

Electronic Supplementary Information (ESI) for CrystEngComm

Structural diversity of Ag/3-nitrophthalate coordination polymers controlled by solvent and induction agent

Di Sun,^{*a} Fu-Jing Liu,^b Rong-Bin Huang,^b Lan-Sun Zheng^b

^aKey Lab of Colloid and Interface Chemistry, Ministry of Education, School of Chemistry and Chemical Engineering, Shandong University, Jinan, Shandong, 250100, China.

E-mail: dsun@sdu.edu.cn; Fax: +86-531-88364218.

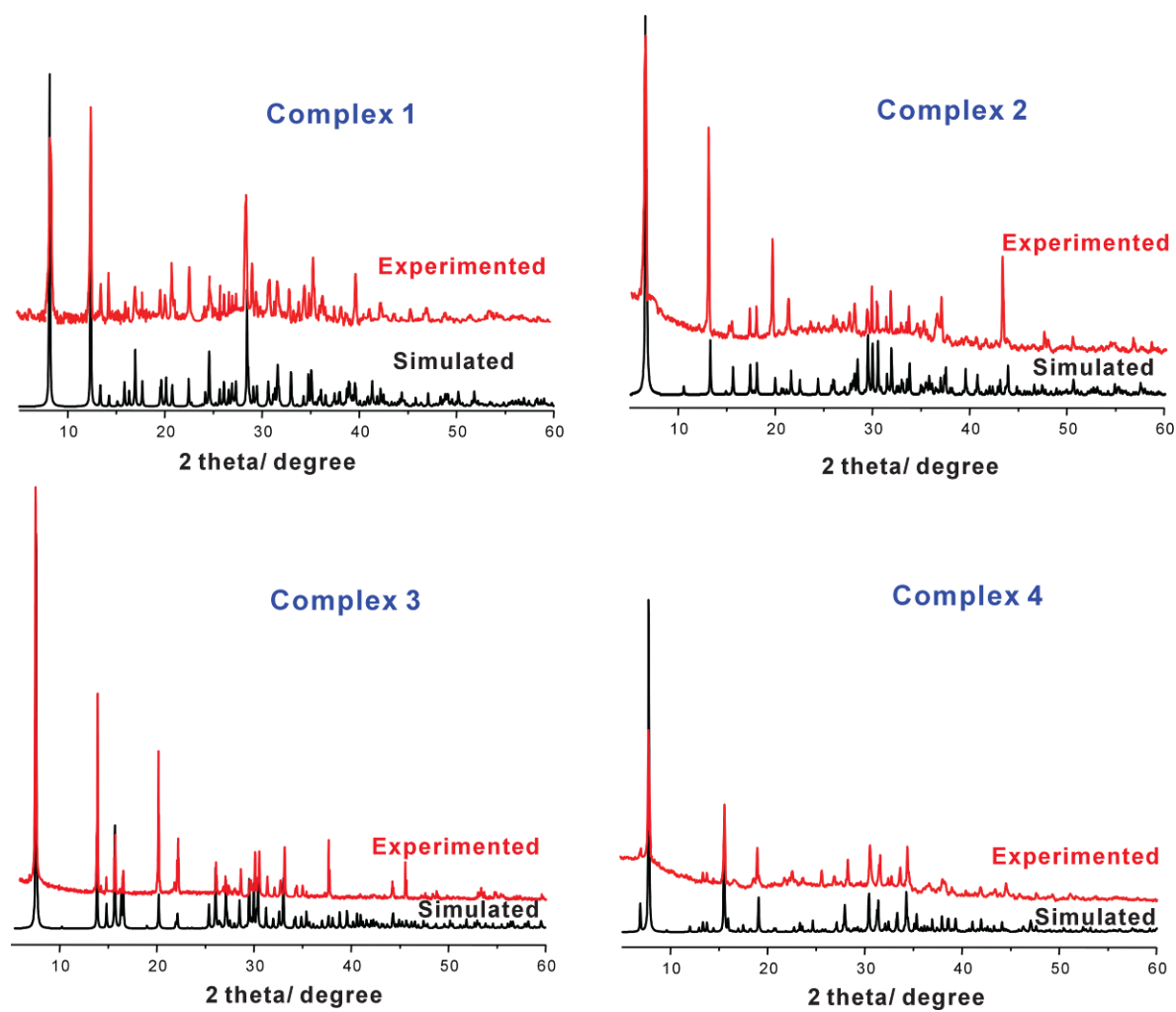
^bState Key Laboratory of Physical Chemistry of Solid Surface, Department of Chemistry, College of Chemistry and Chemical Engineering, Xiamen University, Xiamen, 361005, China.

(1) Table S1 The hydrogen bond geometries for 1-4.	2
(2) Fig. S1 The powder XRD patterns and the simulated one from the single-crystal diffraction data for complex 1-4	3
(3) Fig. S2 IR of complexes 1-4.....	4
(4) Fig. S3: The silver wire in 1.	6
(5) Fig. S4: The [(NH ₄)(H ₂ O)] ⁺ cluster in the lacuna of the 2D sheet.....	7
(6) Fig. S5: TGA curves for CPs 1-4.	8

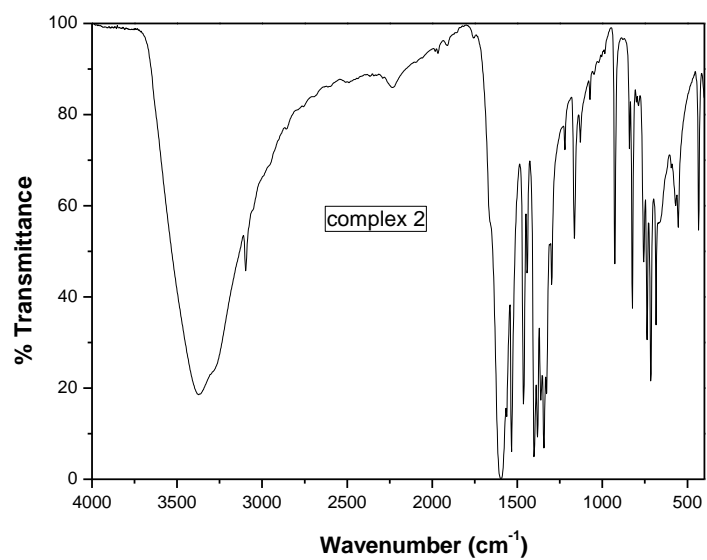
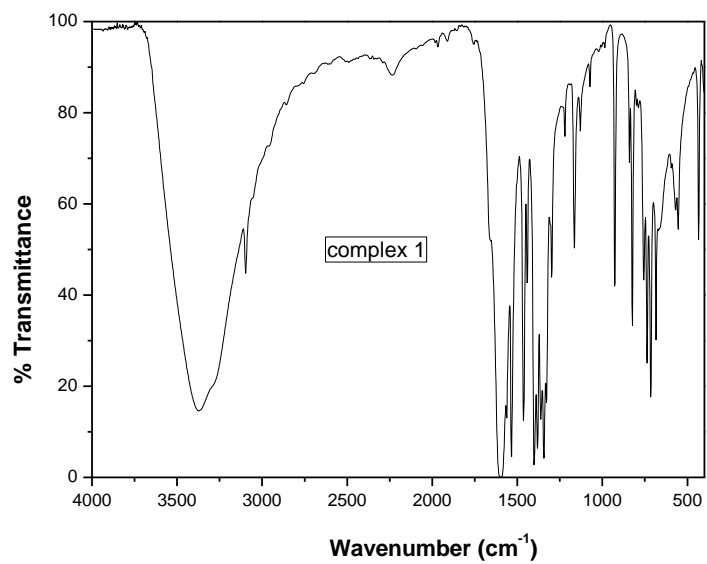
(1) Table S1 The hydrogen bond geometries for **1-4**.

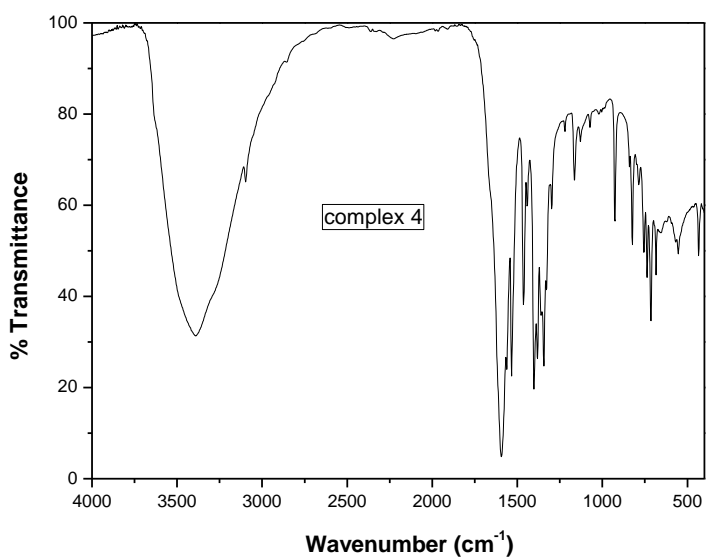
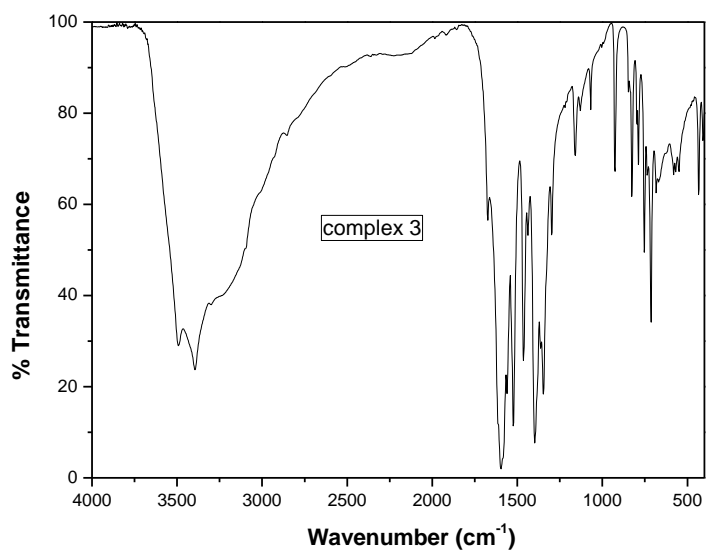
Complex 1					
D—H...A	D—H	H...A	D...A		D—H...A
N2—H2B...O4 ^{iv}	0.91	2.20	3.077	(5)	160.9
N2—H2C...O3	0.91	2.30	3.013	(5)	135.5
N2—H2D...O4 ⁱ	0.91	2.14	2.977	(5)	152.3
N3—H3C...O4 ^v	0.91	2.17	3.007	(5)	152.2
N3—H3A...O1 ⁱⁱ	0.91	2.04	2.947	(5)	173.7
N3—H3B...O6 ^{vi}	0.91	2.39	3.079	(5)	132.6
Symmetry codes: (i) $-x+1, -y+1, -z+2$; (ii) $x, y, z-1$; (iv) $x-1, y, z$; (v) $x-1, y, z-1$; (vi) $x-1/2, -y+3/2, z-1/2$.					
Complex 2					
N2—H2A...O6 ⁱⁱ	0.90	2.06	2.928	(4)	161.2
N2—H2B...O1 ^{vi}	0.90	2.42	3.314	(5)	174.2
N2—H2C...O2 ⁱⁱⁱ	0.90	2.44	3.301	(5)	160.4
Symmetry codes: (ii) $x, y-1, z$; (iii) $x, -y+3/2, z+1/2$; (vi) $x, -y+3/2, z-1/2$.					
Complex 3					
N2—H2C...O3	0.85	2.09	2.875	(5)	153.2
N2—H2E...O4 ^{iv}	0.85	1.92	2.764	(5)	173.3
N2—H2D...O3 ⁱⁱ	0.85	2.27	3.037	(5)	149.9
N2—H2B...O1W	0.85	2.01	2.851	(5)	173.1
O1W—H1WB...O2 ^v	0.85	2.05	2.827	(5)	151.3
O1W—H1WA...O2	0.85	2.16	2.774	(5)	128.8
Symmetry codes: (ii) $-x+1, y+1/2, -z+1/2$; (iv) $x, y+1, z$; (v) $-x+1/2, y+1/2, z$.					
Complex 4					
N3—H3B...O3 ^{iv}	0.91	2.10	3.005	(7)	172.1
N3—H3C...O7 ⁱ	0.91	2.22	3.085	(6)	158.0
N3—H3D...O11 ^{vi}	0.91	2.48	3.017	(7)	117.7
N4—H4B...O5 ⁱⁱ	0.91	2.26	3.166	(7)	177.9
N4—H4D...O10	0.91	2.47	3.314	(7)	153.5
N4—H4C...O1W ^{vii}	0.91	2.14	2.993	(7)	155.3
N5—H5A...O9 ^{iv}	0.91	2.04	2.879	(6)	152.1
N5—H5B...O1W ⁱⁱ	0.91	2.13	2.973	(7)	153.7
N5—H5C...O10	0.91	2.06	2.848	(6)	143.6
N6—H6A...O2 ⁱ	0.91	2.21	3.037	(7)	151.2
N6—H6B...O9 ^{iv}	0.91	2.43	3.072	(7)	127.7
N6—H6C...O8	0.91	2.40	3.054	(7)	128.7
O1W—H1WA...O3	0.85	1.93	2.760	(6)	164.9
O1W—H1WB...O1 ^{viii}	0.85	2.02	2.848	(6)	164.5
Symmetry codes: (i) $-x+1, -y+1, -z+1$; (ii) $-x+1, -y+1, -z+2$; (iv) $x+1, y, z$; (vi) $-x+1, y-1/2, -z+3/2$; (vii) $-x, -y+1, -z+2$.					

(2) Fig. S1 The powder XRD patterns and the simulated one from the single-crystal diffraction data for complex 1-4

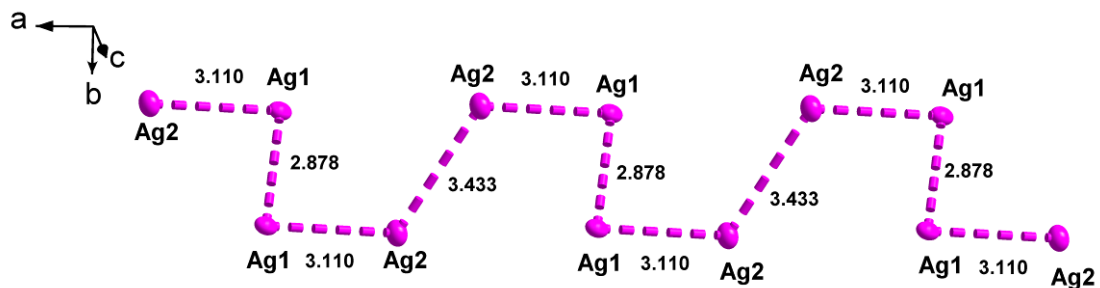


(3) Fig. S2 IR of complexes 1-4

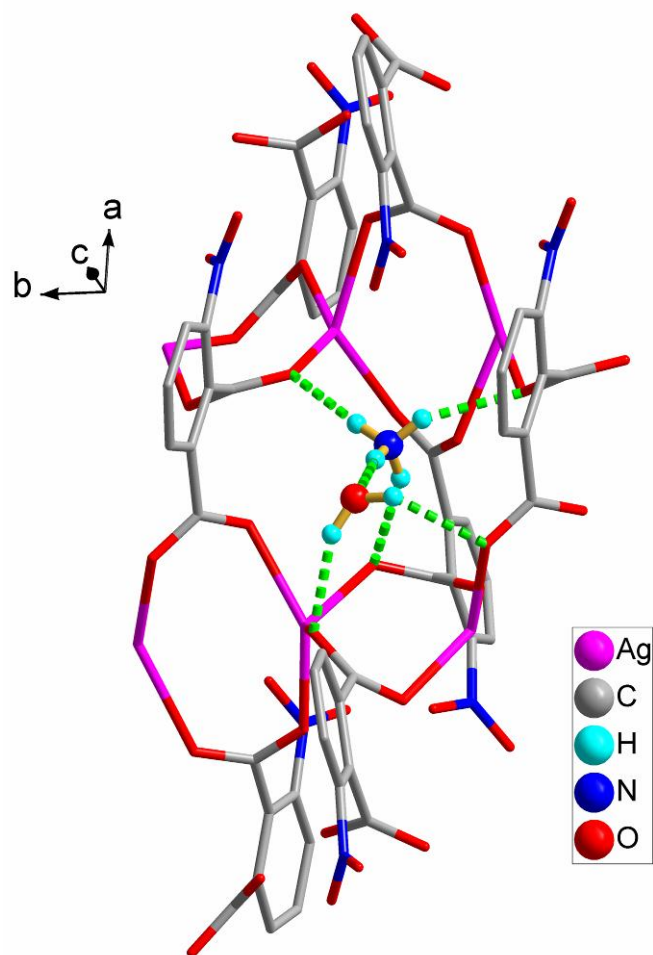




(4) Fig. S3: The silver wire in 1.



(5) Fig. S4: The $[(\text{NH}_4)(\text{H}_2\text{O})]^+$ cluster in the lacuna of the 2D sheet



(6) Fig. S5: TGA curves for CPs 1-4.

