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Facile Bottom-Up Synthesis of Coronene-based 3-Fold Symmetrical and Highly Substituted Nanographenes from Simple Aromatics

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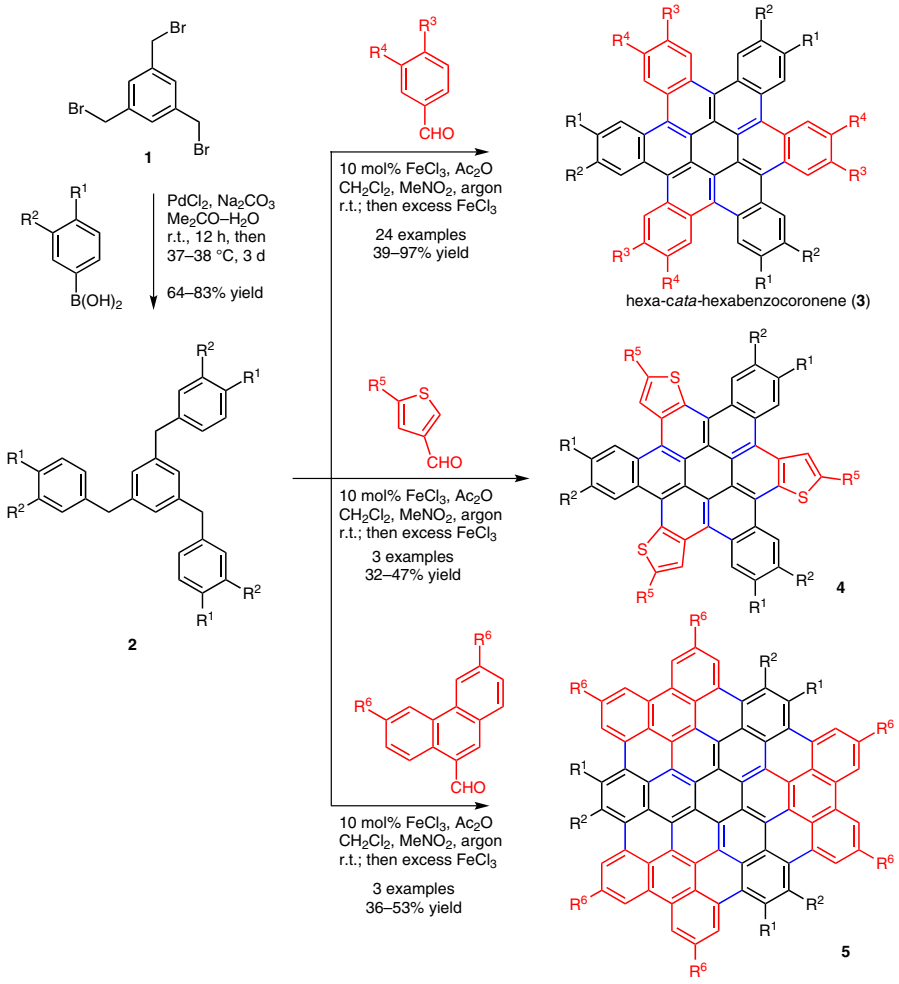
Efficient Three-Fold Symmetrical Nanographene Synthesis



Significance: An efficient synthesis of nanographenes is reported. The key is recognizing that hexa-*cata*-hexabenzocoronene (*c*-HBC) possesses three-fold symmetry and that only seven of the 13 benzene rings are enough to build up *c*-HBC. **2** reacts with three equivalents of an aromatic aldehyde via Friedel–Crafts and Scholl reaction.

Comment: Alkoxy groups for R^1 and R^2 were employed to generate electron-rich compound **2** which is more reactive towards Friedel–Crafts and Scholl reaction. Bromo-substituted (R^3) *c*-HBC can be potentially utilized to prepare more functionalized nanographenes.

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