

研究简报

## 含三嗪或查尔酮结构聚对亚苯基亚乙炔基的合成及其荧光特性

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摘要

关键词 [三嗪](#) [查尔酮](#) [聚对亚苯基乙炔](#) [Sonogashira偶联反应](#) [光致发光](#)

分类号

## SYNTHESIS AND PHOTOPHYSICAL PROPERTIES OF POLY(ARYLENE ETHYNYLENE)S CONTAINING 1,3,5-TRIAZINE OR CHALCONE UNITES

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**Abstract** Poly(arylene ethynylene)s,P1 and P2 containing 1,3,5-triazine and chalcone unites respectively,were synthesized by Sonogashira coupling reaction. These polymers exhibited good solubility in common organic solvents,such as dichloromethane,chloroform,and tetrahydrofuran. The molecular weight  $M_w$  of P1 was 6390 with polydispersity(*PDI*)being 2.33 and that of P2 was 6870 with polydispersity(*PDI*)being 1.85 characterized by GPC. The photophysical properties were analyzed by solution and solid state photoluminescence spectroscopy. P1 emitted blue fluorescence at around 441 nm in  $CH_2Cl_2$  or THF solutions under UV excitation. The photoluminescence behavior of P2 was dependent on the solvent,with green emitting light at around 550 nm in  $CH_2Cl_2$  solution and 500 nm in THF solution. Powder photoluminescence spectra of P1 and P2 showed that the peak wavelengths respectively shifted to 530 and 605 nm.

**Key words** [1,3,5-Triazine](#) [Chalcone](#) [Poly \(arylene ethynylene\)](#) [Sonogashira coupling](#) [Photoluminescence](#)

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