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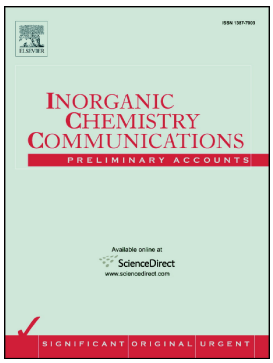

Structural adjustment of bipyridinium-bearing Cu(II) coordination polymers and the adsorption properties toward methanol, water and ethanol vapors

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Structural adjustment of bipyridinium-bearing Cu(II) coordination polymers and the adsorption properties toward methanol, water and ethanol vapors

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Abstract:
Two bipyridinium-bearing Cu(II) coordination polymers, $[Cu(BCbpy)(ox)(H_2O)]\cdot H_2O$ (**1**) and $[Cu_2(BCbpy)_2(ox)_2]\cdot 3H_2O\cdot DMF$ (**2**), have been synthesized and structurally characterized. Upon solvent modulation, the structure transformation from a closely-packed 1D chain to a 2D laminar network with parallelogram-shaped channels can be achieved. More interestingly, the charge separated skeleton of BCbpy ligand incorporated in compound **2** makes the pore space polarized, endowing it with different adsorption abilities for methanol, water and ethanol vapors.

Keywords: Coordination polymers; Bipyridinium; Vapor adsorption

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