

عنوان مقاله:

Synthesis and catalytic properties of nano CuO prepared by soft chemical method

محل انتشار:

مجله بین المللی ابعاد نانو، دوره 3، شماره 1 (سال: 1391)

تعداد صفحات اصل مقاله: 6

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خلاصه مقاله:

Well faceted CuO nanoparticles, were synthesized by thermal-assisted dissociation method at reflux temperature in a short period of time. A possible mechanism for synthesis of such highly pure and stable nanoparticles is tentatively proposed by FT-IR study. The large surface area and rich exposed active sites are expected to endow such nanoparticles with excellent performances in catalysis as demonstrated here for the remarkable catalytic activity with respect to the oxidation of alcohol. This interesting result highlights the advantage of such a CuO nanostructure over the bulk counterpart, i.e. the high density of active sites and large surface area, which places a solid foundation for the feasible and promising application of such highly faceted nanomaterials in catalysis. It is the first report on the nanometer-sized faceted CuO acting as a catalyst for an oxidation reaction and simultaneously a good example for .the combination of green chemistry and functional materials

کلمات کلیدی:

Nanomaterials, CuO, Starch, catalyst, Sodium borohydride, alcohol oxidation

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