Electronic Supplementary Information (ESI)

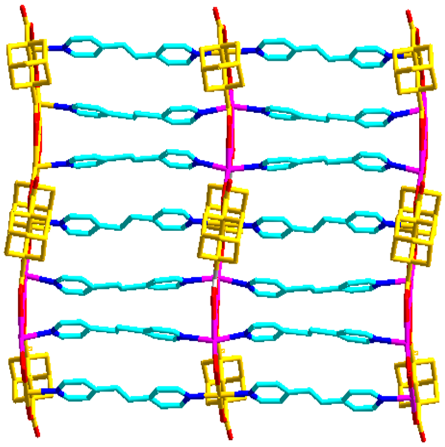

Figure S1. 2D (4,4) sheet structure with quadrangle grids in **4**

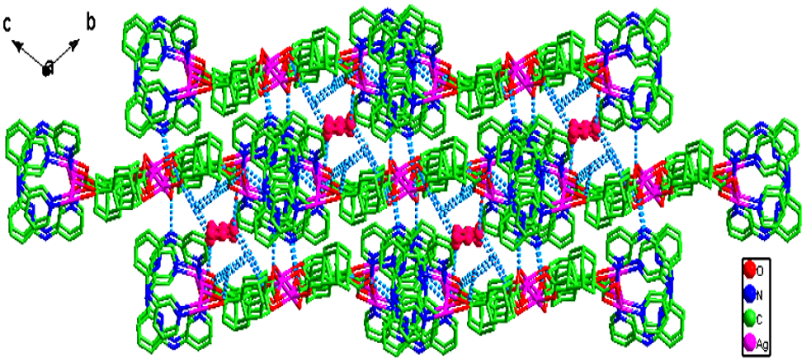

Figure S2. 3D structure formed by hydrogen-bonding interactions in 7. C_2H_5OH molecules are in red.

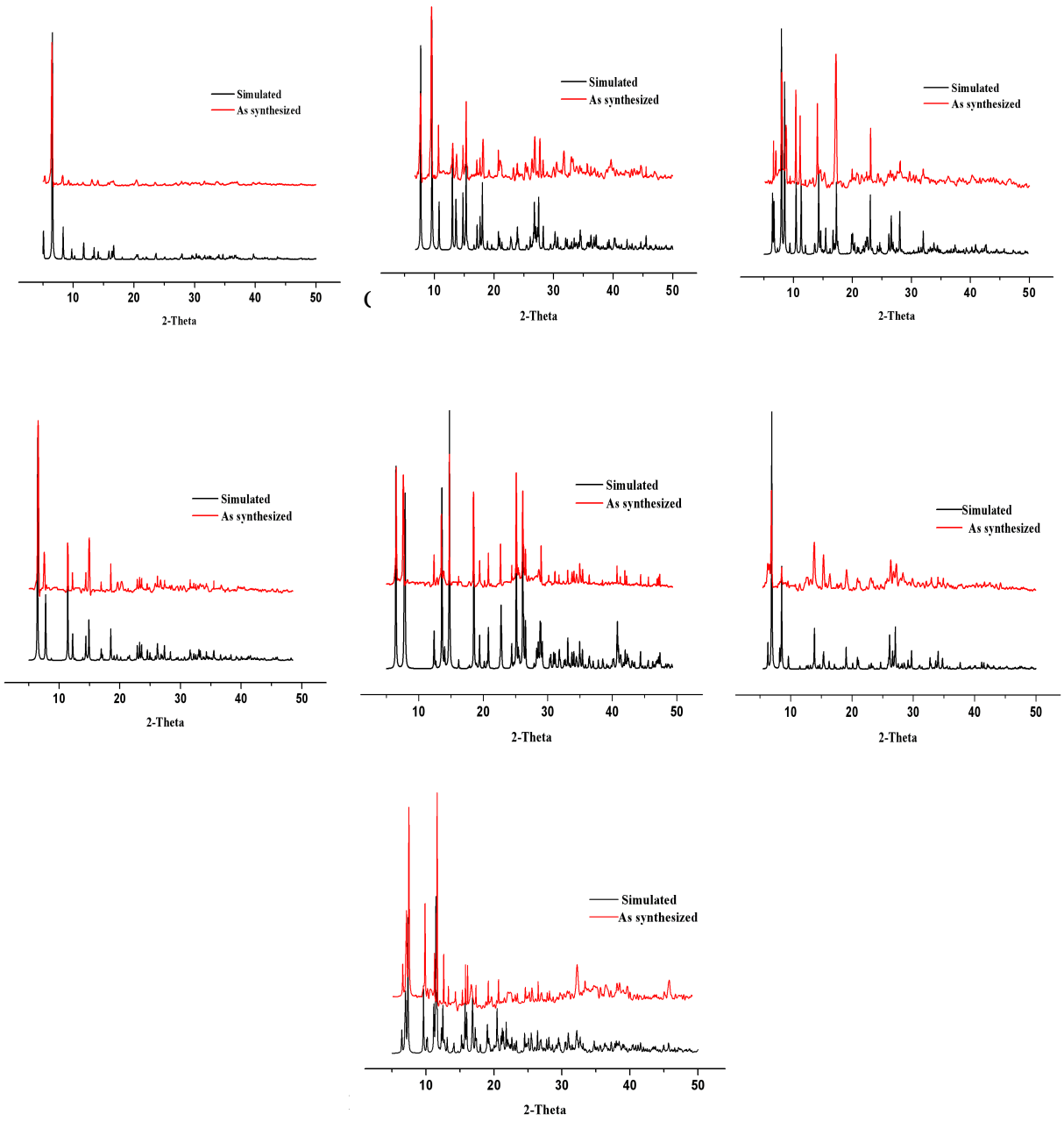

Figure S3. X-ray diffraction patterns of **1–7**.

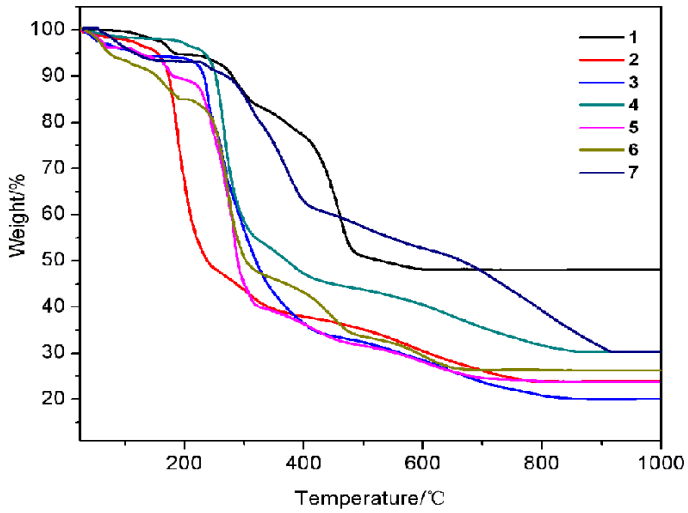

Figure S4. TGA curves of complexes **1–7** under N_2 atmosphere.

Table S1

Selected bond lengths [Å] and angles [°] for complexes **1**–**7**.

Complex 1					
Ag(1)-O(8)	2.220(6)	Ag(1)-O(9A)	2.235(5)	Ag(1)-O(3)	2.520(5)
Ag(1)-O(13)	2.560(18)	Ag(1)-Ag(3)	3.2763(11)	Ag(1)-Ag(4D)	3.425 (11)
Ag(1)-Ag(5)	2.8215(11)	Ag(1)-Ag(6)	3.1101(12)	O(8)-Ag(1)-O(9A)	154.1(2)
O(8)-Ag(1)-O(3)	101.46(19)	O(9A)-Ag(1)-O(3)	93.58(19)	O(8)-Ag(1)-O(13)	84.7(4)
O(9A)-Ag(1)-O(13)	118.5(4)	O(3)-Ag(1)-O(13)	81.7(5)	Ag(2)-O(2)	2.237(6)
Ag(2)-O(6B)	2.206(5)	Ag(2)-O(7E)	2.626(16)	Ag(2)-O(10A)	2.585(5)
Ag(2)-Ag(2B)	2.8298(14)	O(6B)-Ag(2)-O(2)	160.1(2)	O(6B)-Ag(2)-O(10A)	118.36(19)
O(2)-Ag(2)-O(10A)	78.75(19)	O(6B)-Ag(2)-O(7E)	93.306(43)	O(7E)-Ag(2)-O(2)	88.220(42)
O(7E)-Ag(2)-O(10A)	113.43(43)	Ag(3)-O(6C)	2.516(5)	Ag(3)-O(7A)	2.45(2)
Ag(3)-O(11)	2.190(5)	Ag(3)-O(14)	2.132(14)	Ag(3)-Ag(5)	3.386 (13)
Ag(3)-Ag(6)	2.8123(11)	O(14)-Ag(3)-O(11)	158.2(4)	O(14)-Ag(3)-O(7)	106.2(7)
O(11)-Ag(3)-O(7)	87.3(6)	O(14)-Ag(3)-O(6C)	113.6(4)	O(11)-Ag(3)-O(6C)	85.04(19)
O(7)-Ag(3)-O(6C)	80.7(6)	Ag(4)-O(3D)	2.231(5)	Ag(4)-O(4)	2.213(15)
Ag(4)-OW(5)	2.467(6)	Ag(4)-O(13D)	2.712 (18)	Ag(4)-Ag(4D)	2.7930(14)
O(4)-Ag(4)-O(3D)	165.1(4)	O(4)-Ag(4)-OW(5)	92.7(4)	O(3D)-Ag(4)-OW(5)	98.3(2)
O(4)-Ag(4)-O(13D)	97.684(52)	O(3D)-Ag(4)-O(13D)	94.851(38)	OW(5)-Ag(4)-O(13D)	75.101(38)
Ag(5)-OW(1)	2.565(10)	Ag(5)-O(7)	2.197(17)	Ag(5)-O(10A)	2.176(5)
Ag(5)-O(11)	2.657(6)	Ag(5)-Ag(5E)	3.3312(15)	O(10A)-Ag(5)-O(7)	169.2(5)
O(10A)-Ag(5)-OW(1)	117.31(15)	O(7)-Ag(5)-OW(1)	65.0(4)	O(10A)-Ag(5)-O(11)	95.54(18)
O(7)-Ag(5)-O(11)	89.28(48)	OW(1)-Ag(5)-O(11)	132.22(12)	Ag(6)-OW(5D)	2.572(6)
Ag(6)-O(12)	2.192(16)	Ag(6)-O(13)	2.093(16)	O(13)-Ag(6)-O(12)	158.5(10)
O(13)-Ag(6)-OW(5D)	84.7(5)	O(12)-Ag(6)-OW(5D)	112.9(5)		
Complex 2					
Ag(1)-N(2B)	2.184(3)	Ag(1)-N(1)	2.188(4)	Ag(1)-O(1)	2.688(3)
Ag(1)-O(2A)	2.8425(34)	Ag(1)-Ag(1A)	3.0685(8)	N(2B) -Ag(1)-N(1)	166.15(14)
N(2B)-Ag(1)-O(1)	95.32(11)	N(1)-Ag(1)-O(1)	92.10(12)	N(2B)-Ag(1)-O(2A)	88.569(13)
N(1)-Ag(1)-O(2A)	88.568(13)	O(2A)-Ag(1)-O(1)	159.399(12)		
Complex 3					
Ag(1)-N(2)	2.210(2)	Ag(1)-N(1)	2.211(2)	Ag(1)-O(1)	2.499(2)
Ag(1)-O(2)	2.6360(24)	Ag(1)-Ag(1A)	3.0076(5)	N(2)-Ag(1)-N(1)	146.22(9)
N(2)-Ag(1)-O(1)	114.41(9)	N(1)-Ag(1)-O(1)	98.82(9)	N(2)-Ag(1)-O(2)	94.855(73)

N(1)-Ag(1)-O(2)	111.869(76)	O(1)-Ag(1)-O(2)	50.011(69)		
Complex 4					
Ag(1)-O(3)	2.152(6)	Ag(1)-Ag(2)	2.9042(15)	O(3A)-Ag(1)-O(3)	176.0(3)
Ag(2)-N(2)	2.229(5)	Ag(2)-N(1B)	2.240(5)	Ag(2)-O(4C)	2.333(7)
Ag(2)-O(2A)	2.7972(79)	N(2)-Ag(2)-N(1B)	153.7(2)	N(2)-Ag(2)-O(4C)	100.7(2)
N(1B)-Ag(2)-O(4C)	105.4(2)	N(2)-Ag(2)-O(2A)	82.229(23)	N(1B)-Ag(2)-O(2A)	84.562(23)
O(4C)-Ag(2)-O(2A)	127.59(257)	Ag(3)-O(4)	2.715(8)	Ag(3)-N(3)	2.156(4)
N(3)-Ag(3)-N(3C)	180.0	N(3)-Ag(3)-O(4)	90.7(2)	N(3C)-Ag(3)-O(4)	89.3(2)
Complex 5					
Ag(1)-N(1)	2.204(5)	Ag(1)-N(2A)	2.214(5)	Ag(1)-O(1)	2.603(4)
N(1)-Ag(1)-N(2A)	171.0(2)	N(1)-Ag(1)-O(1)	95.24(17)	N(2A)-Ag(1)-O(1)	93.00(16)
O(1)-Ag(1)-O(1B)	48.94(12)				
Complex 6					
Ag(1)-N(1)	2.191(8)	Ag(1)-N(2)	2.221(7)	Ag(1)-O(1A)	2.7012(65)
N(1)-Ag(1)-N(2)	170.9(4)	N(2)-Ag(1)-O(1A)	94.896(13)	N(1)-Ag(1)-O(1A)	93.457(13)
O(1A)-Ag(1)-O(1B)	48.568(18)	Ag(2)-N(4)	2.193(8)	Ag(2)-N(3C)	2.205(8)
N(4)-Ag(2)-N(3C)	177.2(4)				
Complex 7					
Ag(1)-O(3)	2.455(6)	Ag(1)-O(4)	2.6098(5)	Ag(1)-O(7)	2.279(6)
Ag(1)-O(8A)	2.218(6)	Ag(1)-Ag(1A)	2.8847(14)	O(7)-Ag(1)-O(3)	105.5(3)
O(8A)-Ag(1)-O(3)	114.4(3)	O(8A)-Ag(1)-O(7)	139.9(3)	O(8A)-Ag(1)-O(4)	100.478(11)
O(7)-Ag(1)-O(4)	108.180(11)	O(3)-Ag(1)-O(4)	50.487(8)	Ag(2)-N(1)	2.127(7)
Ag(2)-N(6)	2.148(7)	Ag(2)-O(2)	2.505(7)	Ag(2)-Ag(3)	2.9452(10)
Ag(2)-Ag(4)	3.0326(10)	N(1)-Ag(2)-N(6)	164.7(3)	N(1)-Ag(2)-O(2)	101.5(3)
N(6)-Ag(2)-O(2)	91.0(3)	Ag(3)-O(1)	2.135(6)	Ag(3)-N(2)	2.133(7)
O(1)-Ag(3)-N(2)	178.1(3)	Ag(4)-O(5)	2.120(7)	Ag(4)-O(6)	2.6388(5)
Ag(4)-N(7)	2.122(8)	O(5)-Ag(4)-N(7)	174.0(4)	O(6)-Ag(4)-N(7)	122.84(13)
O(5)-Ag(4)-O(6)	53.023(10)				

[a] Symmetry codes: For **1**: A x, -y+1, z-1/2; B -x+1, -y+1, -z+1; C x, -y+1, z+1/2 ; D -x, -y+1, -z+1; E -x+1, y, -z+3/2. For **2**: A -x+2, -y, -z+2; B x, y-1, z. For **3**: A -x+1, -y+1, -z+2; B x-1/2, -y+1/2, z-1/2; C x+1/2, -y+1/2, z+1/2. For **4**: A -x+2, y, -z+1/2; B x, y+1, z; C -x+2, -y+2, -z. For **5**: A -1+x, y, z; B x, -y+3/2, z. For **6**: A 1+x, y, z; B 1+x, 1/2-y, z; C 1+x, y, 1+z. For **7**: A 1-x, 1-y, 1-z.

Table S2
Hydrogen-bonding lenghts and angles for compounds **2** and **5**−**7**.

Compound	D–H···A	D–H (Å)	H···A (Å)	D···A (Å)	D–H···A (°)
2	O(3)–H(3)···O(1)#1	0.82	1.76	2.5763(3)	173.4
5	OW(4)–H(4WA)···O(1)	0.82	1.93	2.7054(69)	157.5
	O(3)#1–H(3)#1···OW(4)	0.82	1.77	2.5647(83)	162.5
6	OW(11)–H(11C)···O(1)#1	0.88	1.95	2.8202(70)	169.6
	OW(12)–H(12B)···OW(13)	0.86	1.97	2.8145(34)	111.3
	OW(13)–H(13C)···O(2)	0.79	1.96	2.7355(10)	171.5
	OW(14)–H(14C)···O(2)	0.85	2.08	2.9255(20)	172.4
	OW(15)–H(15C)···O(1)	0.80	2.51	3.3166(99)	177.3
	C(8)#2–H(8A)···OW(11)	0.93	2.50	3.2737(12)	141.7
	C(13) –H(13A)···OW(12)	0.93	2.36	3.2691(28)	166.2
	C(20)#3–H(20A)···OW(15)	0.93	2.71	3.3966(69)	131.3
7	OW(9)–H(9C)···OW(10)#1	0.80	1.93	2.7230(8)	174.7
	OW(10)#1–H(10A)···O(7)#2	0.80	2.00	2.7946(7)	179.1
	OW(10)#1–H(10B)···OW(12)#2	0.80	2.01	2.8133(4)	179.7
	OW(12)#2–H(12A)···O(2)#2	0.80	2.02	2.8153(3)	179.7
	OW(12)#2–H(12B)···O(5)#2	0.80	1.94	2.7371(4)	179.1
	OW(11)#3–H(11D)···OW(9)	0.80	1.74	2.549(4)	175.8
	OW(11)#3–H(11C)···O(1)#4	0.80	3.04	3.2946(6)	101.5
	N(3)#5–H(3C)···OW(11)#3	0.86	2.09	2.9280(4)	166.1

For **2**: #1 -x+1, -y, -z+2. For **5**: #1 1-x, -1/2+y, 1-z. For **6**: #1 x+1, y, z; #2 -x+1, y+1/2, -z; #3 -x+1, y+1/2, -z+1. For **7**: #1 x, y, 1+z; #2 1-x, 1-y, 2-z; #3 1-x, 1-y, 1-z; #4 -1+x, y, z; #5 1-x, -y, 2-z.