

عنوان مقاله:

Highly selective olefin epoxidation with the hydrogen peroxide in the presence of hematite nanoparticles (α -Fe₂O₃-NP)

محل انتشار:

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خلاصه مقاله:

Metal oxide nanoparticles have been applied for detection and separation of proteins i, to immunoassay ii, drug iii and gene delivery iv,v. Moreover, the use of nanoparticles attracted a lot of attention in the field of catalysis due to their high surface area. Therefore given the far lower cost, less toxicity and greater abundance of iron over the more precious metals, it is clear that iron derived catalysts would provide a range of benefits if they could be made practical, stable, active and selective. The catalytic properties of the NPs can be modified by particles size. The most obvious size-dependence relationship results from the change in the percentage of surface atoms which are responsible for the catalytic properties when changing the diameter. In this work we report a facile solvothermal approach to the synthesis of hematite nanoparticles (α -Fe₂O₃-NP) and their applications in the catalytic oxidation of olefins.

کلمات کلیدی:

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