

研究简报

双邻位甲基侧基聚芳醚酮醚酮酮/聚芳醚醚酮酮的合成与表征

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摘要

关键词 [1 4-二苯氧基苯](#) [4 4'-二\(2 6-二甲苯氧基\)二苯酮](#) [PEEKK](#) [缩聚](#)

分类号

SYNTHESIS AND CHARACTERIZATION OF POLY(ARYL ETHER ETHER KETONE KETONE)/POLY(AR YL ETHER KETONE ETHER KETONE KETONE) CONTAINING BIS(o-METHYL) MOIETY

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Abstract Poly (aryl ether ether ketone ketone) (PEEKK) is a kind important high-performance polymers due to their excellent thermal stability and other outstanding properties similar to PEEK and PEKK. However, the PEEKK's insolubility in common solutions and high melt point restrict its processing and applications. In this paper, a series of random copolymers composed of poly(aryl ether ether ketone ketone)(PEEKK)/poly(aryl ether ketone ether ketone ketone) containing bis(o-methyl) moiety (DM-PEKEKK) were prepared by low temperature solution polycondensation of 4,4'-bis(2,6-dimethylphenoxy) diphenylketone (*o*-M₂DPOBP), 1,4-diphenylbenzene (DPB) and terephthaloyl chloride (TPC) in 1,2-dichloroethane with the presence of AlCl₃ and DMF. The copolymers were characterized by FT-IR, DSC, WAXD, TGA, etc. The results show that glass transition temperature increases greatly with the increasing of the ratio of *o*-M₂DPOBP/DPB, while melting temperature and crystallinity of copolymers decrease. The solubility of the copolymers is improved greatly, while the copolymers still exhibit excellent thermostability.

Key words [diphenylbenzene](#) [4 4'-Bis\(2 6-dimethylphenoxy\) diphenylketone](#) [PEEKK](#) [Polycondensation](#)

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