

简报

## 聚亚胺酮的合成与性能研究

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摘要

关键词 [1](#) [4-双-\(4'溴苯酰基\)苯](#) [钯催化](#) [配体](#) [聚亚胺酮](#)

分类号

## SYNTHESIS AND PROPERTIES OF POLY(IMINO KETONE)S

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**Abstract** 1,4-Bis-(4-bromobenzoyl)benzene as the monomer has been synthesized and characterized by Friedel-Crafts benzoylation reaction. Novel poly(imino ketone)s (PIKs) as high performance polymers have been obtained by the condensation polymerization of 1,4-bis-(4-bromobenzoyl)benzene and aromatic diamines *via* palladium-catalyzed aryl amination reaction. The structure of PIKs is characterized by means of FT-IR and <sup>1</sup>H-NMR spectroscopy, and the results show an agreement with the proposed structure. DSC and *T<sub>G</sub>* measurements show that PIKs possess high glass transition temperature (*T<sub>g</sub>* > 230 °C) and good thermal stability with high decomposition temperatures (*T<sub>D</sub>* > 500 °C). PIKs also exhibit the excellent solubility, PIK-3 can be dissolved in common organic solvent CHCl<sub>3</sub> at room temperature (20 °C).

**Key words** [1](#) [4-Bis-\(4-bromobenzoyl\)benzene](#) [Palladium-catalyzed](#) [Ligand](#) [Poly\(imino ketone\)s](#)

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