



Macromolecular polyynes-containing benzoxazines for cross-linked polymerization.

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Streszczenie

A Mannich condensation of 2,4-di-*tert*-butylphenol, *p*-bromophenethylamine, and formaldehyde followed by a Sonogashira coupling of the resulting 3-(4-bromophenethyl)-6,8-di-*tert*-butyl-3,4-dihydro-2*H*-benz[1,3]oxazine (**1-Br**) with TMSCH gave acetylenic benzoxazine **1-C₂TMS** which was a precursor for polyynic derivatives. Firstly, it was deprotected with K₂CO₃ in *i*PrOH/MeOH to give the terminal acetylene **1-C₂H**, which was subsequently dimerized to the symmetrical diyne **1-C₄-1**. Next, **1-C₂H** was transformed to **1-C₄TMS** via a Cadiot–Chodkiewicz coupling, and then **1-C₄TMS** was homocoupled with in situ deprotection to give octatetrayne **1-C₈-1**. X-ray diffraction studies of **1-C₈-1** showed distinctive chain bending and a packing analysis revealed the potential for 1,*n*-topochemical polymerization that implies a cross-linking opportunity.

Słowa kluczowe

Polyynes

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