

研究简报

反相微乳液法合成碘化铅纳米棒

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摘要 用 $\text{Pb}(\text{NO}_3)_2$ 和KI为反应物, 在水溶液/Triton X-100/正己醇/环己烷反相微乳液体系中制得了碘化铅纳米棒. 研究了 ω_0 (水与表面活性剂的摩尔比)、反应物浓度、反应温度及陈化时间等因素对产物尺寸和形貌的影响, 并用TEM和XRD等技术对产品进行了表征.

关键词 [碘化铅](#) [纳米棒](#) [W/O微乳液](#)

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Synthesis of Lead Iodide Nanorods by Inverse Microemulsion Method

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Abstract Lead iodide nanorods with a length of 500—3200 nm and a diameter of 35—130 nm were synthesized in an inverse microemulsion system consisting of water, Triton X-100, cyclohexane and *n*-hexanol. The prepared products were characterized *via* TEM and XRD. The results show that ω_0 (the molar ratio of water to surfactant), the concentration of reactants, reaction temperature and aging time all can affect the morphology and size of the lead iodide nanorods prepared. The as-prepared nanorods belong to hexagonal system.

Key words [Lead iodide; Nanorods; W/O microemulsion](#)

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