

表面活性剂对固相反应制备钴酸镍形貌影响的研究

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收稿日期 2006-2-8 修回日期 2006-4-11 网络版发布日期 接受日期

摘要 采用醋酸镍、醋酸钴和草酸, 加入不同的表面活性剂, 在室温条件下进行固相化学反应, 于60℃水浴恒温2d, 获得前驱物; 经热分析后, 610℃分解. 用XRD、SEM对热分解产物进行表征, 获得了多种不同微观形貌的NiCo₂O₄复合氧化物.

进行了不同聚合度和不同类型的表面活性剂对多种制备体系产物形貌影响的对比实验. 实验结果表明, 表面活性剂在合成过程中充当了软模板剂, 对产物形貌的构成产生了明显作用.

关键词 [钴酸镍](#) [表面活性剂](#) [固相反应](#) [形貌](#)

分类号 [0614](#)

Preparation of Different Topography NiCo₂O₄ with Surfactant by Solid

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Abstract Manifold mixed precursors were prepared with Ni(CH₃COO)₂·4H₂O, Co(CH₃COO)₂·4H₂O, H₂C₂O₄·2H₂O and different surfactants by solid state reaction at room temperature; then they were put into a bain-marie to keep 2d at 60℃. After these precursors analyzed by TG-DTA, and decomposed at 610℃, the phase and topography of the thermolysis products were characterized by XRD, SEM. The nanometer composite oxide NiCo₂O₄ with different topography was obtained. The experimental results show that these surfactants act as soft-templates, they have evident effect on topography of products.

Key words [NiCo₂O₄](#) [surfactant](#) [solid state reaction](#) [topography](#)

DOI:

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