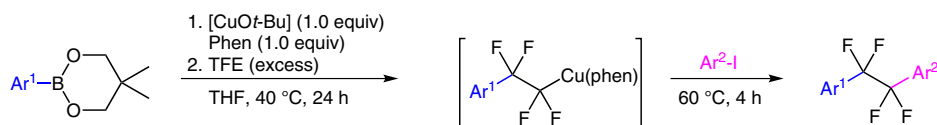
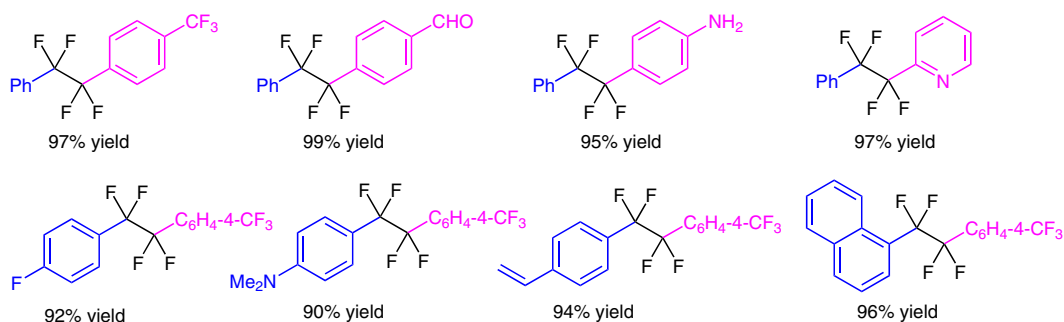


H. SAIJO, M. OHASHI, S. OGOSHI* (OSAKA UNIVERSITY AND JAPAN SCIENCE AND TECHNOLOGY AGENCY, OSAKA, JAPAN)
Fluoroalkylcopper(I) Complexes Generated by the Carbocupration of Tetrafluoroethylene: Construction of a Tetrafluoroethylene-Bridging Structure
J. Am. Chem. Soc. **2014**, *136*, 15158–15161.

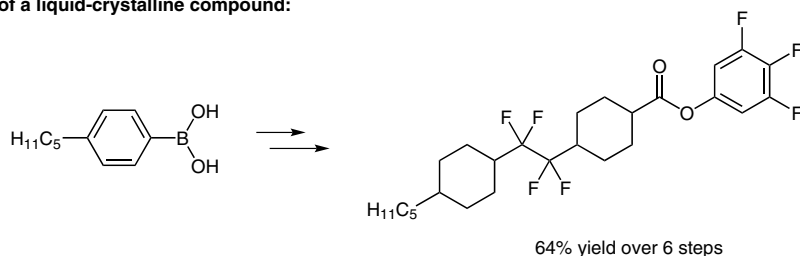
Construction of a Tetrafluoroethylene-Bridging Structure via Carbocupration



Selected examples:



Synthesis of a liquid-crystalline compound:



Significance: The authors report the synthesis, characterization, and synthetic application of 2-aryl-1,1,2,2-tetrafluoroethylcopper complexes. Starting with a carbocupration of tetrafluoroethylene (TFE), a variety of 1,2-difunctionalized 1,1,2,2-tetrafluoroethanes were prepared in high yields.

Comment: The molecular structure of the aryl-TFE-copper species was determined by X-ray crystallography and NMR analysis. Furthermore, the synthetic utility for liquid-crystalline compounds bearing a tetrafluoroethylene-bridging structure was demonstrated.

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Synfacts 2015, 11(1), 0085 Published online: 15.12.2014
DOI: 10.1055/s-0034-1379651; Reg-No.: P15614SF

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Category

Metal-Mediated
Synthesis

Key words

copper

tetrafluoroethylene

aryl groups