

# Syntheses, crystal structures and **photoluminescent** properties of two novel Ag(I) coordination polymers with benzoguanamine and pyrazine-carboxylate ligands: From 1D helix to 1D→2D interdigitation

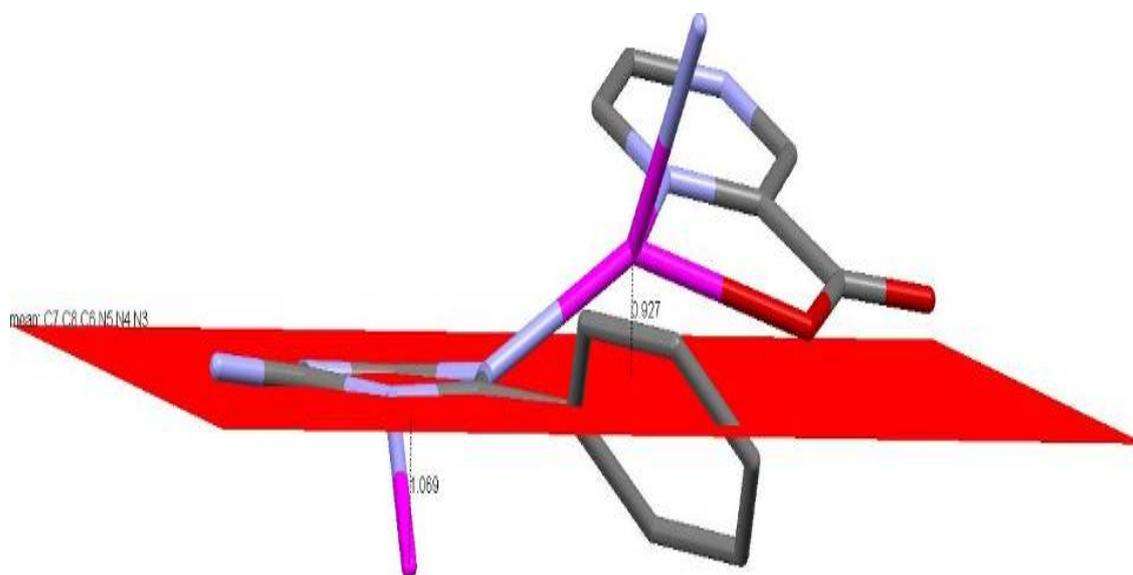
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<sup>‡</sup>These authors contributed equally to this work.

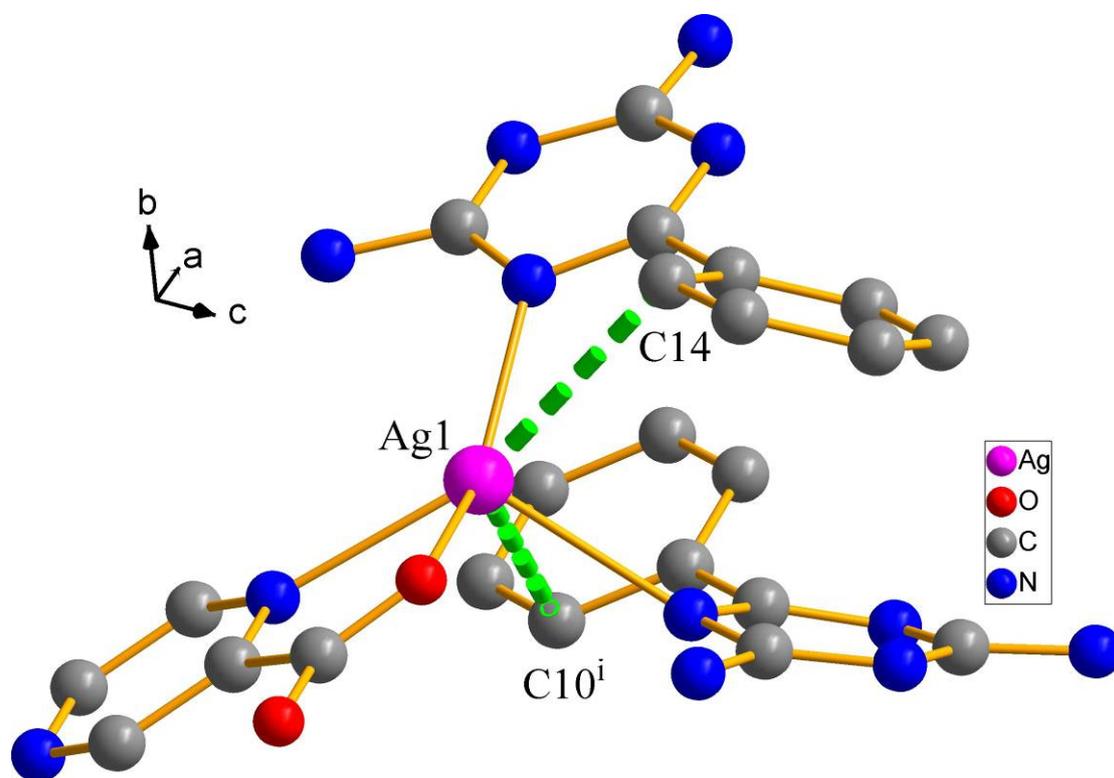
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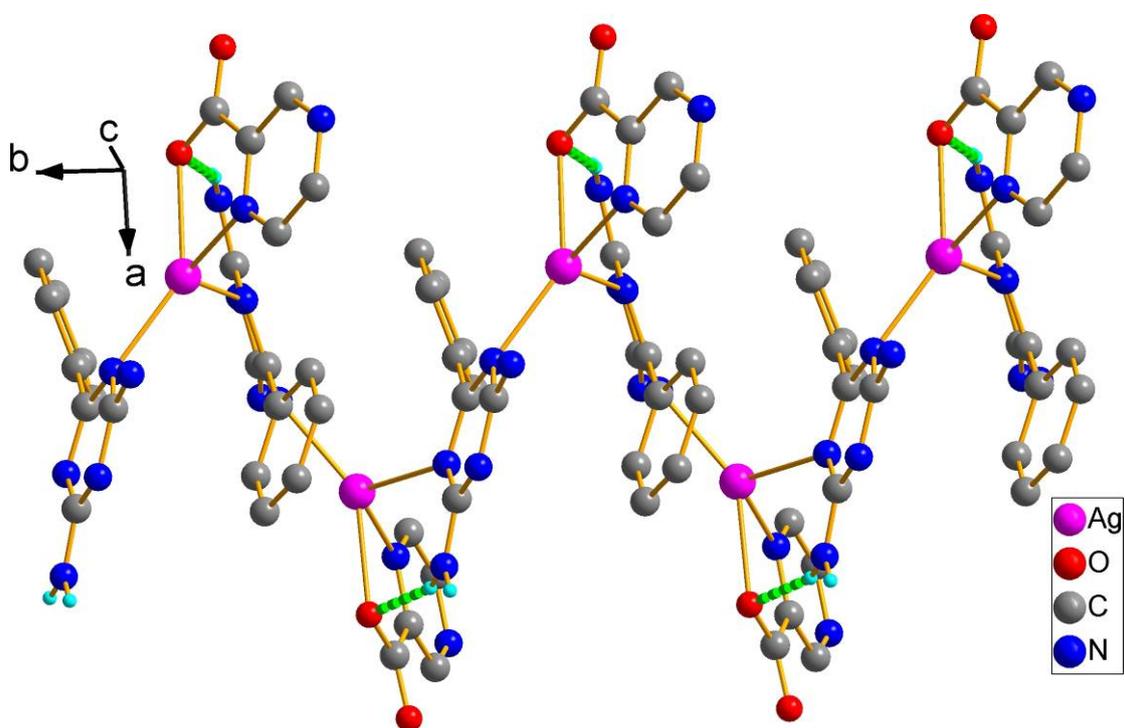
**(1) Fig. S1: Relative positions of Ag1 respect to the triazinyl ring in 1.**



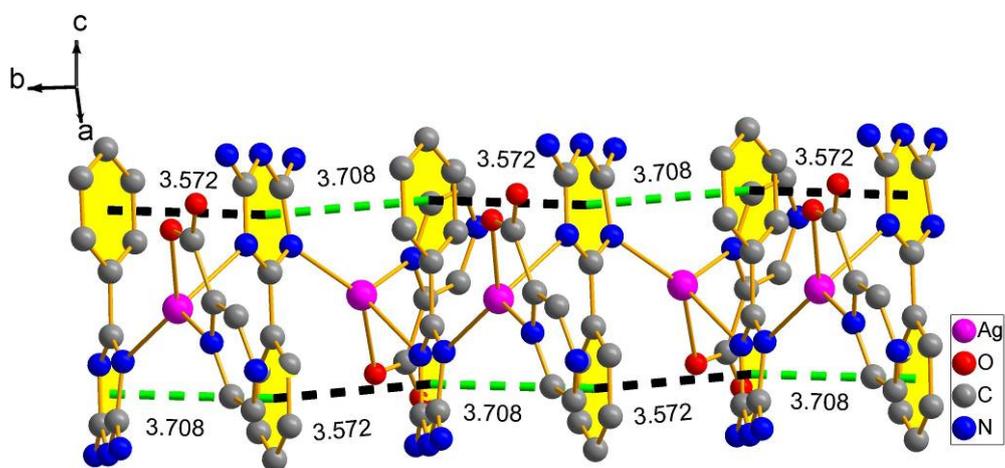
(2) Fig. S2: The Ag $\cdots$ C interactions in 1.



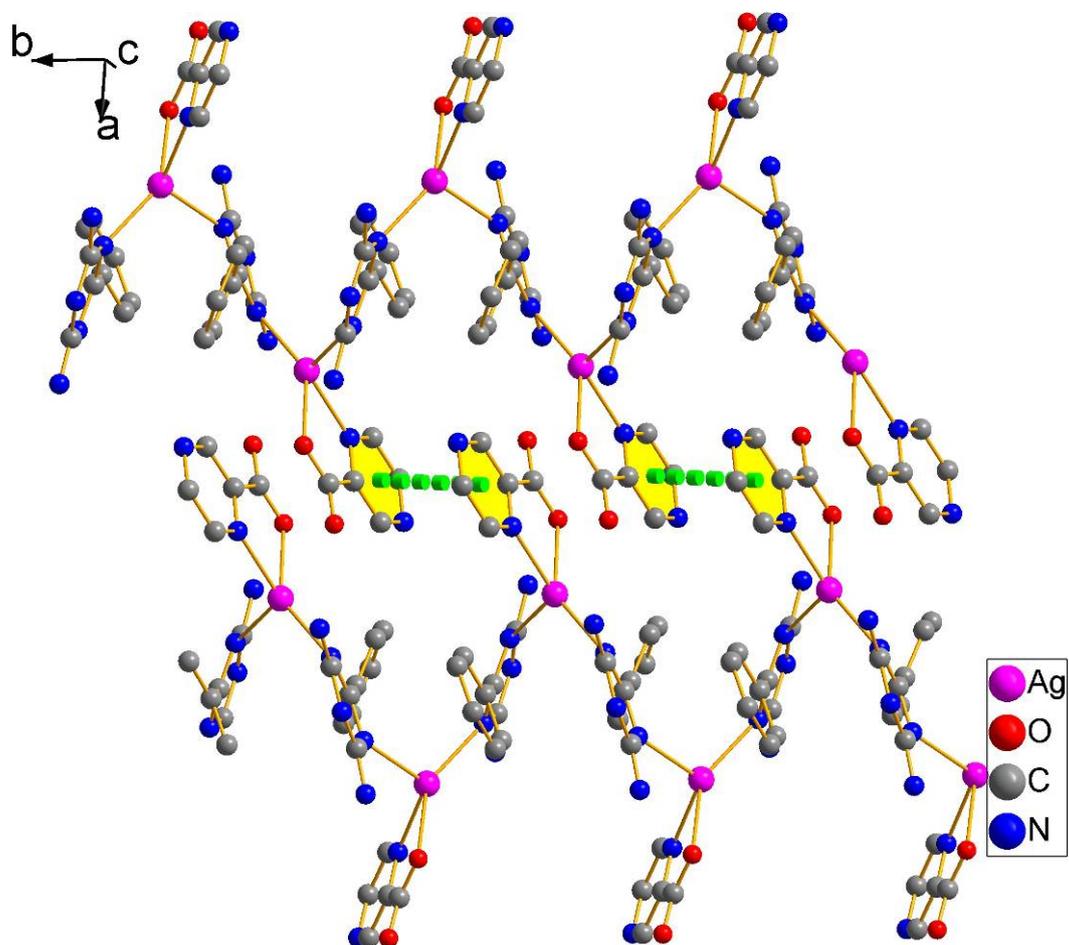
(3) Fig. S3: Intrachain N-H···O hydrogen bonds.



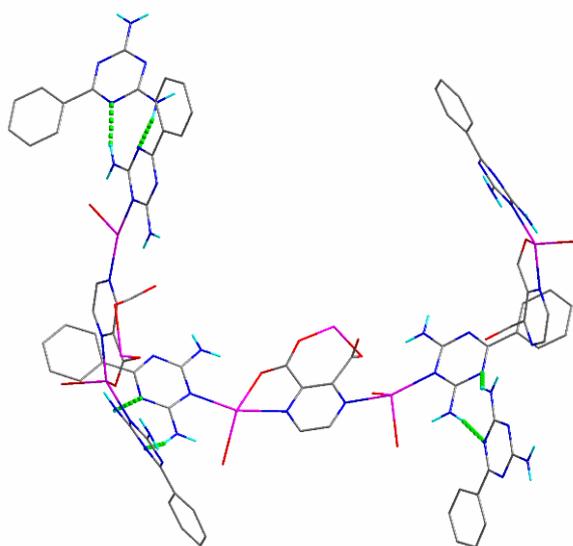
(4) Fig. S4: The face-to-face  $\pi \cdots \pi$  stacking between adjacent bga ligand in 1.



(5) Fig. S5: The  $\pi \cdots \pi$  stacking between adjacent pzc ligand in 1.



**(6) Fig. S6: The complementary N-H...N hydrogen bonds in 2.**



**(7) Table S1: The hydrogen bond geometries for 1 and 2**

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Complex 1				
<i>D</i> —H··· <i>A</i>	<i>D</i> —H	H··· <i>A</i>	<i>D</i> ··· <i>A</i>	<i>D</i> —H··· <i>A</i>
O1W—H1WA···O2	0.85	2.18	3.031(3)	175
N6—H6A···N3 <sup>ii</sup>	0.88	2.24	3.046(3)	153
N6—H6B···O1 <sup>iii</sup>	0.88	2.17	2.812(3)	129
N7—H7B···O1 <sup>iv</sup>	0.88	2.07	2.940(3)	172
N7—H7C···O2 <sup>v</sup>	0.88	2.05	2.898(3)	160

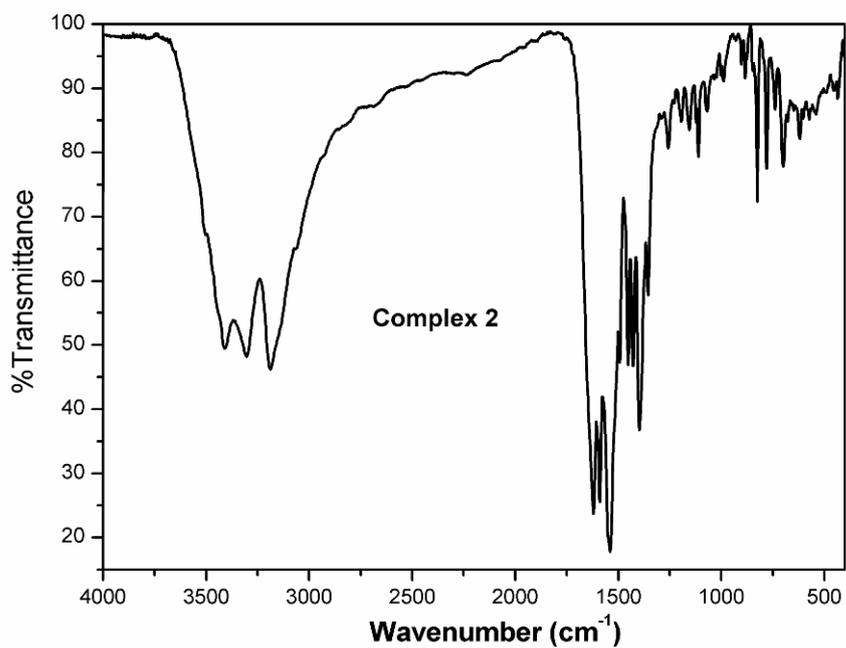
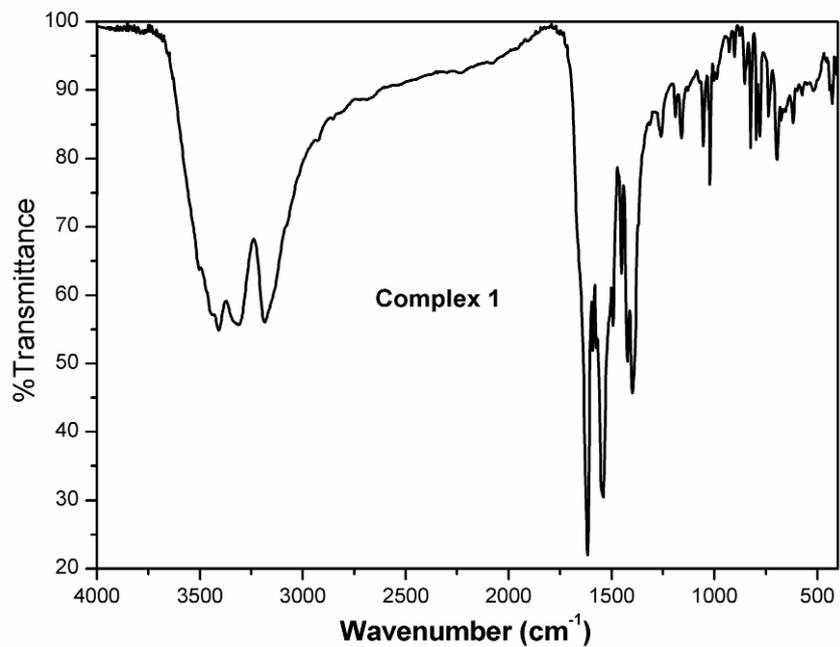
Symmetry codes: (ii)  $-x+3/2, -y+3/2, -z+1$ ; (iii)  $-x+1, -y+1, -z+1$ ; (iv)  $x+1/2, y+1/2, z$ ; (v)  $-x+3/2, y+1/2, -z+3/2$ .

Complex 2				
<i>D</i> —H··· <i>A</i>	<i>D</i> —H	H··· <i>A</i>	<i>D</i> ··· <i>A</i>	<i>D</i> —H··· <i>A</i>
N4—H4B···O1W	0.88	2.21	2.943(10)	141
N4—H4A···N2 <sup>ii</sup>	0.88	2.34	3.086(10)	143
N5—H5B···O1	0.88	2.03	2.909(10)	176
N9—H9B···O3 <sup>i</sup>	0.88	1.94	2.817(9)	171
N9—H9C···N6 <sup>iii</sup>	0.88	2.19	3.034(10)	161
N10—H10B···O4	0.88	2.15	2.924(10)	146
N10—H10C···N7 <sup>iv</sup>	0.88	2.23	3.033(10)	153
O1W—H1WC···O2 <sup>v</sup>	0.85	2.07	2.767(8)	139
O1W—H1WA···O4 <sup>vi</sup>	0.85	1.95	2.753(8)	157

Symmetry codes: (i)  $x, -y+2, z+1/2$ ; (ii)  $-x+1, y, -z+3/2$ ; (iii)  $x, -y+3, z+1/2$ ; (iv)  $x, -y+3, z-1/2$ ; (v)  $x, -y+1, z+1/2$ ; (vi)  $x, y-1, z$ .

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**(8) Fig. S7: IR spectra of 1 and 2**



**(9) Fig. S8: Emission spectrum of free bga ligand**

