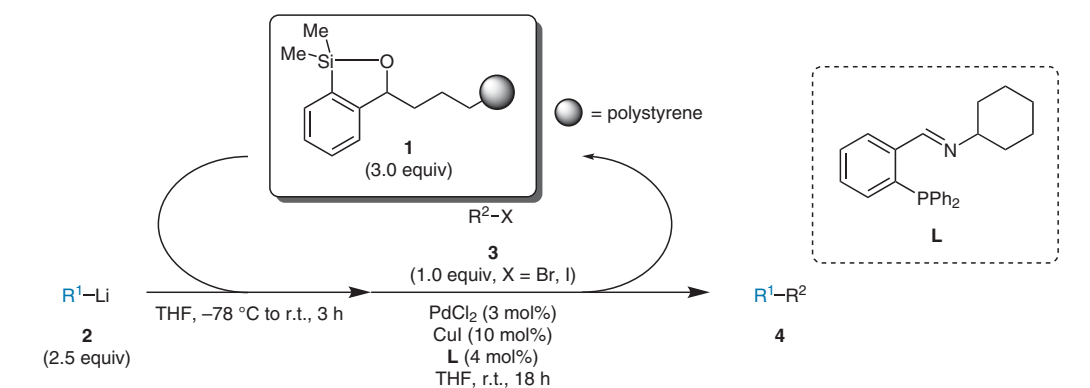


M. H. NGUYEN, K. T. O'BRIEN, A. B. SMITH, III\* (UNIVERSITY OF PENNSYLVANIA, PHILADELPHIA, USA)

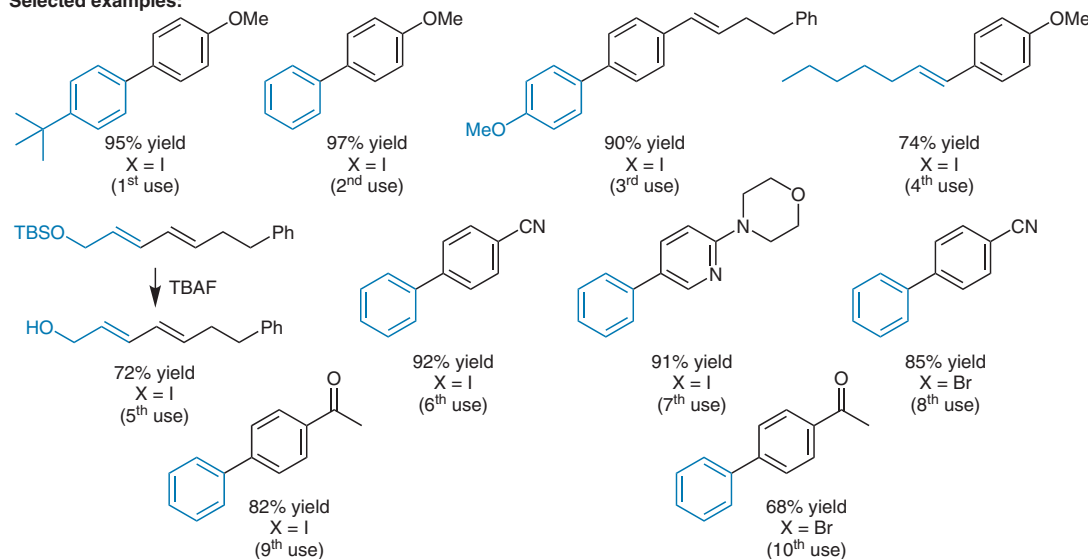
Design, Synthesis, and Application of Polymer-Supported Silicon-Transfer Agents for Cross-Coupling Reactions with Organolithium Reagents

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## Pd-Catalyzed Cross-Coupling Mediated by Polymer-Supported Siloxanes



### Selected examples:



**Significance:** Polymer-supported siloxanes were developed as transfer agents for cross-coupling reactions involving organolithium reagents. For example, the polystyrene-supported siloxane **1** was treated with an aryl or alkenyl lithium **2**, and the resulting material was treated with an aryl halide **3** in the presence of  $PdCl_2$ ,  $CuI$ , and ligand **L** to give the corresponding product **4** in 68–97% yield.

**Comment:** The transfer agent **1** was recovered almost quantitatively by simple filtration and rinsing, and reused in the cross-coupling several times. No cross-contamination of the products **4** was detected in a series of ten reactions with recycled **1** and various combinations of organolithium reagents **2** and aryl halides **3**.

**SYNFACTS Contributors:** Yasuhiro Uozumi, Takuma Sato  
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