R. RIEGER, D. BECKMANN, W. PISULA, M. KASTLER, K. MÜLLEN* (MAX PLANCK INSTITUTE FOR POLYMER RESEARCH, MAINZ, GERMANY)

Tetrathiahexacene as Building Block for Solution-Processable Semiconducting Polymers: Exploring the Monomer Size Limit

Macromolecules 2010, 43, 6264-6267.

An Extended Polythiophene with Interesting Core Synthesis

Significance: A novel extended polythiophene derivative **4** was synthesized ($M_n = 18$ kDa, PDI = 2.3). The key step in the monomer synthesis (**1** \rightarrow **2**) is accomplished in 78% yield by a novel base-induced cyclization.

Comment: The authors attempted to synthesize a homopolymer of the brominated analogue of **3** via a nickel-catalyzed dehalogenation, but a soluble polymer could not be obtained. The optical and electronic properties of **4** were found to be very similar to those of poly(3-hexylthiophene).

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