

研究简报

含氧磷结构的可溶性感光聚酰亚胺合成与表征

王维, 张爱清, 邱小林, 杨志兰, 乔学亮, 陈建国

模具技术国家重点实验室华中科技大学材料科学与工程学院; 中南民族大学化学与材料科学学院
催化材料科学湖北省重点实验室; 南昌理工学院纳米材料研究中心; 模具技术国家重点实验室华中
科技大学材料科学与工程学院 武汉

收稿日期 2005-11-29 修回日期 2006-1-20 网络版发布日期 接受日期

摘要

关键词 [聚酰亚胺](#) [氧磷](#) [查尔酮](#) [合成](#) [光敏性](#)

分类号

SYNTHESIS AND CHARACTERIZATION OF SOLUBLE PHOTSENSITIVE POLYIMIDES CONTAINING PHOSPHINE OXIDE MOIETIES

WANG Wei¹, ZHANG Aiqing², QIU Xiaolin³, YANG Zhilan², QIAO Xueliang¹, CHEN Jianguo¹

1 State Key Laboratory of Die & Mould Technology; College of Materials Science & Engineering; Huazhong Iniversity of Science and Technology; Wuhan 430074; 2 Hubei Key Laboratory of Catalysis and Materials Science; College of Chemistry & Materials Science; South-Central University for Nationalities; Wuha 430074; 3 Nanomaterials Research Center; Nanchang Institute of Technology; Nanchang 330013

Abstract The soluble photosensitive polyimides were synthesized by the copolymerization of 3,3'-diaminochalcone (mDAC), bis(3-aminophenyl)-3,5-bis(trifluoromethyl)phenyl phosphine oxide(mDA6FPPO) and 4,4'-(hexafluoroisopropylidene)-diphthalic anhydride(6FDA). The polymers were characterized by FR-IR spectrum, and the properties of polymers were also discussed. The results show that the polyimides have excellent solubility in conventional organic solvents such as NMP, DMF, THF and acetone. The T_g s of polyimides are ranged in 256 °C ~ 277 °C. The polymers are stable up to over 400 °C and the residual weights at 800 °C are between 46% ~ 50%. The resulting polyimides have good adhesive properties, and they were found to increase with increasing the mDA6FPPO content. The photosensitivity of the polymers was investigated by observations of UV—Vis spectral changes during UV irradiation.

Key words [Polyimide](#) [Phosphine oxide](#) [Chalcone](#) [Synthesis](#) [Photosensitivity](#)

DOI:

通讯作者 乔学亮

扩展功能

本文信息

▶ [Supporting info](#)

▶ [PDF\(210KB\)](#)

▶ [\[HTML全文\]\(0KB\)](#)

▶ [参考文献](#)

服务与反馈

▶ [把本文推荐给朋友](#)

▶ [加入我的书架](#)

▶ [加入引用管理器](#)

▶ [复制索引](#)

▶ [Email Alert](#)

▶ [文章反馈](#)

▶ [浏览反馈信息](#)

相关信息

▶ 本刊中 [包含“聚酰亚胺”的相关文章](#)

▶ 本文作者相关文章

- [王维](#)
- [张爱清](#)
- [邱小林](#)
- [杨志兰](#)
- [乔学亮](#)
- [陈建国](#)