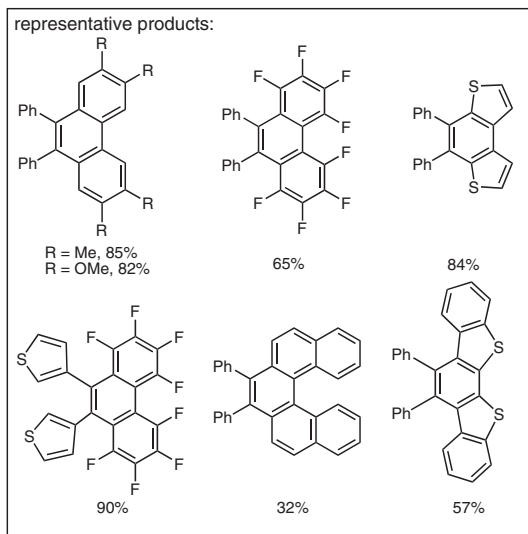
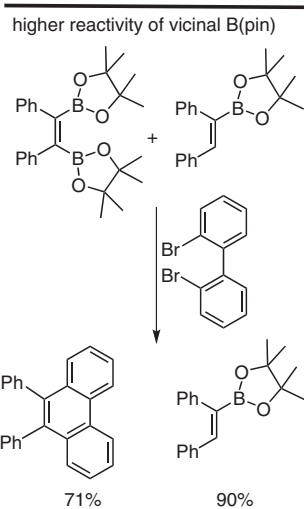
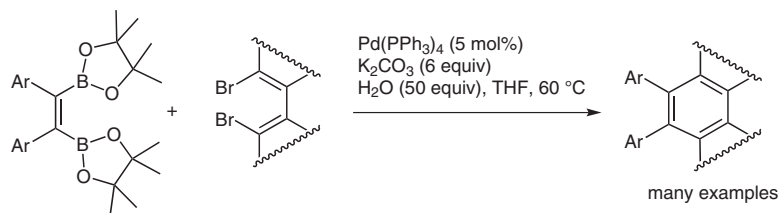


M. SHIMIZU,\* I. NAGAO, Y. TOMIOKA, T. HIYAMA (KYOTO UNIVERSITY, JAPAN)

Palladium-Catalyzed Annulation of *vic*-Bis(pinacolatoboryl)alkenes and -phenanthrenes with 2,2-Dibromobiaryls: Facile Synthesis of Functionalized Phenanthrenes and Dibenzo[*g,p*]chrysenes  
*Angew. Chem. Int. Ed.* **2008**, *47*, 8096-8099.

## Polycyclic Aromatics via Cross-Coupling



**Significance:** This report demonstrates a powerful method for the formation of functional polycyclic aromatic structures. These classes of structures are important building blocks for the formation of organic semiconductor materials. The high yields of the reactions suggest a practical method to produce quantities of materials and the (*Z*)-1,2-bis(pinacolatoboryl)stilbenes and related compounds are readily prepared from the diboryl and diarylalkynes (*J. Chem. Soc., Dalton Trans.* **2001**, 1650).

**Comment:** Few cross-coupling reactions directly give new aromatic ring systems. The ability to incorporate both electron-rich (thiophene) and electron-poor (perfluoroaromatic) groups into the final products makes this method useful for the synthesis of a variety of useful organic semiconductors. The higher reactivity of the vicinal boryl groups is noteworthy and likely contributes to the ability to produce strained helicenes.

**SYNFACTS Contributors:** Timothy M. Swager  
Synfacts 2009, 1, 0041-0041 Published online: 18.12.2008  
DOI: 10.1055/s-0028-1087259; Reg-No.: S13108SF

2009 © THIEME STUTTGART • NEW YORK

Category

Synthesis of  
Materials and  
Unnatural Products

Key words

cross-coupling

polycyclic  
aromatics

organic  
semiconductors

**SYNFACT**  
*of the month*