

表面活性剂对纳米 Sb_2O_3 和纳米 Sb_2O_3 /云母分散性的影响

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收稿日期 2005-8-8 修回日期 2005-12-26 网络版发布日期 接受日期

摘要 以片状云母作为微反应器制备了纳米 Sb_2O_3 /云母复合物, 并用XRD、TEM进行了表征. 研究了表面活性剂对纳米 Sb_2O_3 颗粒、纳米 Sb_2O_3 /云母复合物的粒子性能及粒度分布的影响, 并对二者进行了比较. 结果表明: 纳米 Sb_2O_3 被十六烷基三甲基溴化铵处理后, 在云母层间均匀生长, 形成的纳米 Sb_2O_3 分散性好, 粒度分布窄. 平均粒径约为5nm, 比不加云母制备的纳米 Sb_2O_3 小30nm.

关键词 [Sb2O3](#) [纳米粒子](#) [云母](#) [表面活性剂](#)

分类号 [TB383](#)

Effects of Surfactants on Dispersion Properties of Nano- Sb_2O_3 and Nano- Sb_2O_3 /Mica

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Abstract The Sb_2O_3 /mica nanoparticles were prepared by using layered mica as the micro-reaction cell and characterized by means of XRD and TEM. The effects of surfactants on the particle properties and particle-size distributions for both nano- Sb_2O_3 and Sb_2O_3 /mica nanoparticle were investigated and compared. The results show that after modified by CTAB, Sb_2O_3 nanoparticles assembled uniformly between mica layers, have a good dispersion property and a narrow size distribution around 5nm, 30nm less than that of Sb_2O_3 nanoparticles prepared without the addition of mica.

Key words [Sb2O3](#) [nanoparticle](#) [mica](#) [surfactant](#)

DOI:

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