Divergent Synthesis of Tricyclic Biselenophene-Based Derivatives

Significance: While tricyclic bithiophene-based materials have been extensively studied as an important class of organic semiconductors, the corresponding biselenophene-based analogues have not been reported. Cheng and co-workers demonstrate for the first time that biselenophene can be utilized as starting material for the synthesis of a new class of both sp³-bridged and sp²-bridged tricyclic biselenophene-based materials.

Comment: The six brominated molecules highlighted above can be used as monomers to create a new class of p- or n-type polymers for exploring biselenophene-based materials in various optoelectronic applications, such as organic field-effect transistors and polymer solar cells.

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