Oxidation and catalytic properties of a binuclear copper(I) complex with a meta-xylyl spacer ligand

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The oxidation product of the binuclear copper (I) complex Cu2L(ClO4)2 (L = N,N?-bis-(6-methyl-2-pyridil) (2?-pyridyl)methyl m-xylylidene imine) has been isolated and structurally characterised. In the cupric species, [Cu2L(Me-O)2](ClO4)2, the metal centres are bridged by two methoxide groups, and the oxygenation of the xylyl spacer of the hexadentate ligand is not observed. The copper(I) complex was found to be a catalyst for the oxidation of 3,5-ditertbutylcatechol to 3,5-ditertbutyl-o-benzoquinone by molecular oxygen.