

COMMUNICATIONS

溶剂热微乳法合成CdS微米球

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收稿日期 2004-11-9 修回日期 2005-6-27 网络版发布日期 接受日期

摘要 CdS微米球可在环己烷/曲拉通100/正戊醇/水的微乳体系中180℃溶剂热处理下合成。产物进行了X射线粉末衍射, 透射电镜, 电子衍射, 能量散射分析和荧光光谱的表征, 结果显示直径1.5~2.5μm CdS微米球其实是由40~50nm的CdS纳米晶组成的。在此基础上, 我们提出了CdS微米球在溶剂热微乳液中的形成机理。

关键词 [CdS微米球](#), [溶剂热微乳](#), [光致发光](#)

分类号

Synthesis of CdS Microspheres by a Hydrothermal Microemulsion Method

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Abstract CdS microspheres were prepared by a hydrothermal microemulsion method in cyclohexane/Triton X-100/pentanol/water at 180 °C. The as-prepared samples were characterized by X-ray diffraction analysis, transmission electron microscopy, electron diffraction, energy diffraction X-ray analysis and photoluminescence spectra. It was found that CdS microspheres with diameter of 1.5—2.5 μm were aggregated by nanocrystals. The formation mechanism was proposed.

Key words [CdS microsphere](#), [hydrothermal microemulsion](#), [photoluminescence](#)

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