

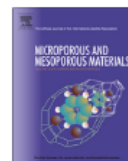


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## Microporous and Mesoporous Materials

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### New method for the immobilization of nitroxyl radical on mesoporous silica



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#### ABSTRACT

This work reports the covalent attachment of 4-hydroxy-2,2,6,6-tetramethylpiperidin-1-oxyl (4-hydroxy-TEMPO) on the mesoporous silicas MCM-41 and SBA-15, by using 1,4-diisocyanatobutane as a binder. The catalysts were characterized by nitrogen adsorption/desorption, XRD, TEM, TGA, DSC and FTIR spectroscopy. Catalytic tests were performed on the liquid phase oxidation of benzyl alcohol and the secondary alcohol isoborneol by using tert-butyl hydroperoxide as oxidant. The catalysts showed good activity and stability in consecutive oxidation experiments with the same catalyst samples.

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