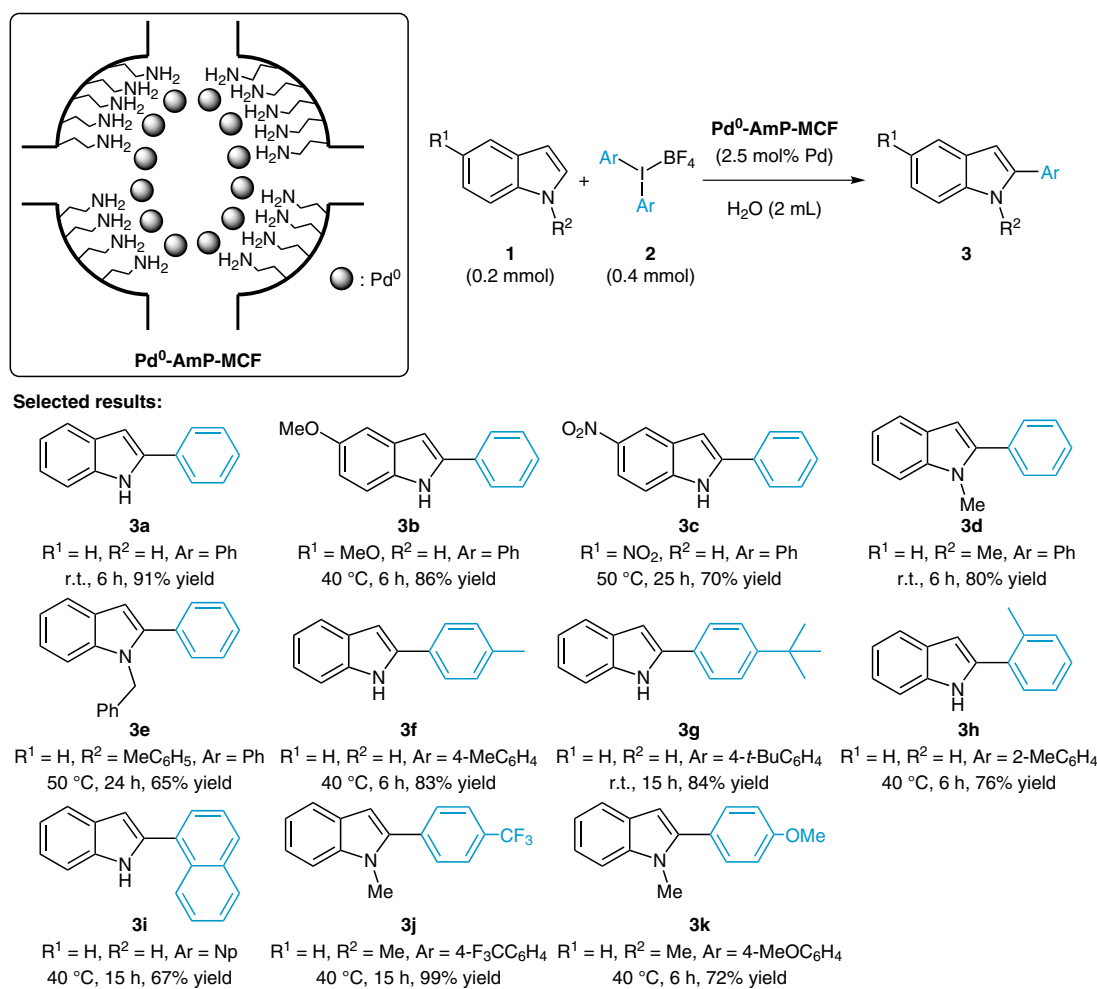


A Heterogeneous Palladium Catalyst for C2-Selective Arylation of Indoles



Significance: Pd⁰-AmP-MCF constitutes of silica-based mesocellular foam (MCF) functionalized with aminopropylsilane (for the preparation, see: M. Shakeri et al. *Chem. Eur. J.* **2011**, *17*, 13269). Pd⁰-AmP-MCF (palladium particles ϕ : 2–3 nm) catalyzed the C2-selective arylation of indoles **1** and substituted diaryliodonium tetrafluoroborates **2** to give the corresponding indole derivatives in 65–99% yield (15 examples).

Comment: The reactions of an electron-rich indole (**3b**), an N-methylated indole (**3d**), *para*-alkyl-substituted salts (**3f,g**), or an electron-deficient CF₃-substituted salt (**3j**) afforded high yields, whereas an N-benzylated indole (**3e**) or a naphthyl salt (**3i**) resulted in lower yield. ICP-OES analysis showed 0.6 ppm of palladium leaching from the reaction mixture (**3a**).