Synthesis, Structural Determination, and Physicochemical Property Studies of Novel Coordination Polymers Incorporating Kinked and Hydrogen-Bonding Capable Bifunctional Organodiimines

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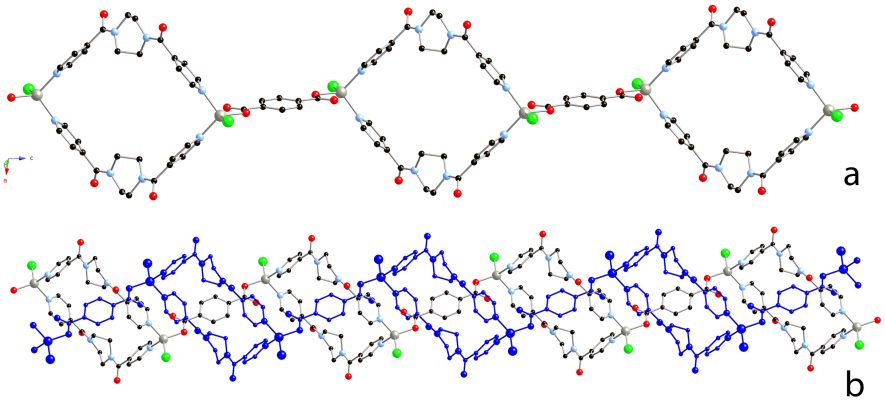
Bis(pyridylformyl)piperazine (bpfp) and bis(pyridylmethyl)piperazine (bpmp) tethering ligands have afforded luminescent divalent metal carboxylate coordination polymers with novel topologies

$[Zn_2Cl_2(terephthalate)(bpfp)_2]_n$

the first 1-D + 1-D → 1-D parallel *pseudo*-rotaxane coordination polymer



$\{[Zn_2(Hpyromellitate)_2(H_2bpmp)]\bullet 4H_2O\}_n$

unprecedented yet very simple 3,4-connected binodal $(4.8^2)(4.8^210^3)$ self-penetrated topology