

Catalytic activity of copper(II) enzyme-like catalysts, prepared by molecular imprinting technique in oxidation of phenols.

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Streszczenie

Molecularly imprinted polymer copper(II) catalysts were prepared by suspension polymerization of 4-vinylpyridine, trimethylolpropane trimethacrylate (series A) and additional monomer – acrylonitrile (series B) in the presence of Cu(II) ions and template: 4-metoxybenzyl alcohol; two samples were also prepared by surface molecular imprinting technique utilizing W/O emulsion. The catalytic activity was tested in model oxidation reactions of hydroquinone and 2,5-di-*tert*-butylhydroquinone using hydrogen peroxide. The imprinted catalysts were more effective in both reactions than non-imprinted but their activity strongly depended on Cu(II) loading. Surface imprinted samples showed the highest activity (L_H up to 100%).

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