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Porous Metalloporphyrinic Frameworks Constructed from Metal 5,10,15,20-Tetrakis(3,5-biscarboxylphenyl)-porphyrin for Highly Efficient and Selective Catalytic Oxidation of Alkylbenzenes
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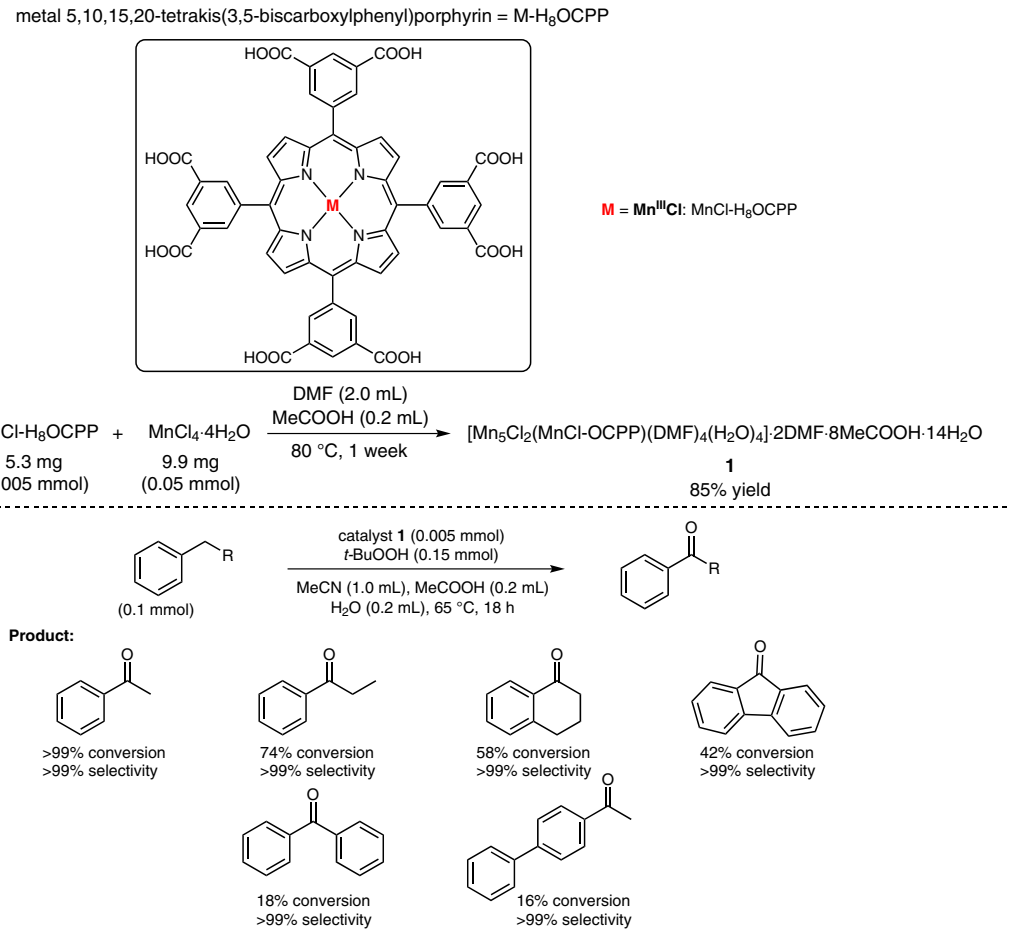
Porous Metalloporphyrinic Frameworks for Oxidation of Alkylbenzenes



Significance: Preparation and characterization of the porous metalloporphyrin octacarboxylate framework **1** are described. The catalytic utility of **1** was examined for the oxidation of alkyl benzenes with *tert*-butyl hydroperoxide as an oxidant to give the corresponding ketones in 16 to >99% conversion with >99% selectivity (ketones obtained as sole oxidation products from alkylbenzenes).

Comment: The framework **1** was recovered by centrifugation and reused 14 times without significant loss of catalytic activity. A homogeneous metalloporphyrin catalyst MnCl-Me$_8$OCPP showed much lower catalytic activity in the oxidation of ethyl benzene under similar conditions.

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Category
Polymer-Supported Synthesis

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manganese(II) chloride
oxidation