

Accepted Manuscript

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PII: S0277-5387(14)00543-9
DOI: <http://dx.doi.org/10.1016/j.poly.2014.08.021>
Reference: POLY 10922

To appear in: *Polyhedron*

Received Date: 2 June 2014
Accepted Date: 2 August 2014

Please cite this article as: P. Bhowmik, A. Bhattacharyya, K. Harms, S. Sproules, S. Chattopadhyay, Anion directed cation templated synthesis of three ternary copper(II) complexes with a monocondensed N₂O donor Schiff base and different pseudohalides, *Polyhedron* (2014), doi: <http://dx.doi.org/10.1016/j.poly.2014.08.021>

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Anion directed cation templated synthesis of three ternary copper(II) complexes with a monocondensed N₂O donor Schiff base and different pseudohalides

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Abstract

Three copper(II) complexes, [Cu₂(L)₂(μ_{1,1}-N₃)₂] (**1**), [Cu₂(L)₂(μ_{1,1}-NCO)₂] (**2**) and [Cu(L)(μ_{1,5}-dca)]_n (**3**), where HL is a tridentate mono-condensed Schiff base, 1-(2-aminoethyliminomethyl)naphthalen-2-ol, and dca is dicyanamide, have been prepared and characterized by elemental analysis, IR, UV–Vis and fluorescence spectroscopy and single crystal X-ray diffraction studies. The Schiff base ligand was prepared by a counter anion mediated copper(II) templated synthesis. The azide ligand in complex **1** and the cyanate ligand in complex **2** show μ-1,1 bridging modes, whereas the dca ligand shows the μ-1,5 bridging mode in

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