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


**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:** Alkoxyl groups for R1 and R2 were employed to generate electron-rich compound 2 which is more reactive towards Friedel–Crafts and Scholl reaction. Bromo-substituted (R3) c-HBC can be potentially utilized to prepare more functionalized nanographenes.