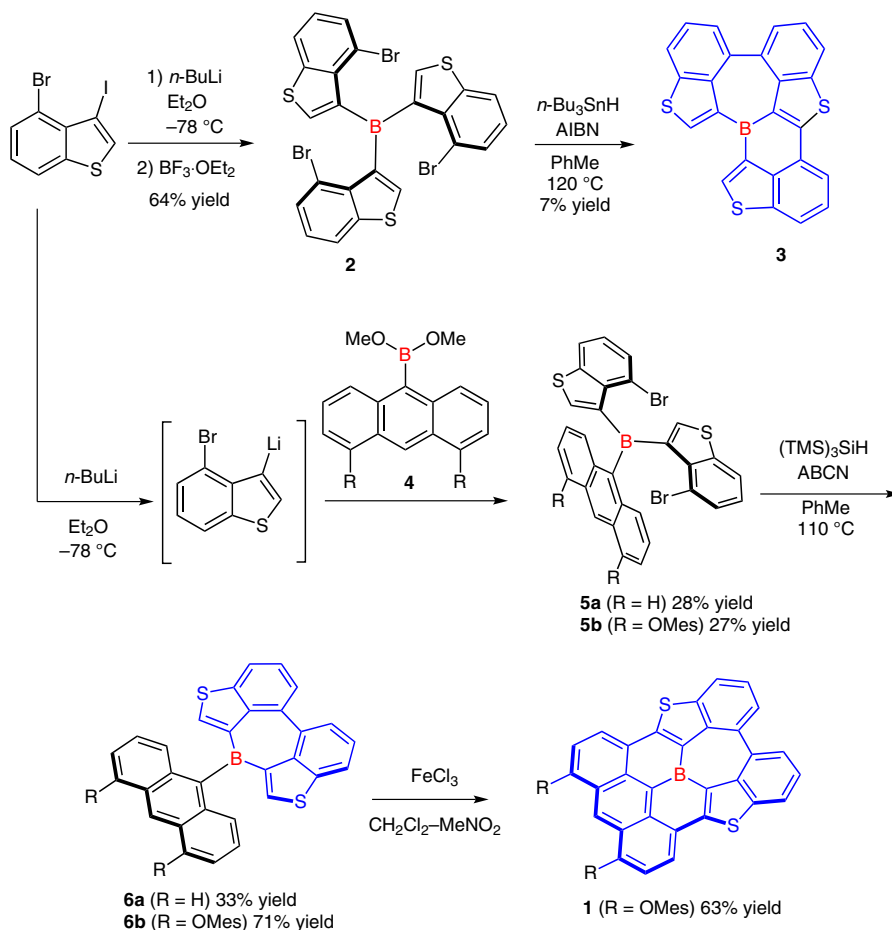


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Polycyclic π -Electron System with Boron at Its Center*J. Am. Chem. Soc.* **2012**, *134*, 9130–9133. π -Conjugated Polycycle Containing Boron

Significance: Triarylboranes have been a subject of extensive studies for electronic applications. This paper reports the synthesis, photophysics and crystal structure of new planarized triarylboranes in which the boron atom is embedded in a 10-ring-fused π -conjugated polycycle. Precursor **6** is obtained via radical-promoted intramolecular homocoupling of **5**. The oxidative cyclization only proceeds when using **6b** to give the final product, **1**, in good yield. The new molecule is reported to be highly stable toward oxygen and water.

Comment: Unlike previously reported triarylboranes, polycycles **1** exhibit a broad absorption band that spans the visible region from 400 nm to 730 nm. The crystal structure shows that the conjugated polycycle is relatively planar and forms a face-to-face π -stacking with a short interplanar distance of 0.35 nm despite the bulky Mes groups.

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