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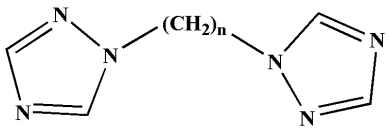
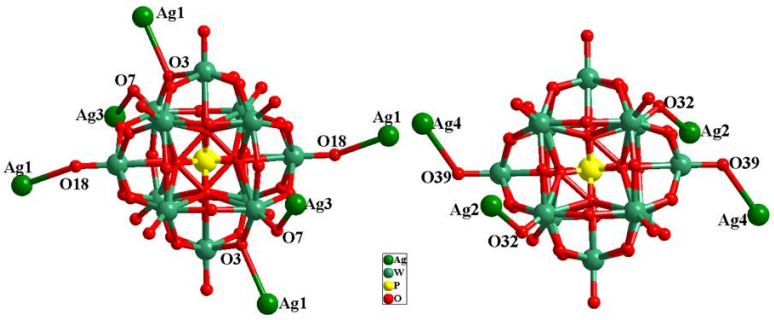
A series of 3D $PW_{12}O_{40}^{3-}$-based Ag^{I}-bis(triazole) complexes containing different multinuclear loops: Syntheses, structures and properties †

Xiuli Wang,* Dan Zhao, Aixiang Tian, * and Jun Ying



btp n=3
btb n=4
btx n=6

Chart S1. The organic ligands 1,3-bis(1,2,4-triazol-1-yl)ethane (btp), 1,4-bis(1,2,4-triazol-1-y1)butan (btb) and 1,6-bis(1,2,4-triazol-1-y1) hexane (btx) used in compounds **1**–**4**.



PW_{12}^{a} PW_{12}^{b}

Fig. S1 Two types of PW_{12} anions in compound **1** with different coordinated modes.

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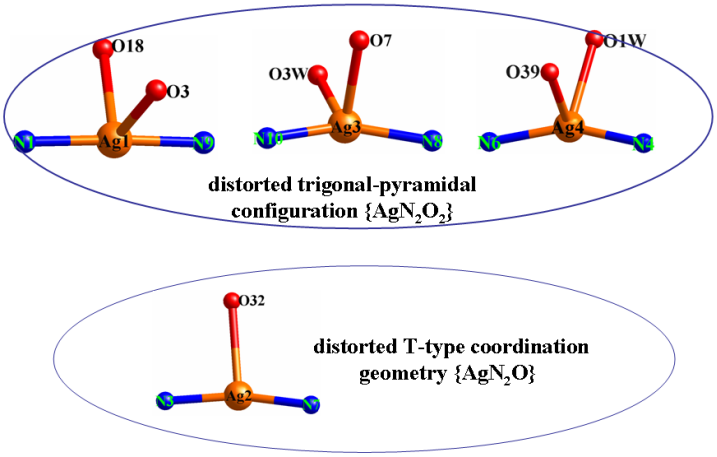

Fig. S2 The coordination environments and modes of four crystallographically independent Ag^{I} ions in compound **1**.

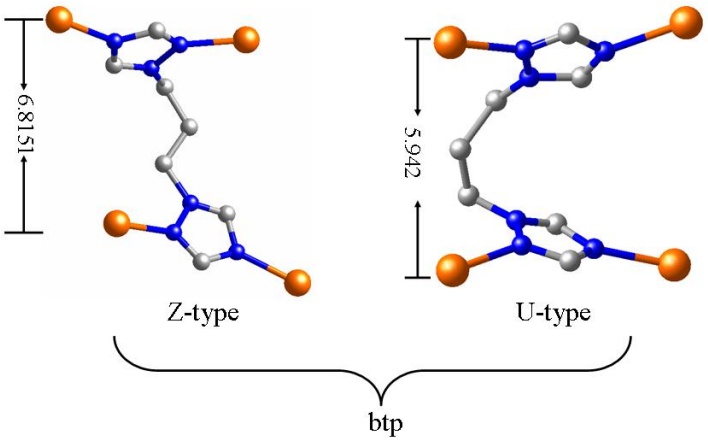

Fig. S3 Two types of conformation modes and lengths of btp in compound **1**

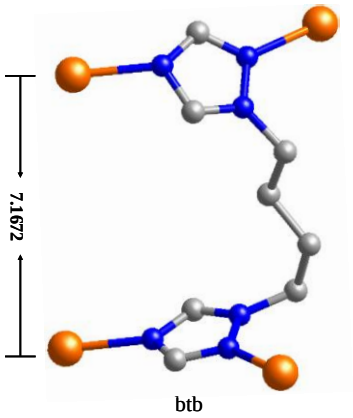

Fig. S4 The conformation and coordination mode of btb in compound **2**.

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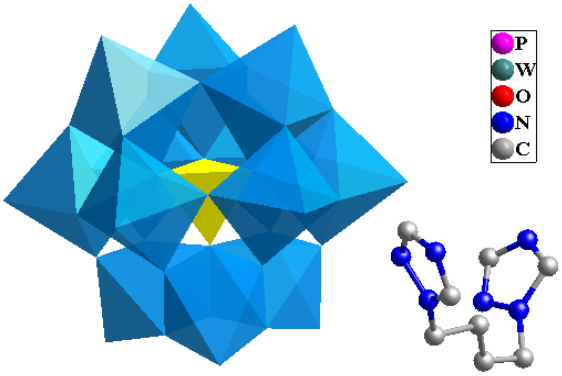

Fig. S5 Ball/stick and polyhedral view of compound **3**. The hydrogen atoms and crystal water molecules are omitted for clarity.

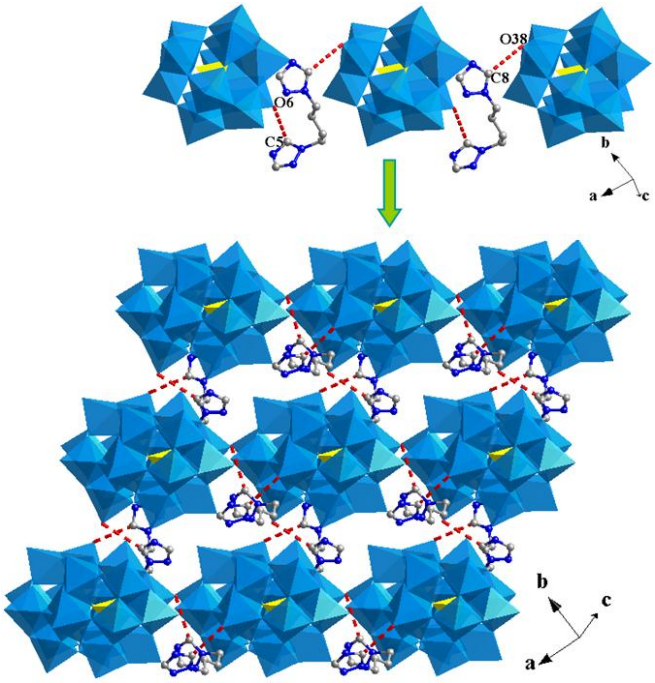

Fig. S6 Ball/stick and polyhedral view of the supramolecular structure of compound **3**.

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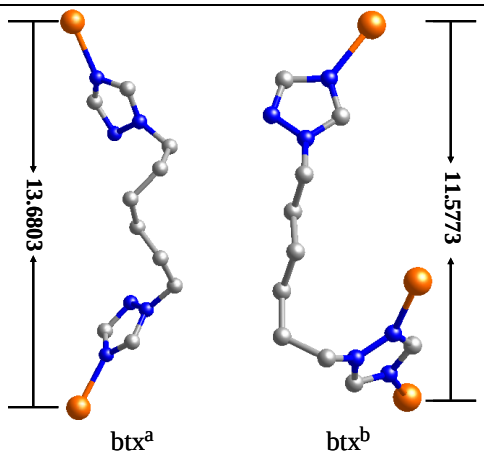
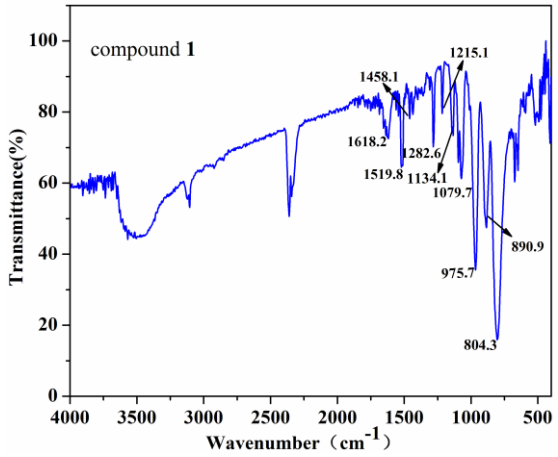
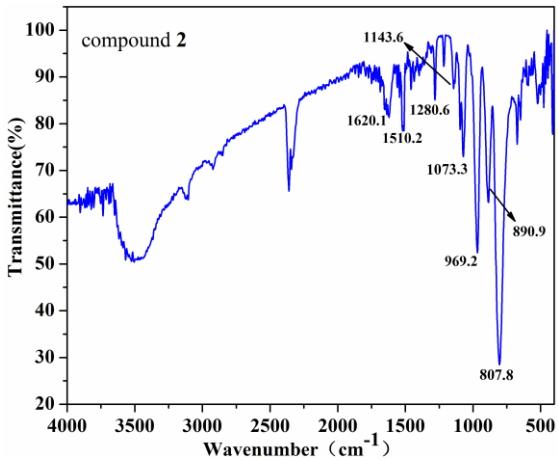


Fig. S7 The two conformation and coordination modes (btx[a] and btx[b]) and lengths of btx ligands in compound **4**.





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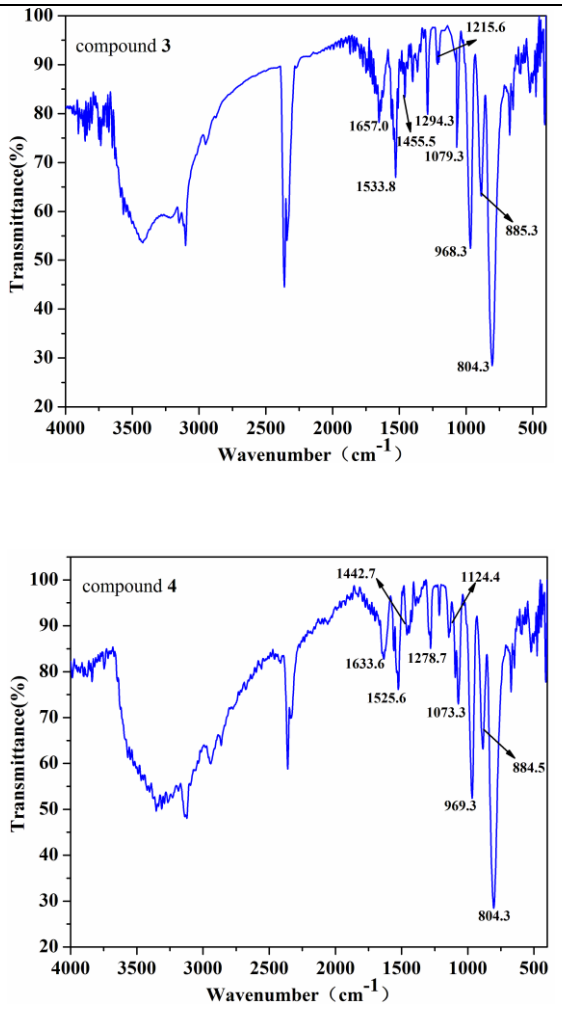
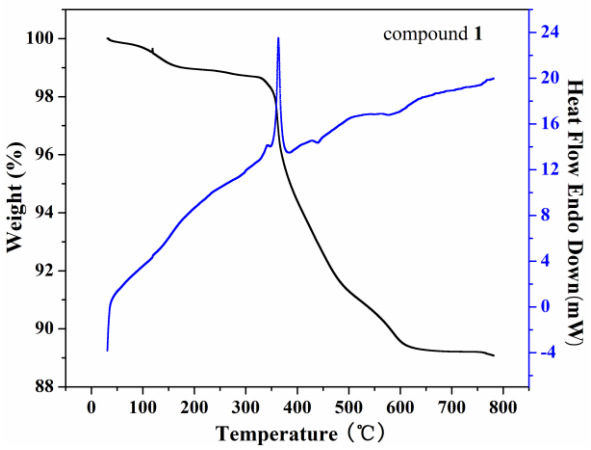


Fig. S8 The IR spectra of compounds **1**–**4**.



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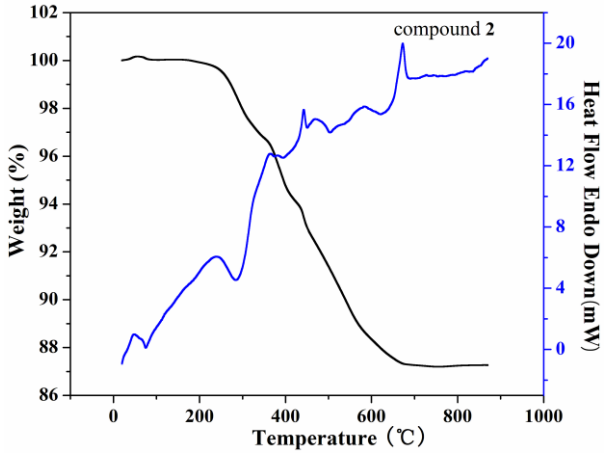

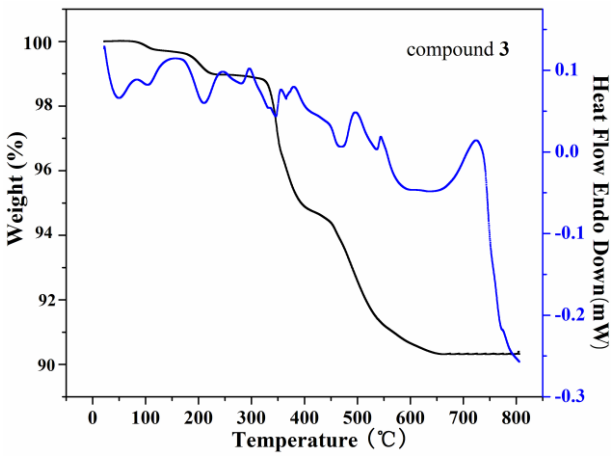

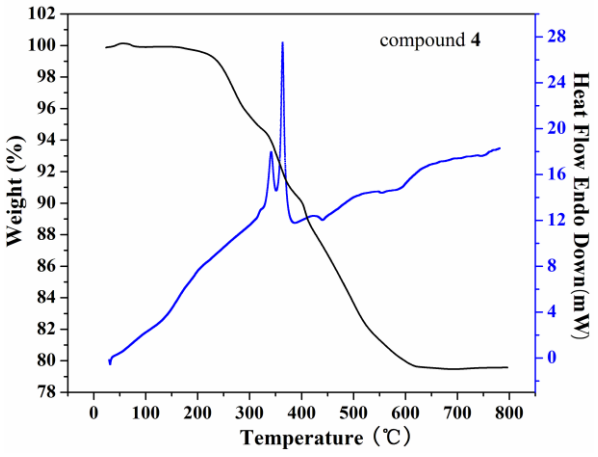

Fig. S9 The TG curves of compounds **1**–**4**.

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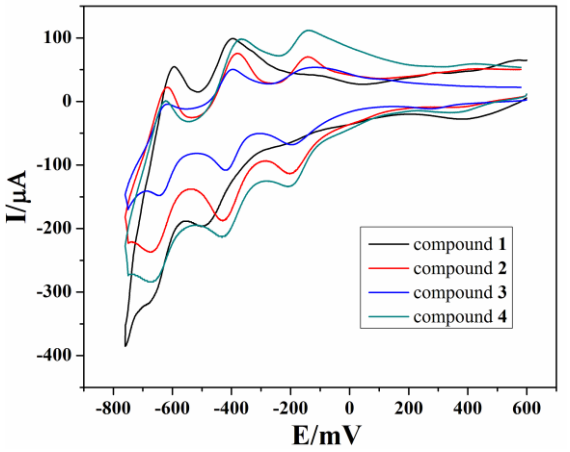


Fig. S10 The cyclic voltammograms of the **1**–, **2**–, **3**– and **4**–CPEs in 0.5M H_2SO_4 aqueous solution at scan rate of 300 mV·s^{-1}

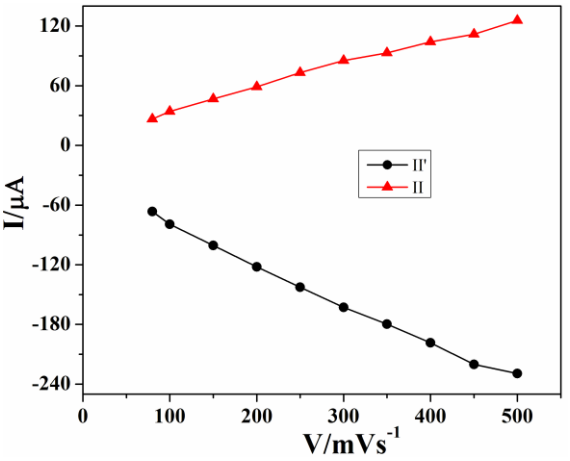
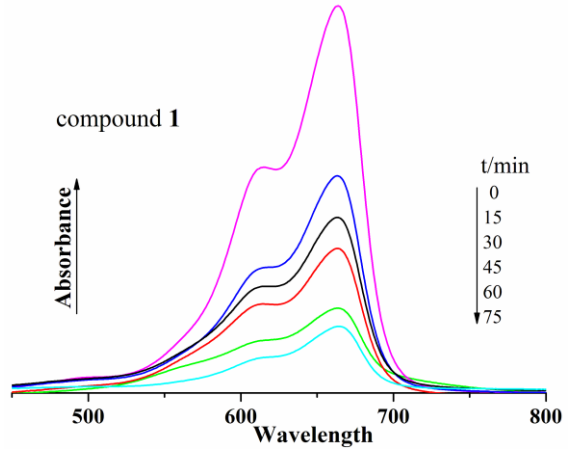


Fig. S11 The dependence of cathodic peak (II) and anodic peak (II') currents of **1**–CPE on scan rates.



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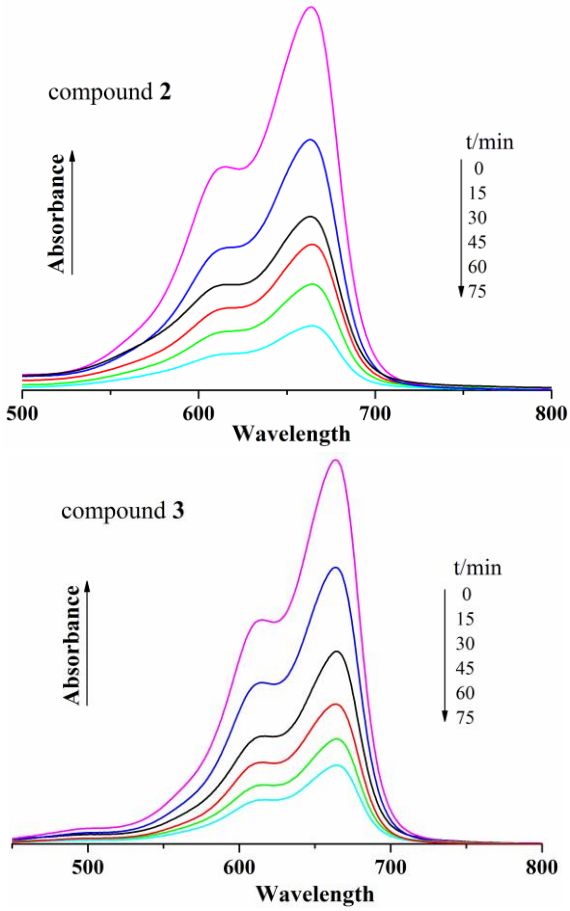

Fig. S12 Absorption spectra of the MB solution during the decomposition reaction under UV light irradiation with the use of **1**, **2** and **3**

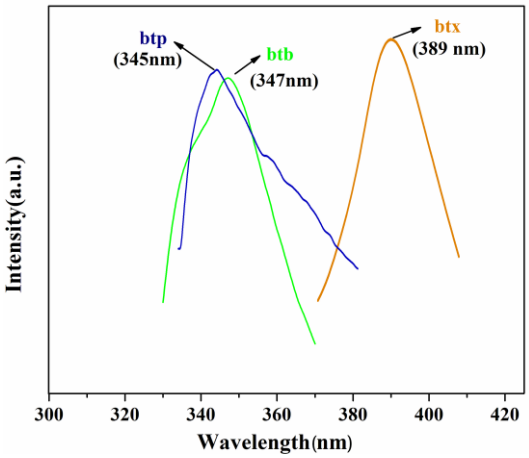

Fig. S13 The emission spectra of free ligands (blue: btp, green: btb, orange: btx).

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Table S1 Selected bond distances (Å) and angles (°) for compounds **1–4.**

Compound **1**			
Ag(1)-N(1)	2.20(4)	Ag(1)-N(9)	2.21(4)
Ag(1)-O(3)	2.62(4)	Ag(1)-O(18)	2.60(4)
Ag(2)-N(3)	2.14(4)	Ag(2)-N(7)#1	2.18(4)
Ag(2)-O(32)	2.79(4)	N(7)-Ag(2)#5	2.18(4)
Ag(3)-O(7)	2.50(5)	Ag(3)-O(3W)	2.31(4)
Ag(3)-N(10)#2	2.18(4)	Ag(3)-N(8)	2.22(4)
N(10)-Ag(3)#6	2.18(4)	Ag(4)-O(39)	2.74(4)
Ag(4)-N(4)	2.17(4)	Ag(4)-N(6)#3	2.24(4)
N(1)-Ag(1)-N(9)	176.9(15)	C(7)-N(1)-Ag(1)	129(3)
N(2)-N(1)-Ag(1)	125(3)	C(12)-N(9)-Ag(1)	128(4)
C(13)-N(9)-Ag(1)	126(3)	O(18)-Ag(1)-N(9)	87.92(4)
O(18)-Ag(1)-N(1)	93.96(3)	O(3)-Ag(1)-N(9)	83.71(4)
O(3)-Ag(1)-O(18)	97.38(3)	N(3)-Ag(2)-N(7)#1	160.6(16)
C(1)-N(3)-Ag(2)	130(3)	N(5)-N(3)-Ag(2)	127(3)
C(14)-N(7)-Ag(2)#5	132(4)	N(11)-N(7)-Ag(2)#5	121(3)
O(32)-Ag(2)-N(7)	102.29(3)	O(32)-Ag(2)-N(3)	90.6(3)
O(3W)-Ag(3)-N(10)#2	99.0(14)	O(3W)-Ag(3)-N(8)	106.9(14)
N(10)#2-Ag(3)-N(8)	153.9(15)	O(3W)-Ag(3)-O(7)	87.3(15)
C(12)-N(8)-Ag(3)	131(3)	C(12)-N(9)-C(13)	120(3)
N(10)#2-Ag(3)-O(7)	91.8(15)	N(8)-Ag(3)-O(7)	93.0(15)
C(6)-N(10)-Ag(3)#6	126(3)	C(7)-N(10)-Ag(3)#6	130(4)
W(12)-O(7)-Ag(3)	122(2)	N(4)-Ag(4)-N(6)#3	155.0(16)
C(2)-N(4)-Ag(4)	125(3)	C(1)-N(4)-Ag(4)	131(4)
C(10)-N(6)-Ag(4)#4	129(3)	C(14)-N(6)-Ag(4)#4	123(3)
O(39)-Ag(4)-N(4)	93.69(3)	O(39)-Ag(4)-N(6)	90.32(3)

Symmetry codes for **1**: #1 x+1, y-1, z #2 x, y+1, z #3 x+1, y, z #4 x-1, y, z #5 x-1, y+1, z #6 x, y-1, z #7 -x+1, -y, -z+1 #8 -x+2, -y+1, -z

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Compound **2**			
N(1)-Ag(1)	2.216(12)	N(4)-Ag(1)	2.215(12)
O(22)-Ag(1)	2.506(14)	Ag(1)-O(19)	2.807(12)
Ag(2)-O(17)	2.848(12)	N(3)-Ag(2)	2.141(12)
N(6)-Ag(2)#3	2.162(12)	Ag(2)-N(6)#5	2.162(12)
Ag(2)-O(19)	2.704(12)	N(1)-Ag(1)-O(19)	119.49(9)
C(2)-N(1)-Ag(1)	128.9(11)	N(2)-N(1)-Ag(1)	127.3(9)
C(5)-N(4)-Ag(1)	125.3(11)	N(5)-N(4)-Ag(1)	131.9(9)
W(1)-O(22)-Ag(1)	135.2(8)	N(4)-Ag(1)-N(1)	152.6(5)
N(4)-Ag(1)-O(22)	110.7(5)	N(1)-Ag(1)-O(22)	82.8(5)
Ag(1)-O(19)-Ag(2)	91.70(5)	N(4)-Ag(1)-O(19)	85.06(5)
C(1)-N(3)-Ag(2)	117.9(10)	C(2)-N(3)-Ag(2)	131.3(10)
C(4)-N(6)-Ag(2)#3	131.8(11)	C(5)-N(6)-Ag(2)#3	124.1(10)
N(3)-Ag(2)-N(6)#5	167.0(5)	N(2)-Ag(2)-O(18)	96.78(5)
N(3)-Ag(2)-O(19)	97.02(5)	N(6)-Ag(2)-O(19)	95.32(5)
O(17)-Ag(2)-N(3)	79.39(5)	O(17)-Ag(2)-N(6)	92.87(5)

Symmetry codes for **2**: #1 x-1, -y+1/2, z-1/2 #2 x+1, -y+1/2, z+1/2 #3 -x+2, y+1/2, -z+1/2 #4 -x+2, -y, -z+1 #5 -x+2, y-1/2, -z+1/2

Compound **3**			
P(1)-O(30)	1.513(13)	P(1)-O(2)	1.519(17)
P(1)-O(29)	1.537(17)	P(1)-O(37)	1.540(14)
W(1)-O(31)	1.717(15)	W(1)-O(33)	1.877(13)
W(1)-O(27)	1.891(15)	W(1)-O(4)	1.901(14)
W(1)-O(16)	1.942(15)	W(1)-O(37)	2.45(2)
W(2)-O(6)	1.727(12)	W(2)-O(28)	1.860(14)
W(2)-O(16)	1.895(18)	W(2)-O(23)	1.922(17)
W(2)-O(21)	1.950(14)	W(2)-O(37)	2.416(15)
W(3)-O(19)	1.693(18)	W(3)-O(4)	1.895(12)
W(3)-O(12)	1.915(15)	W(3)-O(32)	1.922(15)

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W(3)-O(34)	1.936(14)	W(3)-O(30)	2.452(14)
W(4)-O(22)	1.717(16)	W(4)-O(15)	1.861(17)
W(4)-O(8)	1.873(12)	W(4)-O(32)	1.908(19)
W(4)-O(28)	1.940(12)	W(4)-O(30)	2.439(13)
W(5)-O(24)	1.708(16)	W(5)-O(23)	1.896(14)
W(5)-O(35)	1.904(16)	W(5)-O(15)	1.921(15)
W(5)-O(39)	1.956(14)	W(5)-O(2)	2.444(14)
W(6)-O(38)	1.710(12)	W(6)-O(7)	1.912(15)
W(6)-O(10)	1.914(18)	W(6)-O(26)	1.956(19)
W(6)-O(29)	2.429(13)	W(7)-O(3)	1.681(14)
W(7)-O(21)	1.889(13)	W(7)-O(40)	1.896(13)
W(7)-O(13)	1.903(18)	W(7)-O(27)	1.915(18)
W(7)-O(37)	2.417(15)	W(8)-O(25)	1.713(18)
W(8)-O(12)	1.886(15)	W(8)-O(36)	1.892(18)
W(8)-O(26)	1.895(14)	W(8)-O(33)	1.924(12)
W(8)-O(29)	2.42(2)	W(10)-O(11)	1.937(17)
W(9)-O(1)	1.681(12)	W(10)-O(36)	1.97(2)
W(9)-O(34)	1.874(17)	W(10)-O(29)	2.452(16)
W(9)-O(7)	1.910(15)	W(11)-O(17)	1.633(16)
W(9)-O(14)	1.93(2)	W(11)-O(39)	1.873(17)
W(9)-O(8)	1.950(12)	W(11)-O(14)	1.880(18)
W(9)-O(30)	2.442(11)	W(11)-O(10)	1.883(17)
W(10)-O(5)	1.716(18)	W(11)-O(18)	1.942(18)
W(10)-O(40)	1.910(13)	W(11)-O(2)	2.426(13)
W(10)-O(20)	1.913(14)	W(12)-O(9)	1.716(18)
W(12)-O(11)	1.886(15)	W(12)-O(35)	1.929(14)
W(12)-O(13)	1.906(15)	W(12)-O(2)	2.470(16)
W(12)-O(18)	1.923(15)	O(37)-P(1)-O(2)	111.4(9)
O(37)-P(1)-O(30)	108.4(8)	O(31)-W(1)-O(27)	101.4(6)

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O(2)-P(1)-O(30)	109.8(8)	O(33)-W(1)-O(27)	91.6(5)
O(37)-P(1)-O(29)	109.4(8)	O(4)-W(1)-O(27)	156.4(7)
O(2)-P(1)-O(29)	110.3(8)	O(31)-W(1)-O(16)	103.4(6)
O(30)-P(1)-O(29)	107.5(8)	O(33)-W(1)-O(16)	155.2(7)
O(31)-W(1)-O(33)	101.4(6)	O(4)-W(1)-O(16)	89.0(5)
O(31)-W(1)-O(4)	102.2(6)	O(27)-W(1)-O(16)	83.8(6)
O(33)-W(1)-O(4)	85.6(5)	O(31)-W(1)-O(37)	171.8(5)
O(33)-W(1)-O(37)	83.9(6)	O(16)-W(2)-O(23)	155.7(5)
O(4)-W(1)-O(37)	84.4(6)	O(28)-W(2)-O(23)	85.3(6)
O(27)-W(1)-O(37)	72.0(5)	O(6)-W(2)-O(21)	103.8(5)
O(16)-W(1)-O(37)	71.4(5)	O(16)-W(2)-O(21)	86.9(6)
O(6)-W(2)-O(16)	100.6(6)	O(28)-W(2)-O(21)	155.2(4)
O(6)-W(2)-O(28)	100.8(5)	O(23)-W(2)-O(21)	86.0(6)
O(16)-W(2)-O(28)	91.5(6)	O(6)-W(2)-O(37)	172.1(6)
O(6)-W(2)-O(23)	103.6(7)	O(16)-W(2)-O(37)	72.8(5)
O(28)-W(2)-O(37)	84.0(5)	O(4)-W(3)-O(34)	156.1(7)
O(23)-W(2)-O(37)	82.9(5)	O(19)-W(3)-O(12)	103.1(7)
O(21)-W(2)-O(37)	71.9(4)	O(32)-W(3)-O(12)	156.7(7)
O(19)-W(3)-O(32)	100.2(6)	O(4)-W(3)-O(12)	84.9(5)
O(19)-W(3)-O(4)	100.9(6)	O(34)-W(3)-O(12)	88.5(5)
O(32)-W(3)-O(4)	90.3(5)	O(19)-W(3)-O(30)	172.1(5)
O(19)-W(3)-O(34)	103.0(6)	O(32)-W(3)-O(30)	73.9(6)
O(32)-W(3)-O(34)	86.7(5)	O(4)-W(3)-O(30)	84.6(6)
O(34)-W(3)-O(30)	71.7(6)	O(22)-W(4)-O(32)	101.4(7)
O(12)-W(3)-O(30)	82.9(6)	O(15)-W(4)-O(32)	154.5(6)
O(22)-W(4)-O(15)	103.9(7)	O(8)-W(4)-O(32)	87.8(6)
O(22)-W(4)-O(8)	101.2(5)	O(28)-W(4)-O(32)	87.6(6)
O(15)-W(4)-O(8)	89.8(6)	O(22)-W(4)-O(30)	171.7(6)
O(22)-W(4)-O(28)	101.9(5)	O(15)-W(4)-O(30)	82.7(6)

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O(15)-W(4)-O(28)	84.7(6)	O(8)-W(4)-O(30)	73.5(5)
O(8)-W(4)-O(28)	156.9(5)	O(28)-W(4)-O(30)	83.5(4)
O(32)-W(4)-O(30)	72.3(5)	O(35)-W(5)-O(39)	83.1(5)
O(24)-W(5)-O(35)	99.4(7)	O(23)-W(5)-O(39)	156.2(6)
O(24)-W(5)-O(23)	104.0(6)	O(15)-W(5)-O(39)	91.2(6)
O(35)-W(5)-O(23)	90.3(6)	O(24)-W(5)-O(2)	168.9(6)
O(24)-W(5)-O(15)	106.9(6)	O(35)-W(5)-O(2)	72.7(6)
O(35)-W(5)-O(15)	153.7(6)	O(23)-W(5)-O(2)	84.1(5)
O(23)-W(5)-O(15)	84.7(6)	O(15)-W(5)-O(2)	81.1(5)
O(24)-W(5)-O(39)	99.6(6)	O(39)-W(5)-O(2)	72.1(5)
O(38)-W(6)-O(10)	106.7(6)	O(3)-W(7)-O(27)	101.8(6)
O(38)-W(6)-O(7)	100.9(5)	O(21)-W(7)-O(27)	87.1(6)
O(10)-W(6)-O(7)	84.2(6)	O(3)-W(7)-O(40)	104.4(6)
O(38)-W(6)-O(20)	103.8(5)	O(21)-W(7)-O(40)	155.7(5)
O(10)-W(6)-O(20)	91.4(6)	O(27)-W(7)-O(40)	90.4(6)
O(7)-W(6)-O(20)	155.1(4)	O(3)-W(7)-O(13)	103.0(7)
O(38)-W(6)-O(26)	97.9(6)	O(21)-W(7)-O(13)	89.1(6)
O(10)-W(6)-O(26)	155.0(5)	O(27)-W(7)-O(13)	155.3(5)
O(7)-W(6)-O(26)	86.5(6)	O(40)-W(7)-O(13)	83.1(6)
O(20)-W(6)-O(26)	87.4(6)	O(3)-W(7)-O(37)	170.4(5)
O(38)-W(6)-O(29)	169.1(6)	O(21)-W(7)-O(37)	73.0(5)
O(10)-W(6)-O(29)	83.7(5)	O(27)-W(7)-O(37)	72.0(5)
O(7)-W(6)-O(29)	82.9(4)	O(40)-W(7)-O(37)	83.2(5)
O(20)-W(6)-O(29)	72.3(4)	O(13)-W(7)-O(37)	83.6(5)
O(26)-W(6)-O(29)	72.1(5)	O(25)-W(8)-O(12)	103.0(7)
O(3)-W(7)-O(21)	99.8(5)	O(25)-W(8)-O(36)	97.4(7)
O(12)-W(8)-O(36)	159.4(7)	O(1)-W(9)-O(14)	105.1(7)
O(25)-W(8)-O(26)	102.2(6)	O(34)-W(9)-O(14)	155.4(5)
O(12)-W(8)-O(26)	90.2(5)	O(7)-W(9)-O(14)	83.7(6)

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O(36)-W(8)-O(26)	88.9(6)	O(1)-W(9)-O(8)	102.8(5)
O(25)-W(8)-O(33)	102.8(6)	O(34)-W(9)-O(8)	87.0(6)
O(12)-W(8)-O(33)	84.5(5)	O(7)-W(9)-O(8)	155.6(5)
O(36)-W(8)-O(33)	87.7(5)	O(14)-W(9)-O(8)	89.2(6)
O(26)-W(8)-O(33)	155.0(7)	O(1)-W(9)-O(30)	170.8(7)
O(25)-W(8)-O(29)	171.2(6)	O(34)-W(9)-O(30)	72.5(5)
O(12)-W(8)-O(29)	84.6(6)	O(7)-W(9)-O(30)	83.1(4)
O(36)-W(8)-O(29)	75.4(6)	O(14)-W(9)-O(30)	83.2(5)
O(26)-W(8)-O(29)	73.1(5)	O(8)-W(9)-O(30)	72.9(4)
O(33)-W(8)-O(29)	82.1(5)	O(5)-W(10)-O(40)	103.2(5)
O(1)-W(9)-O(34)	99.4(7)	O(5)-W(10)-O(20)	100.1(5)
O(1)-W(9)-O(7)	101.6(5)	O(40)-W(10)-O(20)	156.5(6)
O(34)-W(9)-O(7)	89.8(6)	O(5)-W(10)-O(11)	104.8(7)
O(40)-W(10)-O(11)	84.2(6)	O(39)-W(11)-O(10)	156.7(5)
O(20)-W(10)-O(11)	87.0(6)	O(17)-W(11)-O(18)	100.0(6)
O(5)-W(10)-O(36)	99.7(7)	O(14)-W(11)-O(18)	157.4(6)
O(40)-W(10)-O(36)	91.7(6)	O(39)-W(11)-O(18)	85.1(6)
O(20)-W(10)-O(36)	87.2(6)	O(10)-W(11)-O(18)	88.9(6)
O(11)-W(10)-O(36)	155.5(6)	O(17)-W(11)-O(2)	174.4(6)
O(5)-W(10)-O(29)	169.5(5)	O(14)-W(11)-O(2)	83.7(5)
O(40)-W(10)-O(29)	84.4(5)	O(39)-W(11)-O(2)	74.6(5)
O(20)-W(10)-O(29)	72.9(5)	O(10)-W(11)-O(2)	82.1(5)
O(11)-W(10)-O(29)	83.0(6)	O(18)-W(11)-O(2)	74.7(5)
O(36)-W(10)-O(29)	72.5(5)	O(9)-W(12)-O(11)	102.6(6)
O(17)-W(11)-O(14)	101.8(6)	O(9)-W(12)-O(13)	103.0(6)
O(17)-W(11)-O(39)	103.3(6)	O(11)-W(12)-O(13)	85.6(6)
O(14)-W(11)-O(39)	95.8(6)	O(9)-W(12)-O(35)	102.7(7)
O(17)-W(11)-O(10)	99.9(6)	O(11)-W(12)-O(35)	154.7(7)
O(14)-W(11)-O(10)	81.4(6)	O(13)-W(12)-O(35)	89.1(5)

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O(9)-W(12)-O(18)	99.8(6)	W(9)-O(7)-W(6)	150.9(9)
O(11)-W(12)-O(18)	88.9(5)	W(4)-O(8)-W(9)	125.8(7)
O(13)-W(12)-O(18)	157.1(6)	W(6)-O(10)-W(11)	155.1(8)
O(35)-W(12)-O(18)	86.5(5)	W(12)-O(11)-W(10)	151.4(7)
O(9)-W(12)-O(2)	171.5(6)	W(8)-O(12)-W(3)	151.7(7)
O(11)-W(12)-O(2)	82.7(6)	W(12)-O(13)-W(7)	152.6(8)
O(13)-W(12)-O(2)	83.8(5)	W(11)-O(14)-W(9)	155.2(8)
O(35)-W(12)-O(2)	72.2(6)	W(4)-O(15)-W(5)	154.6(8)
O(18)-W(12)-O(2)	73.4(5)	W(2)-O(16)-W(1)	127.2(7)
P(1)-O(2)-W(11)	128.2(7)	W(11)-O(18)-W(12)	122.7(8)
P(1)-O(2)-W(12)	125.1(8)	W(10)-O(20)-W(6)	126.0(6)
W(11)-O(2)-W(12)	89.0(5)	W(7)-O(21)-W(2)	126.4(6)
P(1)-O(2)-W(5)	125.4(7)	W(5)-O(23)-W(2)	151.3(8)
W(11)-O(2)-W(5)	88.6(5)	W(8)-O(26)-W(6)	125.6(7)
W(12)-O(2)-W(5)	88.2(5)	W(7)-O(27)-W(1)	128.2(7)
W(1)-O(4)-W(3)	150.1(7)	W(2)-O(28)-W(4)	151.3(8)
P(1)-O(29)-W(10)	124.8(8)	W(8)-O(36)-W(10)	122.7(7)
P(1)-O(29)-W(8)	127.7(8)	P(1)-O(37)-W(2)	127.0(8)
W(10)-O(29)-W(8)	89.3(5)	P(1)-O(37)-W(1)	126.8(9)
P(1)-O(29)-W(6)	125.3(7)	W(2)-O(37)-W(1)	88.5(4)
W(10)-O(29)-W(6)	88.7(4)	P(1)-O(37)-W(7)	125.7(8)
W(8)-O(29)-W(6)	89.0(4)	W(2)-O(37)-W(7)	88.3(4)
P(1)-O(30)-W(3)	128.0(8)	W(1)-O(37)-W(7)	87.9(4)
P(1)-O(30)-W(9)	126.4(7)	W(11)-O(39)-W(5)	124.7(8)
W(3)-O(30)-W(9)	88.6(5)	W(10)-O(40)-W(7)	153.9(8)
P(1)-O(30)-W(4)	125.2(7)	W(9)-O(30)-W(4)	88.3(5)
W(3)-O(30)-W(4)	87.7(4)	W(9)-O(34)-W(3)	127.1(7)
W(3)-O(32)-W(4)	125.3(7)	W(5)-O(35)-W(12)	126.9(8)
W(1)-O(33)-W(8)	152.6(8)		

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Compound **4**			
Ag(1)-N(9)	2.107(19)	Ag(1)-N(1)	2.16(2)
Ag(1)-O(19)#1	2.568(14)	Ag(1)-O(21)	2.579(15)
O(19)-Ag(1)#6	2.568(14)	Ag(2)-N(4)	2.12(2)
Ag(2)-N(12)#2	2.13(2)	N(12)-Ag(2)#5	2.13(2)
Ag(2)-O(18)	2.726(14)	Ag(2)#5-O(18)	2.726(14)
Ag(3)-N(6)#3	2.13(2)	Ag(3)-N(6)	2.13(2)
N(9)-Ag(1)-N(1)	167.1(8)	N(9)-Ag(1)-O(19)#1	109.9(5)
N(1)-Ag(1)-O(19)#1	82.1(7)	N(9)-Ag(1)-O(21)	89.3(6)
N(1)-Ag(1)-O(21)	87.1(8)	O(19)#1-Ag(1)-O(21)	126.0(6)
C(5)-N(1)-Ag(1)	130(2)	C(1)-N(1)-Ag(1)	124.9(18)
C(9)-N(9)-Ag(1)	125.8(16)	C(8)-N(9)-Ag(1)	128.9(16)
W(5)-O(19)-Ag(1)#6	147.1(9)	W(2)-O(21)-Ag(1)	157.7(11)
N(4)-Ag(2)-N(12)#2	170.1(8)	N(5)-N(4)-Ag(2)	134.5(17)
C(19)-N(4)-Ag(2)	122.6(17)	C(19)-N(12)-Ag(2)#5	122.8(19)
N2-Ag(2)-O(18)	96.78(17)	N(4)-Ag(2)-O18	91.17(17)
C(20)-N(12)-Ag(2)#5	131.9(19)	N(6)#3-Ag(3)-N(6)	180.0(10)
C(7)-N(6)-Ag(3)	126.7(16)	C(6)-N(6)-Ag(3)	125.2(16)

Symmetry codes for **4**: #1 x-1, y, z #2 x, -y+1/2, z+1/2 #3 -x+1, -y-1, -z+1 #4 -x+2, -y, -z #5 x, -y+1/2, z-1/2 #6 x+1, y, z