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研究简报

树状硅基大分子光引发剂的合成与表征

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摘要

关键词 树状硅碳烷 大分子光引发剂 紫外光固化 热稳定性

分类号

SYNTHESIS AND CHARACTERIZATION OF DENDRITIC CARBOSILANE BASED MACROPHOTOINITIATOR

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Abstract A carbosilane dendrimer based macrophotoinitiator(MPI-185)containing benzophenone moiety terminal groups was synthesized by a divergent bydrosilylation / allylation reaction sequence followed by alcoholysis of the silicon chloride end groups. The structure of MPI-185 was characterized by FTIR,^{1}H-NMR,^{13}C—NMR,and^{29}Si—NMR,and its intrinsic viscosity,molecular weisht and polydispersity were meassured on by using a GPC complex system. Its reactivity was tested *via* curing a sensitive epoxy acrylate(EA)resin using FTIR,and the thermal preperty of films cured was measured by TGA. The results were compared with those of a small molecule photoinitiator(185). It Was found that the cutting efficiency of macrophoinitiator(MPI-185)was satisfactory,and the thermal degradation temperature of EA resin eared with MPI-185 was also markedly improved.

Key words Carbosilane dendrimer Macrophotoinitiator Ultrovialet curing Thermal stability

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