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研究论文

季铵盐单体在蒙脱土中的插层原位聚合反应

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摘要 通过四种结构相似的可聚合季铵盐(二甲基二烯丙基氯化铵、三甲基烯丙基氯化铵、丙烯酰氧乙基三甲基氯化铵、甲基丙烯酰氧乙基三甲基氯化铵), 通过蒙脱土层间构型排布的模拟及分析比较, 从分子水平上探讨了原位插层聚合反应中, 单体分子排列角度及构型对聚合反应的影响.

关键词 蒙脱土 原位插层聚合 季铵盐单体

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In situ Polymerization of Ammonium Ion Monomers Interc alated in the Montmorillonite Template

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Abstract The protonated forms of four ammonium salts(dimethyl diallyl ammonium chloride, DM DAAC; trimethylallyl ammonium chloride, TMAAC; acryloxyethyl trimethylammonium chloride, DA C; 2-methyl acryloxyethyltrimethylammonium chloride, DMC) were introduced into the interlay er region of montmorillonite template through ion-exchange reaction. X-ray diffractometry and FTIR spectra displayed that all the four monomers were intercalated into the layer region successfully, but only two monomers undertook *in situ* polymerization. The different reaction a ctivities of the four monomers were attributed to the different space arrangement and steric hindrance of the monomers in the interlayer of montmonrillonit e template.

Key words Montmorillonite In situ intercalation polymerization Ammonium ion monomer

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