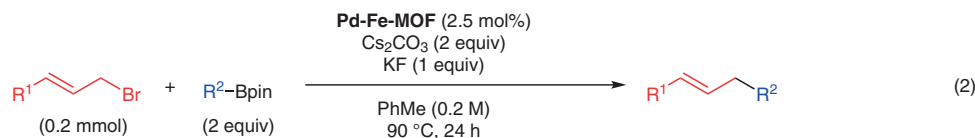
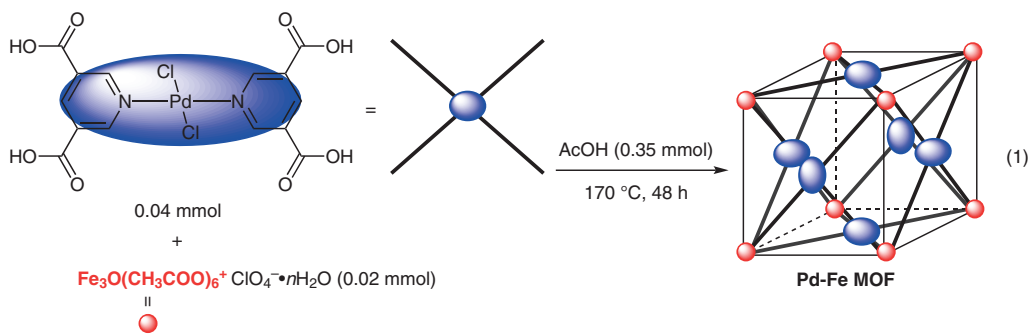
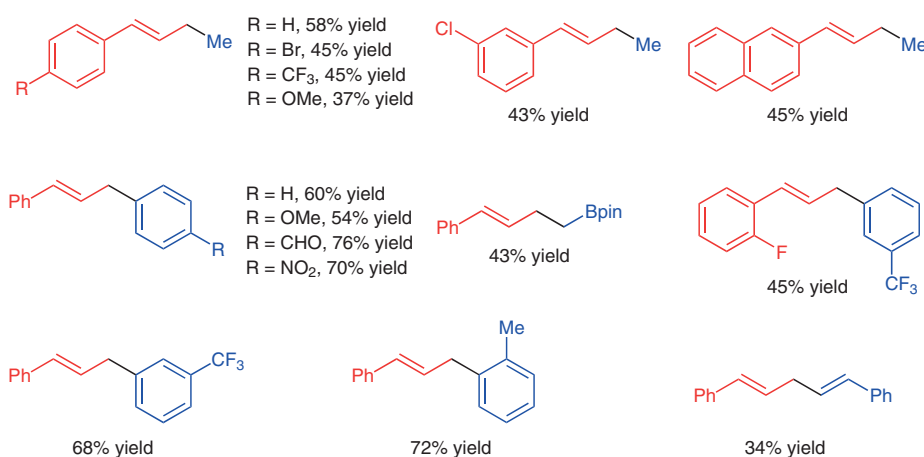


E. MIGUEL-CASAÑ, M. D. DARAWSHEH, V. FARIÑA-TORRES, I. J. VITÓRICA-YREZÁBAL, E. ANDRES-GARCIA, M. FAÑANÁS-MASTRAL*, G. MÍNGEZ ESPALLARGAS* (UNIVERSIDAD DE VALENCIA, PATERNA AND UNIVERSIDADE DE SANTIAGO DE COMPOSTELA, SPAIN)
 Heterometallic Palladium–Iron Metal–Organic Framework as a Highly Active Catalyst for Cross-Coupling Reactions
Chem. Sci. **2023**, *14*, 179–185, DOI: 10.1039/d2sc05192c.

Cross-coupling of Cinnamyl Bromides and Alkyl Boronates Catalyzed by a Pd-Fe MOF



Selected examples:



Significance: A heterometallic palladium–iron metal–organic framework (**Pd-Fe-MOF**) was prepared according to equation 1. **Pd-Fe-MOF** catalyzed the allylic alkylation of cinnamyl bromides with alkylboronic pinacol esters in the presence of Cs_2CO_3 and KF to afford the corresponding coupling products in $\leq 76\%$ yield (eq. 2).

Comment: **Pd-Fe-MOF** was characterized by means of PXRD, single-crystal XRD, XPS, TGA, FT-IR, SEM, EDS, ICP-MS and N_2 , CO_2 , CH_4 gas adsorption isotherm analyses. In the coupling reaction between cinnamyl bromide and phenylboronic acid pinacol ester, **Pd-Fe-MOF** was recovered and reused three times without significant loss of its catalytic activity.

SYNFACTS Contributors: Yasuhiro Uozumi, Shusuke Hattori
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