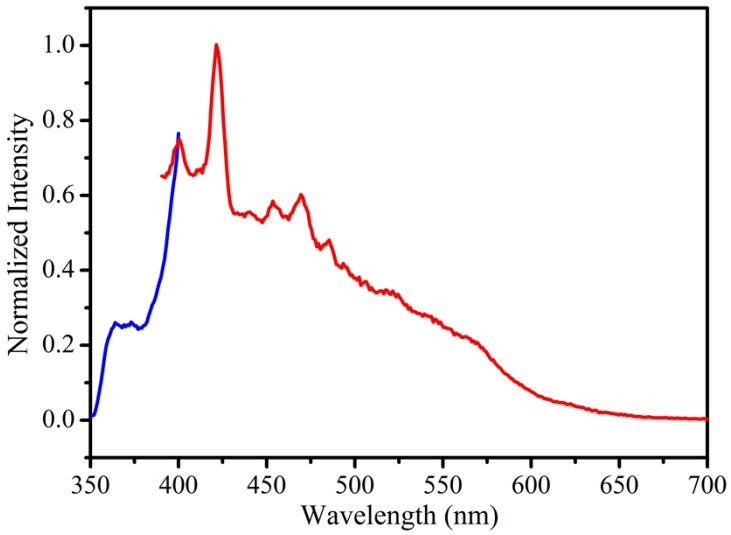


**Fig. S7** Excitation spectrum (blue trace) and emission spectrum (red trace) of **1** in the solid state.

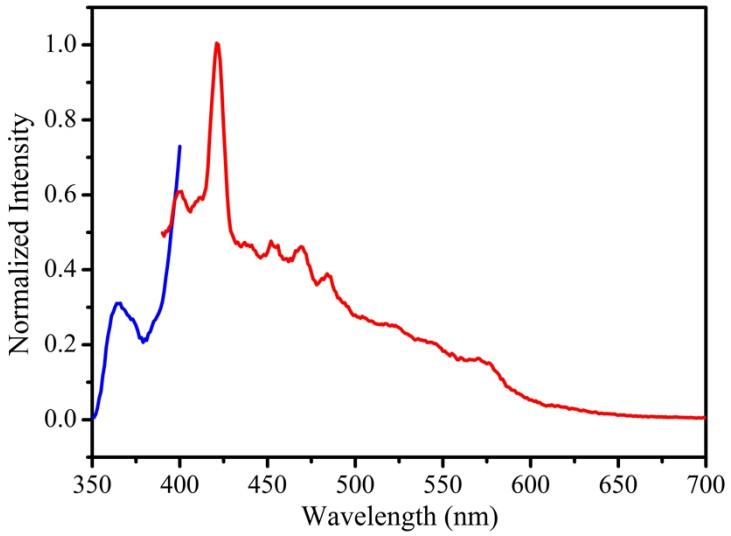


**Fig. S8** Excitation spectrum (blue trace) and emission spectrum (red trace) of **2** in the solid state.

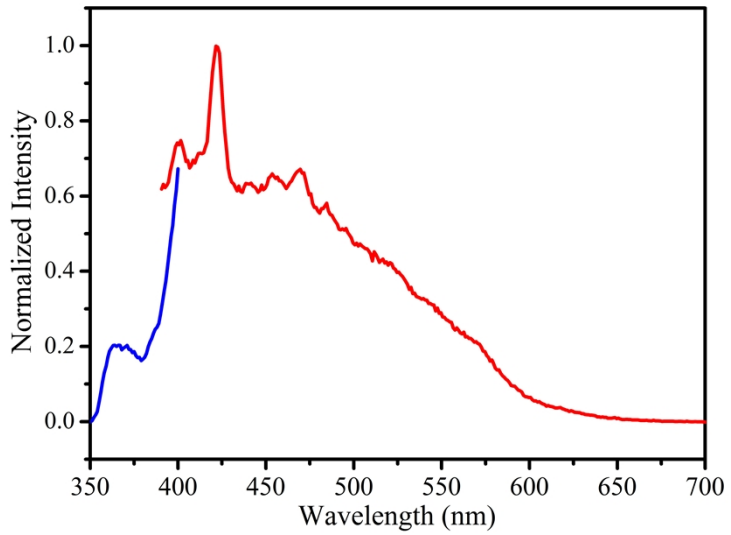


**Fig. S9** Excitation spectrum (blue trace) and emission spectrum (red trace) of **3** in the solid state.

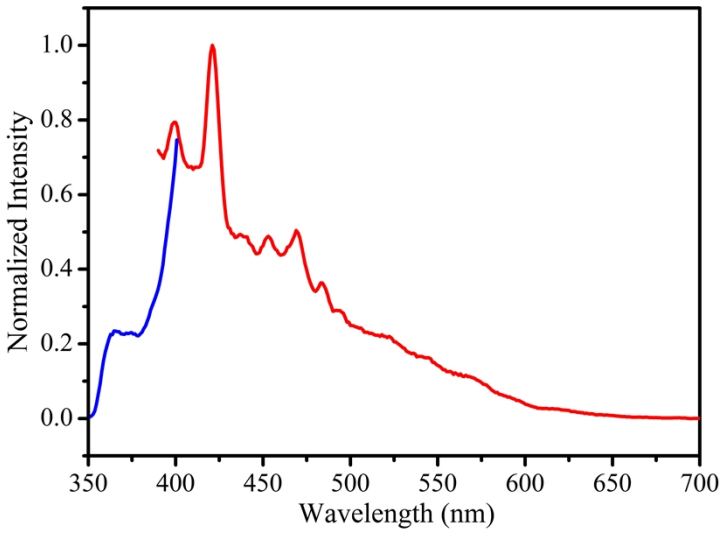


**Fig. S10** Excitation spectrum (blue trace) and emission spectrum (red trace) of AgC≡C$^t$Bu ligand in the solid state.