

Supporting Information

Palladium-functionalized polysiloxane drop-casted on carbon paper as a heterogeneous catalyst for Suzuki–Miyaura reaction

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S1. Characterization of CMP

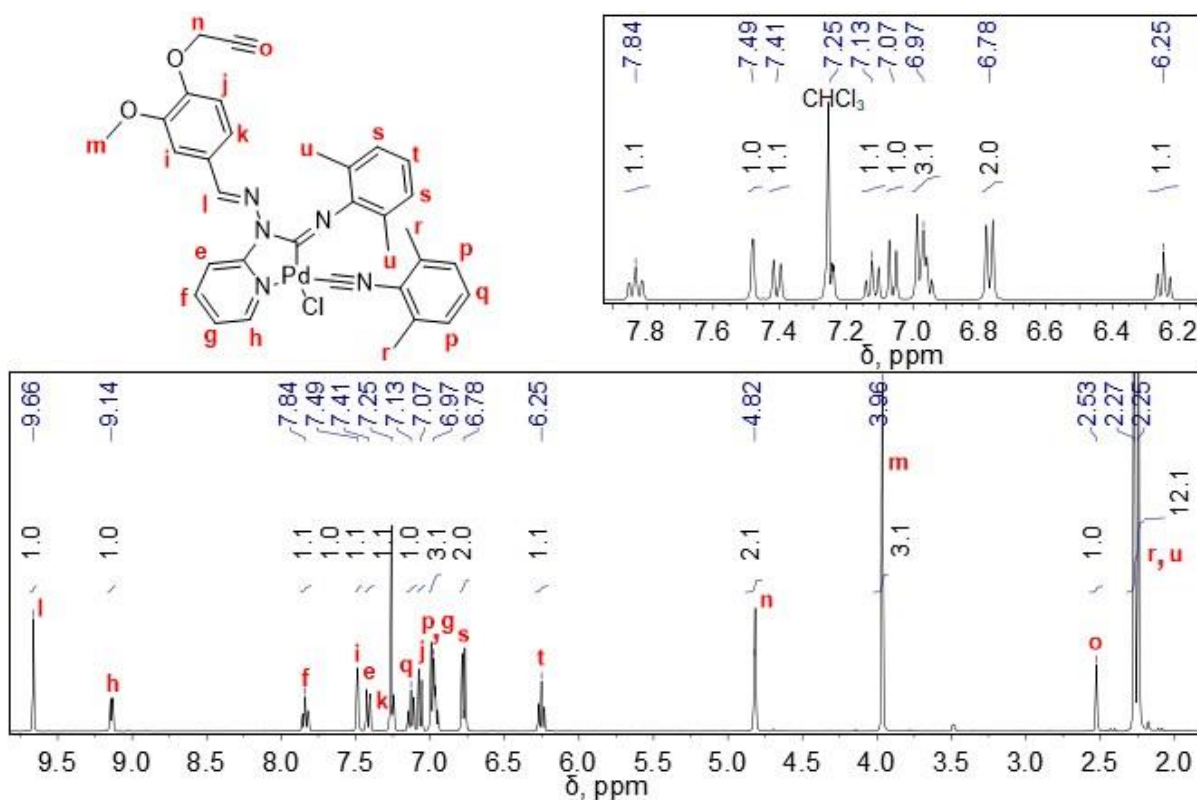


Figure S1. ^1H NMR of CMP registered in CDCl_3 .

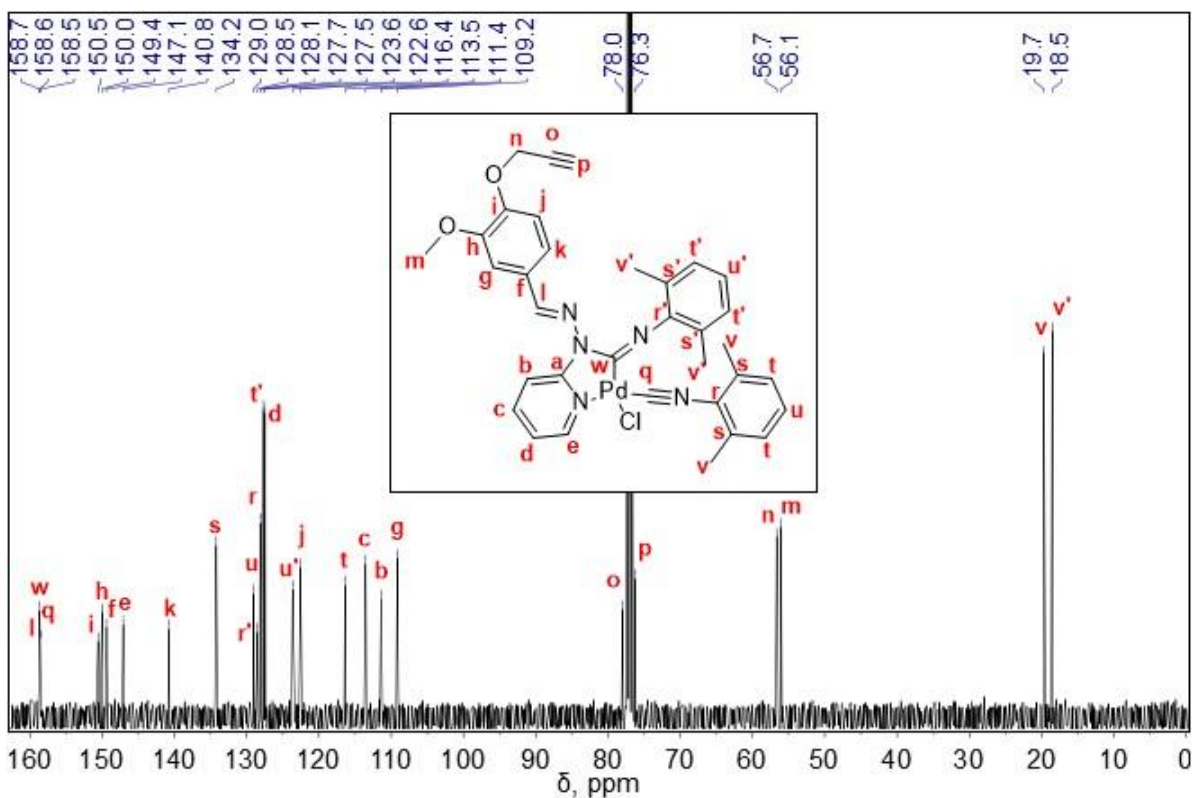


Figure S2. $^{13}\text{C}\{^1\text{H}\}$ NMR of CMP registered in CDCl_3 .

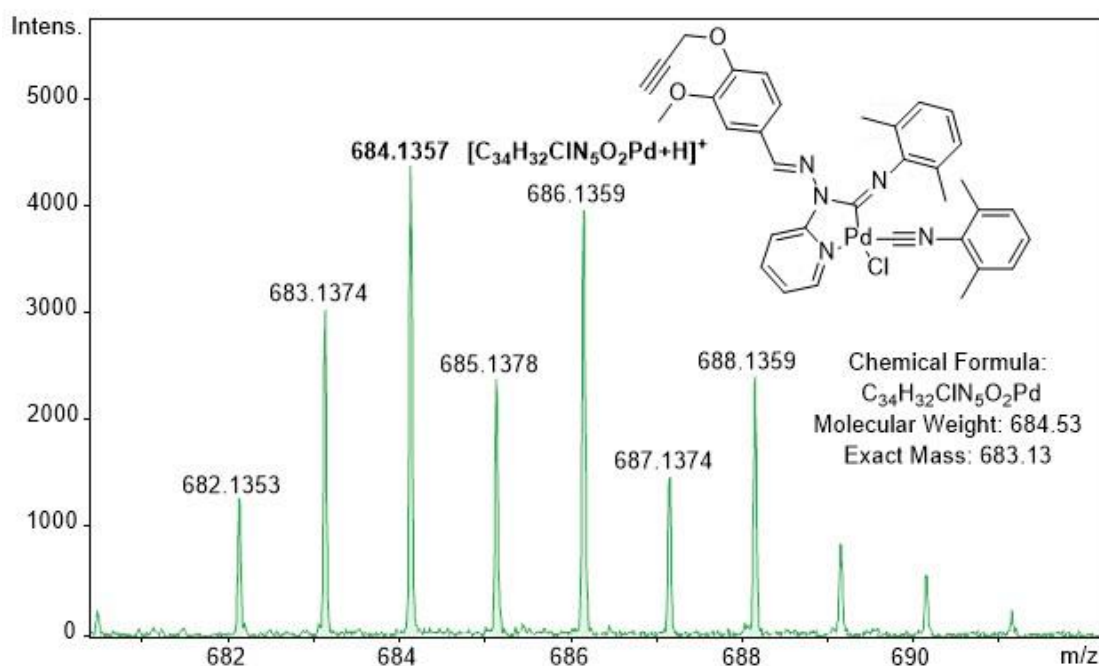


Figure S3. HRESI⁺ mass spectrum of CMP complex.

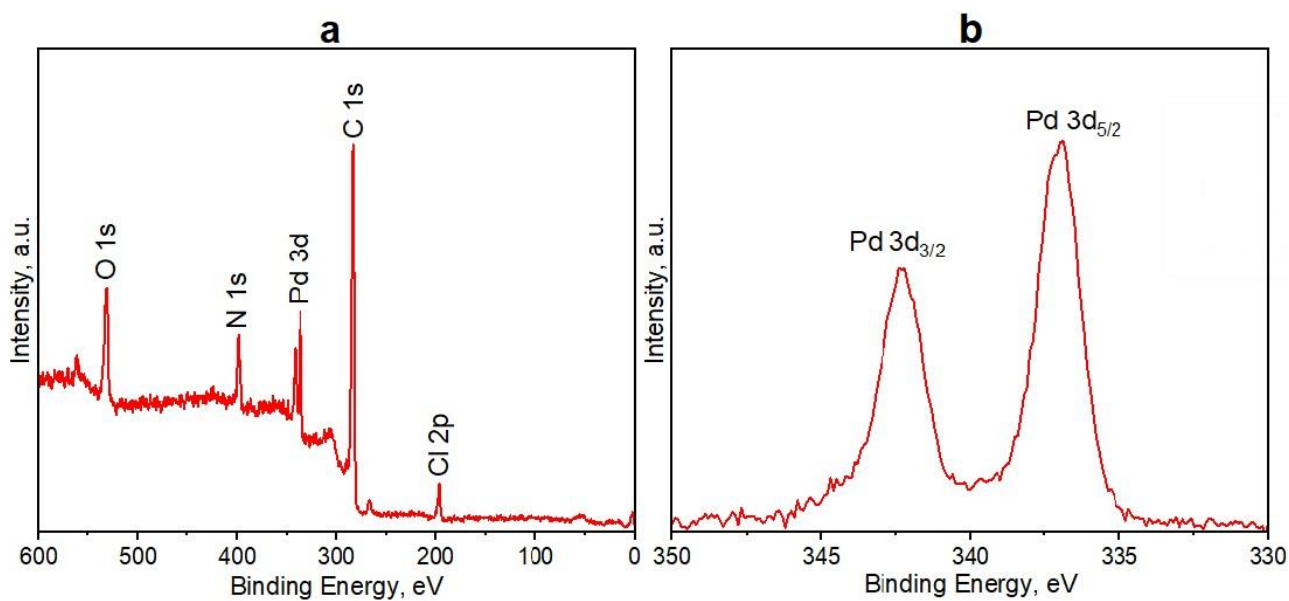


Figure S4. XPS survey spectrum (a) and Pd 3d core level spectrum (b) of CMP.

S2. Catalytic performance of Pd-PDMS

S2.1. Reaction conditions for Suzuki–Miyaura reaction in the presence of Pd-PDMS

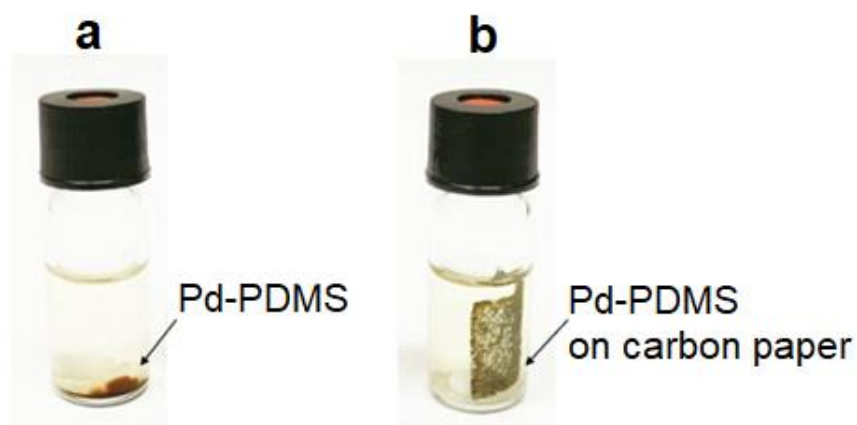
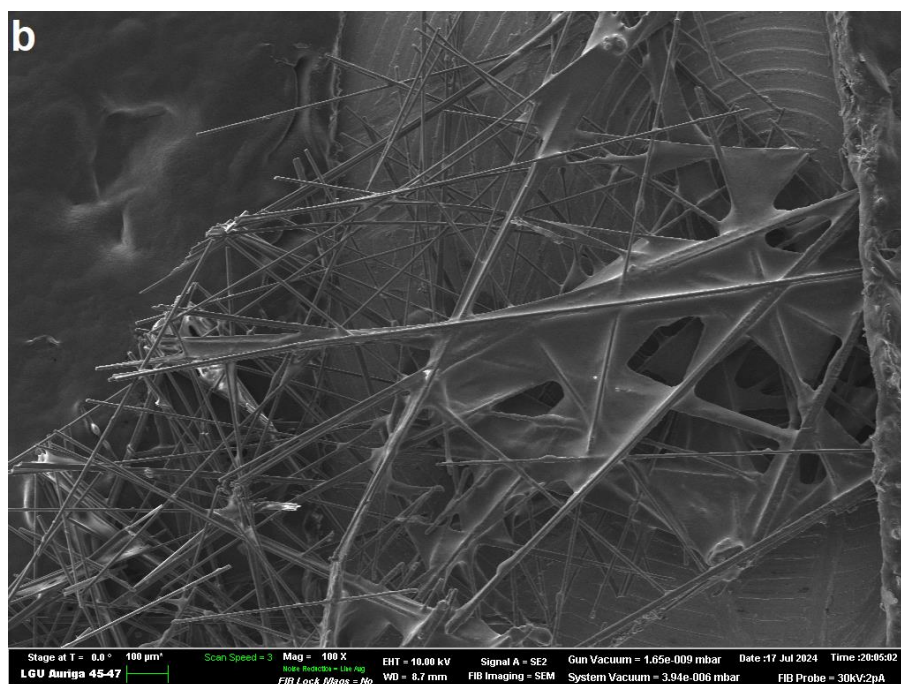
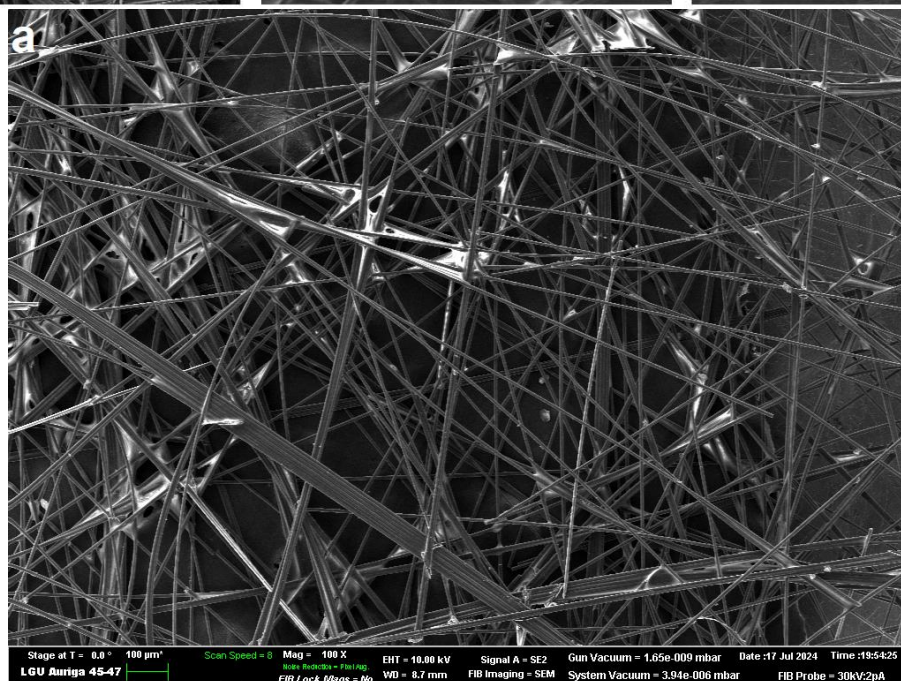
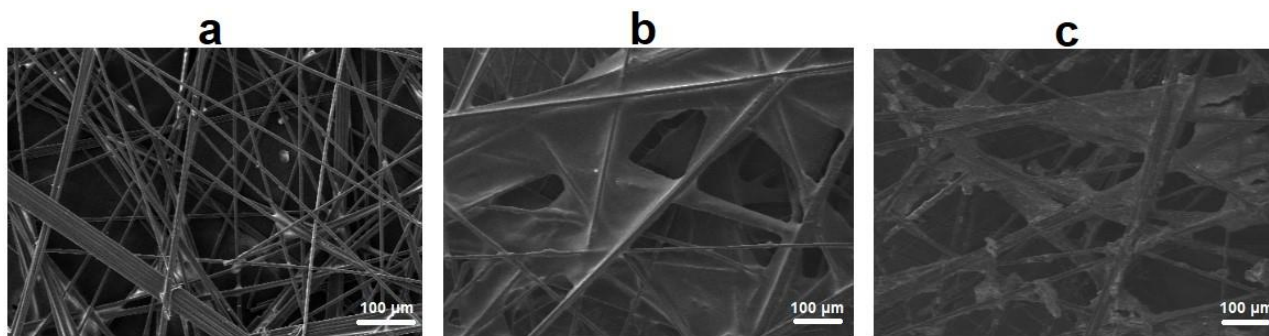


Figure S5. Pd-PDMS applied on walls of a vial (a), Pd-PDMS on carbon paper (CP) (b).



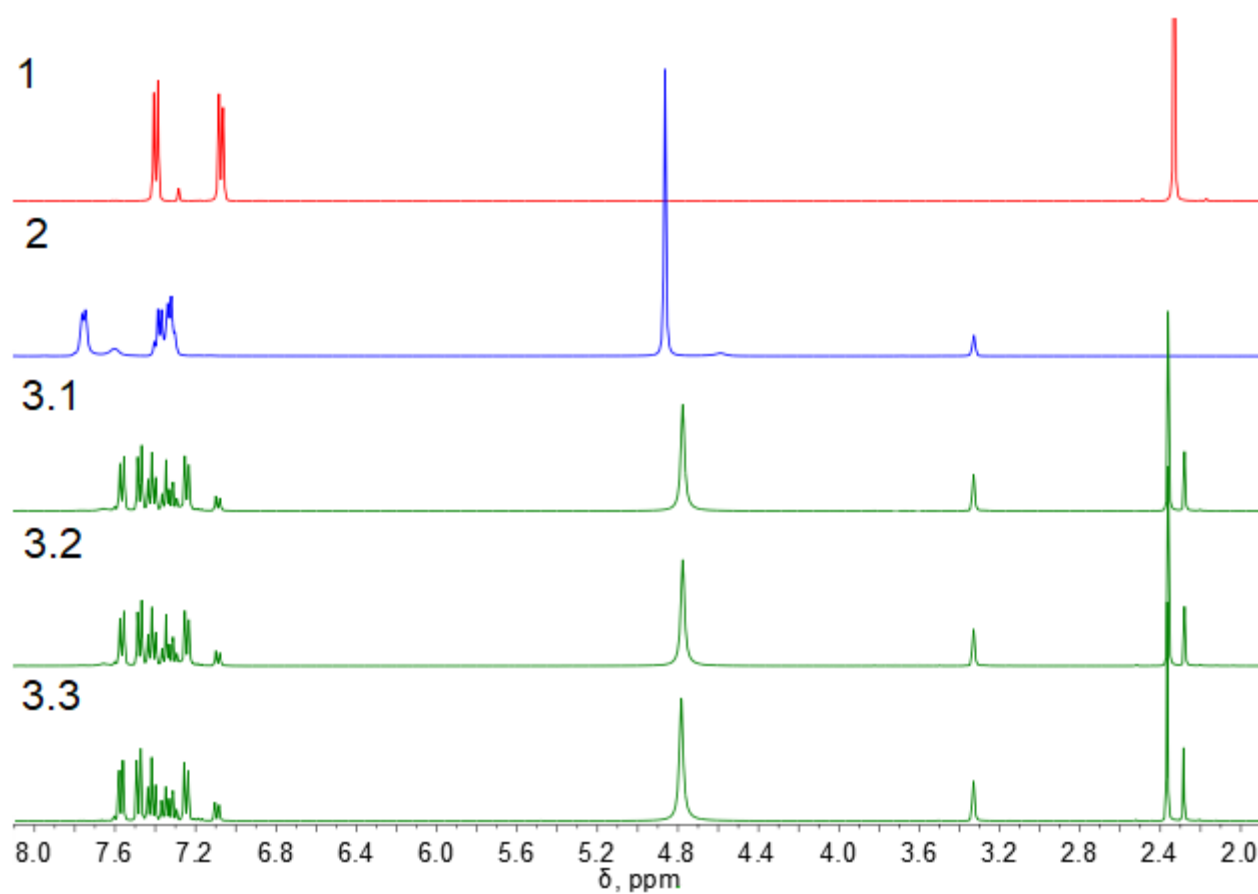


Figure S7. ^1H NMR spectra in a range from 1.75 to 8.25 ppm of 4-bromotoluene (1), phenylboronic acid registered in methanol- d_4 (2), methylbiphenyl 1st catalytic cycle (3.1), methylbiphenyl 2nd catalytic cycle (3.2), methylbiphenyl 3rd catalytic cycle (3.3).

S3. Carbon paper characterization

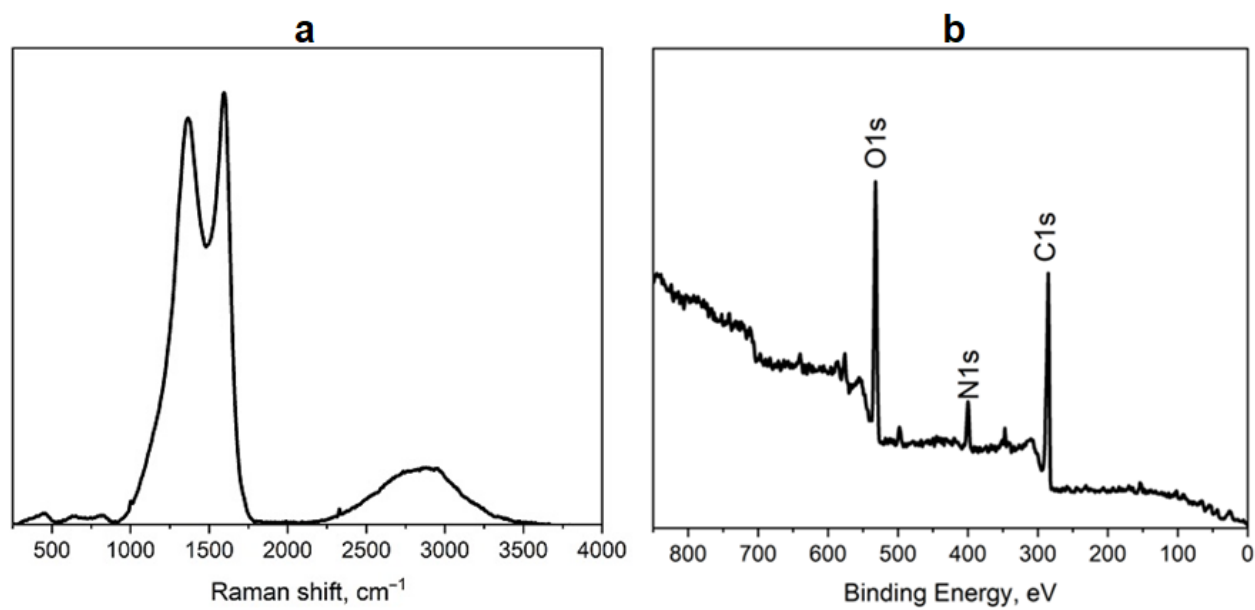


Figure S8. Spectra of the carbon paper used in in catalytic experiments: Raman (a) and XPS survey (b) spectra.

References:

1. Leadbeater, N.E.; Marco, M. Transition-Metal-Free Suzuki-Type Coupling Reactions. *Angew. Chem. Int. Ed.* **2003**, *42*, 1407–1409, doi:10.1002/anie.200390362.