Unnatural Products

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Domino Diels-Alder Cycloadditions of Arynes: New Approach to Elusive Perylene Derivatives Chem. Eur. J. 2010, 16, 9736-9740.

Cascade Cycloadditions for the Synthesis of Perylenes

Significance: Perylene derivatives were prepared by cascade [4+2] cycloadditions between 1,8-difurylnaphthalene and arynes. The double Diels-Alder reaction proceeds in a highly stereoselective fashion and only the exo,exo-diastereomer (3a-c) is formed as confirmed by X-ray crystallographic studies.

Comment: The synthetic method allows facile preparation of extended perylenes, which are potential molecular electronic materials. Further study on substituted derivatives with better solubility and stability is desirable.

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Key words

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polycyclic aromatic hydrocarbons

perylenes

