

研究论文

通过RAFT法制备聚合物/膨润土杂化材料

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摘要 通过可逆加成-断裂链转移(RAFT)自由基聚合方法合成了聚合物/膨润土(蒙脱石)杂化材料. 以乙基黄原酸基膨润土为链转移剂, AIBN为引发剂, 在环己酮溶液中, 通过甲基丙烯酸甲酯的RAFT自由基聚合, 得到了一系列的聚合物/膨润土杂化材料. 并用FT-IR, NMR, SPM, TG, GPC等分别对产物的微观结构、热性能、有机物含量以及分子量和分子量分布进行了表征和测试.

关键词 [膨润土\(蒙脱石\)](#) [可逆加成-断裂链转移\(RAFT\)自由基聚合](#) [乙基黄原酸基膨润土](#) [分子量](#) [分子量分布](#)

分类号

Preparation of Polymer/Bentonite Hybrid Material via RAFT Polym-erization

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Abstract The polymer/bentonite (montmorillonite, MMT) hybrid material was synthesized through reversible addition fragmentation chain transfer (RAFT) radical polymerization method. A series of structure-controlled polymer/bentonite hybrid materials were achieved successfully through RAFT polymerization of methyl methacrylate (MMA) in cyclohexanone solution using ethyl xanthate-terminated bentonite as the RAFT chain transfer agent (CTA) and AIBN as the initiator. The microstructures, thermal characteristics, organic content, molecular weight and molecular weight distribution of the material were characterized and measured with FT-IR, NMR, SPM, TG and GPC respectively.

Key words [bentonite \(montmorillonite\)](#) [reversible addition fragmentation chain transfer \(RAFT\) radical polymerization](#) [ethyl xanthate-terminated bentonite](#) [molecular weight](#) [molecular weight distribution](#)

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