

论文

硫化镉纳米粒子的合成及发光性能

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摘要:

采用多元醇方法制备了硫化镉纳米粒子, 利用X射线衍射仪、透射电子显微镜和扫描电子显微镜等技术对样品的微观结构、粒径大小和形貌进行了分析. 结果表明, 所得硫化镉纳米粒子粒径均一, 形貌均为球形. 光致发光性质研究结果表明, 所得纳米粒子具有较好的蓝光发射性能.

关键词: 关键词硫化镉 多元醇方法 半导体纳米材料

Synthesis and Luminescence Properties of CdS Nanoparticles

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Abstract:

CdS nanoparticles were successfully prepared by polyol method with PVP-K30 as a surfactant. The microstructure, size and morphology of the products were investigated in detail by XRD, TEM and SEM. The results indicate that uniform CdS nanospheres were achieved. Photoluminescence properties of the resulted nanoparticles(S1 and S3) were investigated, and the results indicate that the CdS nanoparticles could be used as a potential blue light emitting material.

Keywords: CdS Polyol method Semiconductor nanomaterial

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