

纳米CeO₂/PMMA杂化材料的制备与表征

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收稿日期 修回日期 网络版发布日期 接受日期

摘要 采用在位分散聚合法制备了纳米CeO₂/PMMA杂化材料。XRD分析表明,杂化材料是无定形的。SEM分析表明,杂化材料中CeO₂含量不同,材料的断面形貌明显不同,随CeO₂含量的增加,杂化材料由韧性断裂向脆性断裂转变。EDS面分析表明,Ce在杂化材料中分布均匀。实验表明,随CeO₂含量的增加,杂化材料的透过率与溶解性降低。

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分类号 [TQ02](#)

Preparation and Characterization of Nanometer-sized CeO₂/PMMA Hybrid Material

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Abstract The nanometer-sized CeO₂/PMMA hybrid material was prepared by in-situ polymerization method. XRD pattern shows that the hybrid material is amorphous. SEM indicates that the morphology of fracture plane of the hybrid material is different when CeO₂ content varies in the hybrid material, the tenacity fracture of hybrid material changes into fragility with the increase of CeO₂ content. EDS reveals that the distribution of Ce in the hybrid material is uniform. It is found that the transmissivity and solubility of the hybrid material decrease with the increase of CeO₂ content.

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