

Supporting Information

for

Conformation Control of Flexible 1,4-phenylenediacetate Ligand in

Coordination Complexes: A Rigidity-Modulated Strategy

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Figure S1 ORTEP drawing of the basic building block in complex **1a** showing the coordination environment around the zinc atoms with thermal ellipsoids at 30% probability. symmetry code: A $(-x, -y+3, -z+1)$, B $(x, y-1, z)$, C $(x, -y+3/2, z-1/2)$.

Figure S2 ORTEP drawing of the basic building block in complex **1b** showing the coordination environment around the manganese atom with thermal ellipsoids at 30% probability. symmetry code: A $(1-x, -y, 2-z)$, B $(1-x, y-1/2, 2-z)$, C $(x, 1/2-y, z+1/2)$, D $(2-x, y-1/2, 5/2-z)$, E $(2-x, 1-y, 2-z)$, F $(x-1, 1/2-y, z-1/2)$, G $(x-1, y-1, z)$

Figure S3 ORTEP drawing of the basic building block in complex **2b** showing the coordination environment around the zinc atom with thermal ellipsoids at 30% probability. symmetry code: A $(x, 2/3-y, 1-z)$, B $(x, y-1, z)$.

Figure S4 ORTEP drawing of the basic building block in complex **2a** showing the coordination environment around the cobalt atom with thermal ellipsoids at 30% probability. symmetry code: A $(x, y-1, z-1)$, B $(-x, 1-y, 1-z)$.

Figure S5 ORTEP drawing of the basic building block in complex **2c** showing the coordination environment around the cadmium atom with thermal ellipsoids at 30% probability. symmetry code: A $(-x, 1-y, 1-z)$, B $(x, y-1, z-1)$.

Figure S6 (a) Polyhedral presentation of the individual 1-D chains built by zinc ions and *cis*-pda²⁻ ligands; (b) Polyhedral presentation of the 2-D coordination net in complex **2a** (*cis*-pda²⁻ and 4,4'-bpy ligands are shown in different shades); (c) Packing diagram of complex **2a**.

Figure S7 Solid-state excitation spectra of **1a**, **2a**, **2c**, **4,4'-bipy** and **H₂pda** at room temperature.

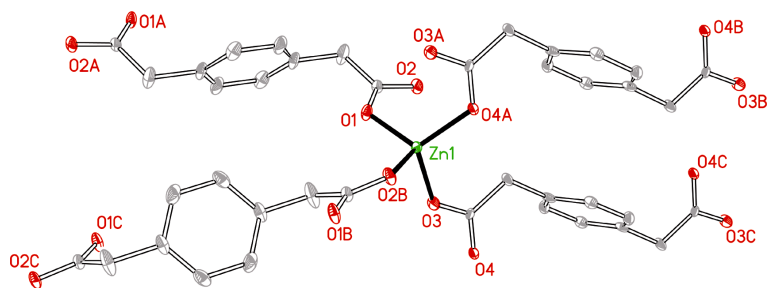


Figure S1

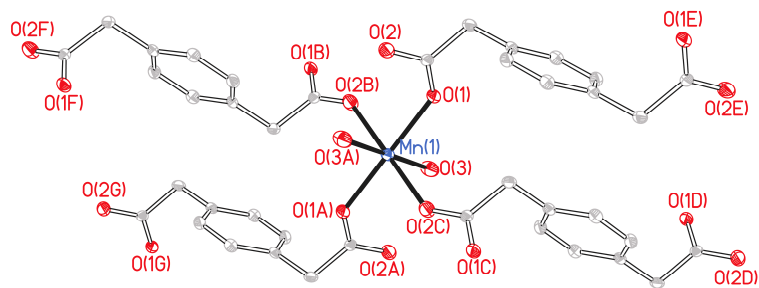


Figure S2

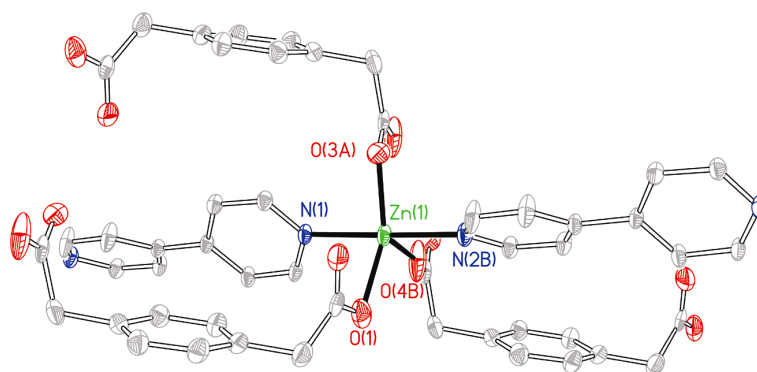


Figure S3

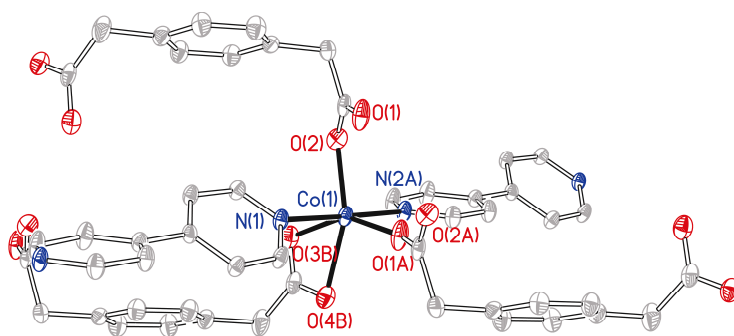


Figure S4

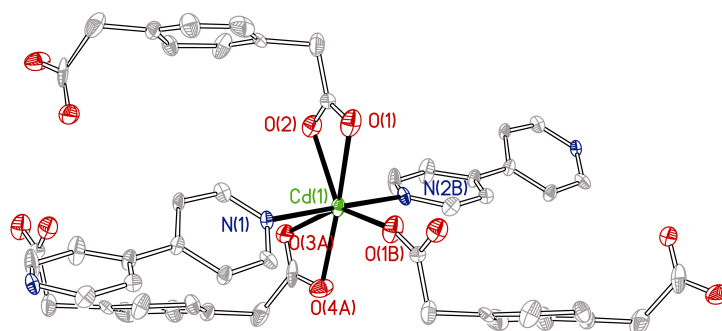


Figure S5

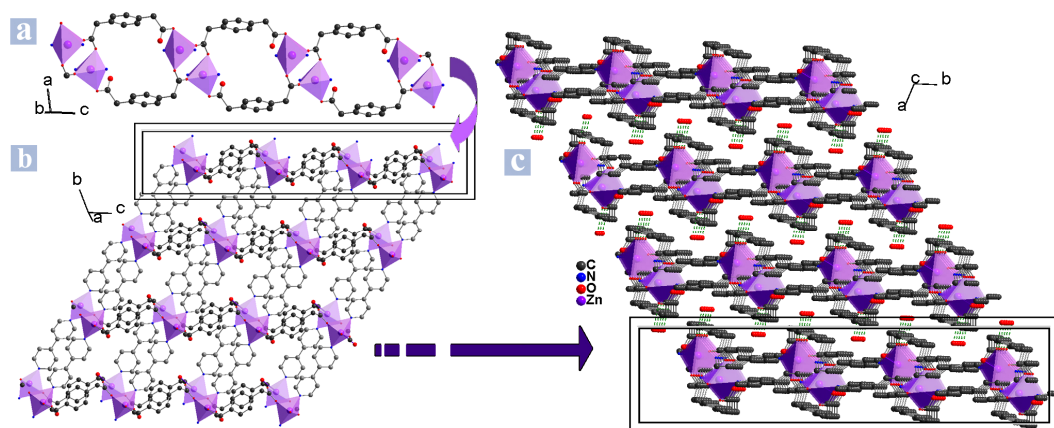


Figure S6

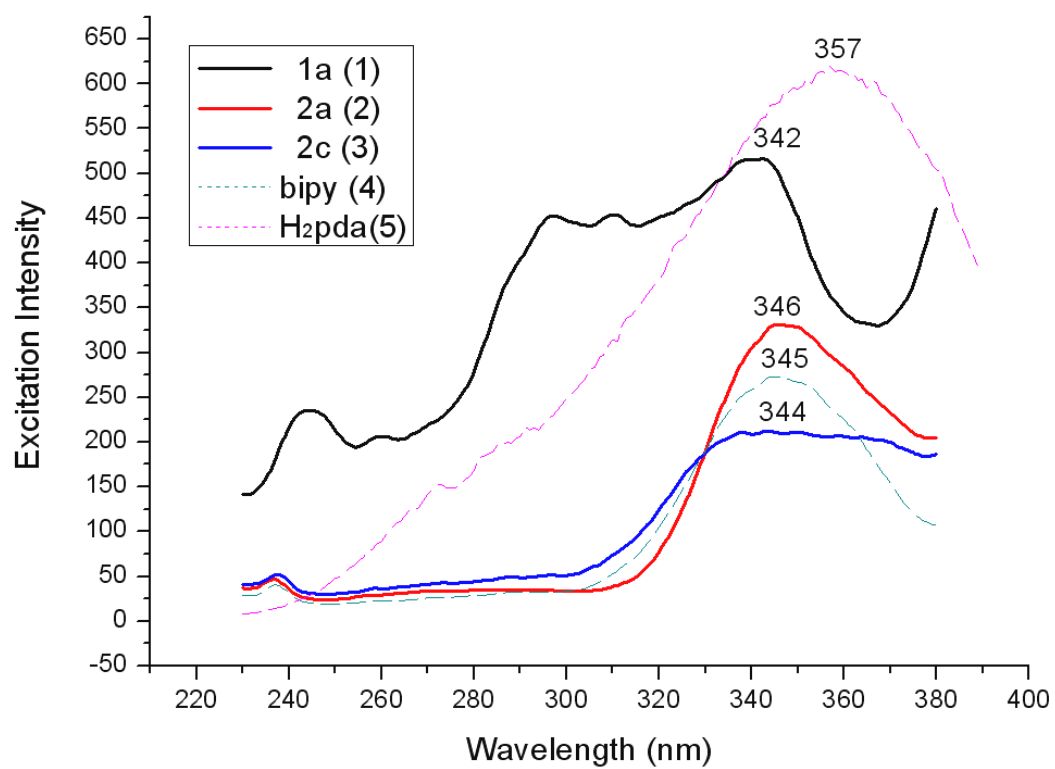


Figure S7