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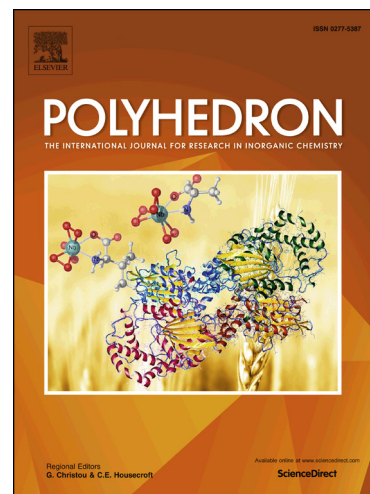
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**Supramolecular assembled networks in crystal structure built up of copper(II) dipicolinates with pyrazine- and pyridinecarboxamides connected through hydrogen bonds**

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**ABSTRACT**

New copper(II) dipicolinate complexes containing pyrazine- or pyridinecarboxamides, namely  $\{[\text{Cu}(\text{pca})(\text{dipic})(\text{H}_2\text{O})] \cdot \text{H}_2\text{O}\}$  (**1**),  $[\text{Cu}(\text{nia})(\text{dipic})(\text{H}_2\text{O})]$  (**2**),  $\{[\text{Cu}(\text{mnia})(\text{dipic})(\text{H}_2\text{O})] \cdot 2\text{H}_2\text{O}\}$  (**3**),  $\{[\text{Cu}(\text{inia})(\text{dipic})]_n \cdot 2n\text{CH}_3\text{OH}\}$  (**4**),  $\{[\text{Cu}(\text{hmnia})(\text{dipic})(\text{H}_2\text{O})]_2 \cdot 2[\text{Cu}(\text{hmnia})(\text{dipic})(\text{H}_2\text{O})_2] \cdot 4\text{H}_2\text{O}\}$  (**5**) and  $[\text{Cu}(\text{denia})(\text{dipic})(\text{H}_2\text{O})]$  (**6**) (dipic = dipicolinate, anion derived from pyridine-2,6-dicarboxylic acid, pca = pyrazinecarboxamide, nia = nicotinamide, mnia = *N*-methylnicotinamide, inia = isonicotinamide, hmnia = *N*-(hydroxymethyl)nicotinamide and denia = *N,N*-diethylnicotinamide) were synthesized, structurally characterized by single-crystal X-ray diffraction analysis and their properties were studied using IR, UV/VIS and EPR spectroscopic techniques. The Cu(II) compounds are of square-pyramidal (**1** - **4** and **6**) or square-bipyramidal geometry (**5**), in which copper(II) centres are coordinated by N donor atom of a nicotinamide or its derivatives, one N donor atom and two O donor atoms of

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