

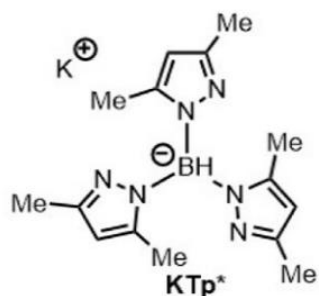
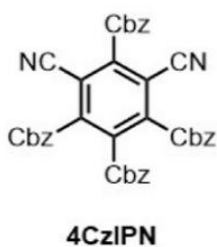
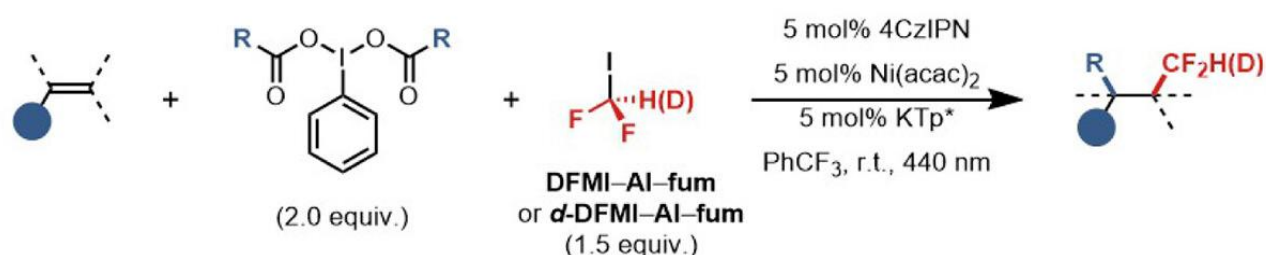
## Journal of the American Chemical Society

### Photochemical Fluoroalkylations with Fluorinated Gases Facilitated by a Robust Metal–Organic Framework

Jiachen He, Joharimanitra Randrianandraina, Husain Adamji, Valerie Chang, Yihuan Lai, Truong N. Nguyen, Yuriy Román-Leshkov, Heather J. Kulik, Jung-Hoon Lee, Phillip J. Milner

J. Am. Chem. Soc. 2026, 148, 1369-1380

<https://doi.org/10.1021/jacs.5c17931>

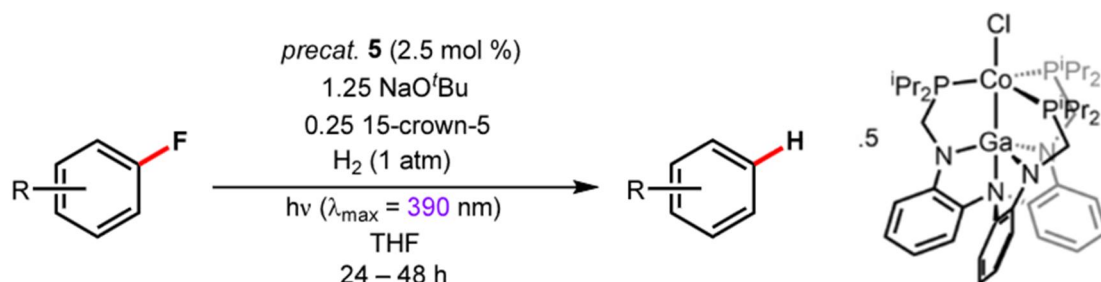


## Unraveling the Mechanism of a Co(-I)–Ga Photoreductant in the Catalytic Hydrodefluorination of Electron-Rich Fluoroarenes

Francis Y. T. Lam, Michael J. Dorantes, Jacob Schaffner, Tom Bergmann, Maurice van Gastel, Gregor Schnakenburg, Victor G. Young Jr., David A. Blank\*, and Connie C. Lu

J. Am. Chem. Soc. 2026, 148, 6097–6108

<https://doi.org/10.1021/jacs.5c16672>



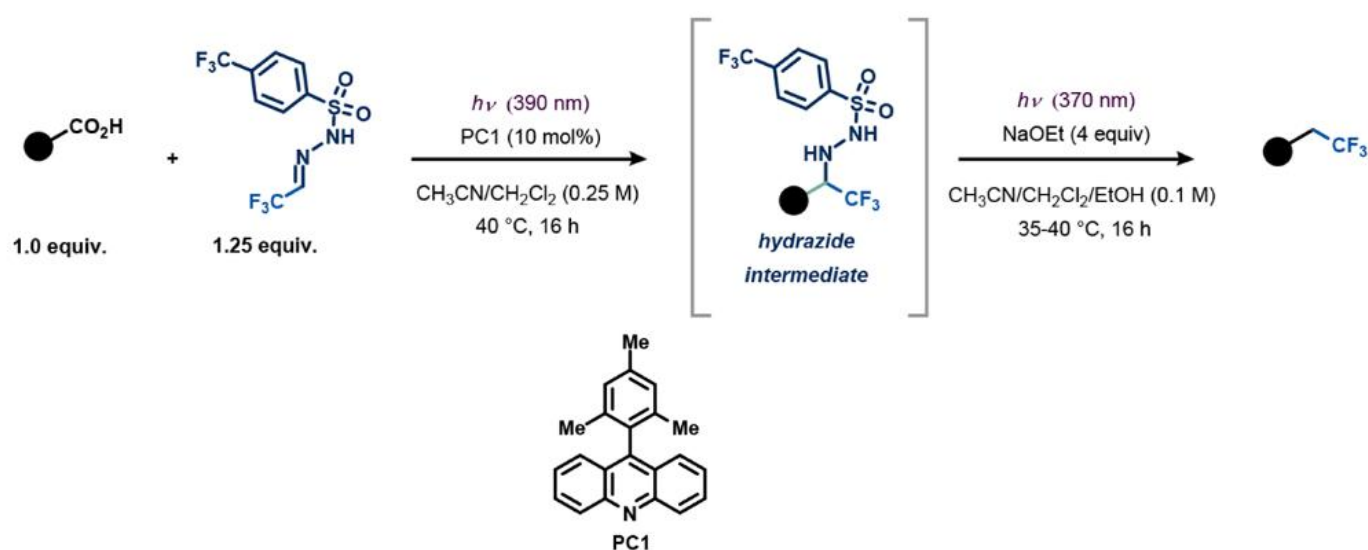
10 examples  
yield up to 97%

## A C1-Homologative Trifluoromethylation: Light-Driven Decarboxylative Trifluoroethylation of Carboxylic Acids

Federico Belnome, Antonio Pulcinella, Stefano Bonciolini, Mattia Lepori, Oleksandr P. Datsenko, Zhen He, Matteo Gasparetto, Pavel K. Mykhailiuk, Bas de Bruin\*, and Timothy Noël

J. Am. Chem. Soc. 2026, 148, 7645–7654

<https://doi.org/10.1021/jacs.5c21423>



29 examples  
1<sup>st</sup> step yield up to 99%  
2<sup>nd</sup> step yield up to 83%

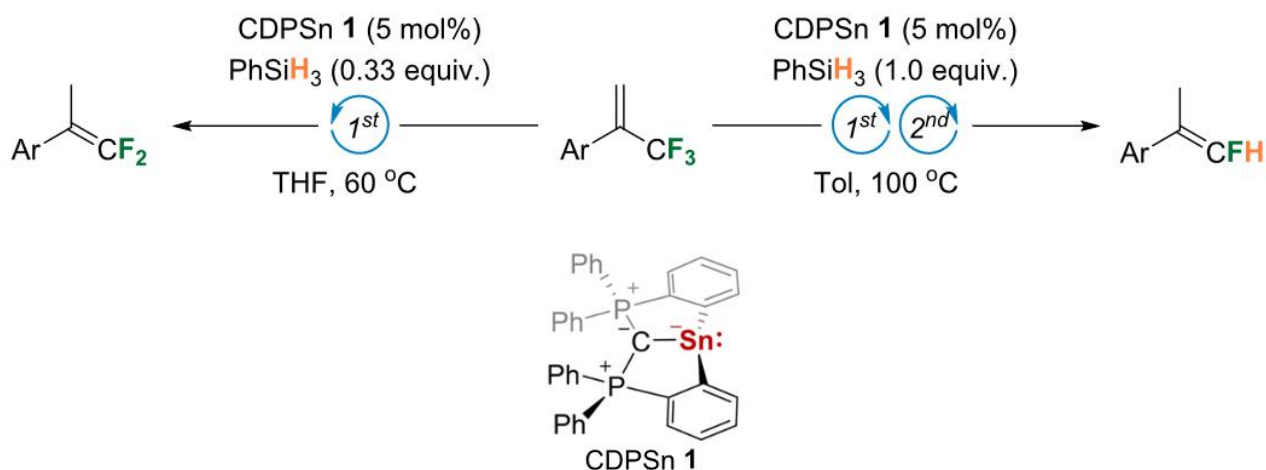
overall yield up to 70%

## Catalytic C(sp<sup>3</sup>)-F Bond Activation at Low-Valent Germaniumium and Tin Redox Platforms

Zhuchunguang Liu, Ru-De Lin, Baihan Ma, Bo Xiao, Xiao Xiao, Xiaoming Zeng, Zhaowen Dong

J. Am. Chem. Soc. 2026, 148, 11176–11186

<https://doi.org/10.1021/jacs.5c22945>



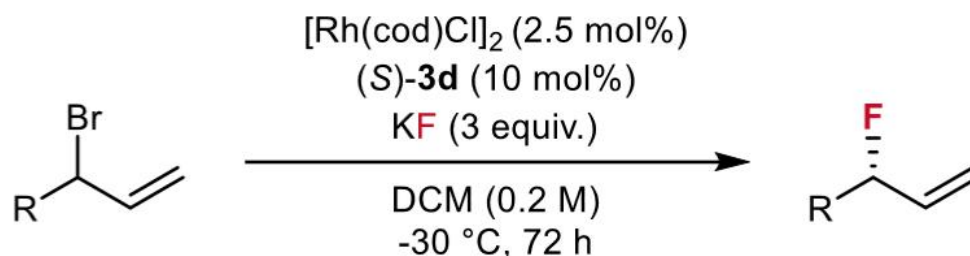
30 examples  
yield up to 99%

## Synergistic Transition Metal and Hydrogen Bonding Phase-Transfer Catalysis Enables Enantioconvergent Allylic Fluorination with KF

Zian Wang, Claire Dooley, Zijun Chen, Gabija Poškaitė, Robert S. Paton, Guy C. Lloyd-Jones\*, and Véronique Gouverneur\*

J. Am. Chem. Soc. 2026, 148, 14213-14222

<https://doi.org/10.1021/jacs.6c00549>



28 examples  
yield up to 85%

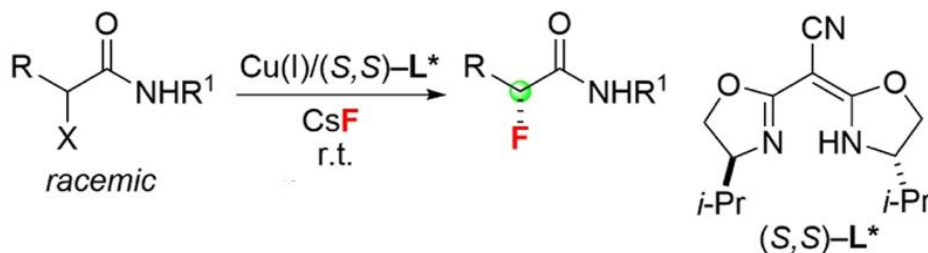


## Copper-Catalyzed Enantioconvergent Nucleophilic Fluorination of Alkyl Electrophiles to Generate $\alpha$ -Fluoroamides

Zhuo-Yan Wang and Gregory C. Fu

J. Am. Chem. Soc. 2026, 148, 14617-14623

<https://doi.org/10.1021/jacs.6c03178>



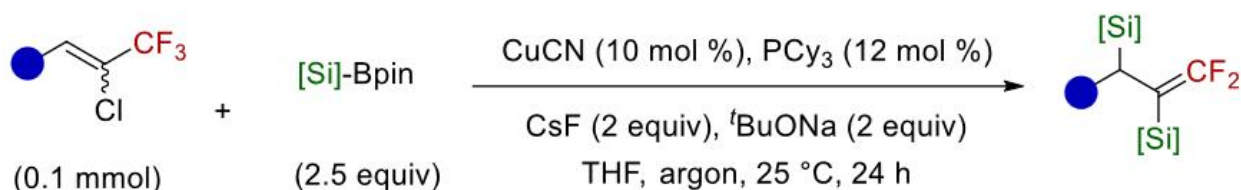
35 examples  
yield up to 88%  
ee up to 99%

## Facile Synthesis of Gem-Difluoroalkene-Based Bis(silanes) via Copper-Catalyzed Disilylative Defluorination of 1-Chloro-1-trifluoromethylalkenes

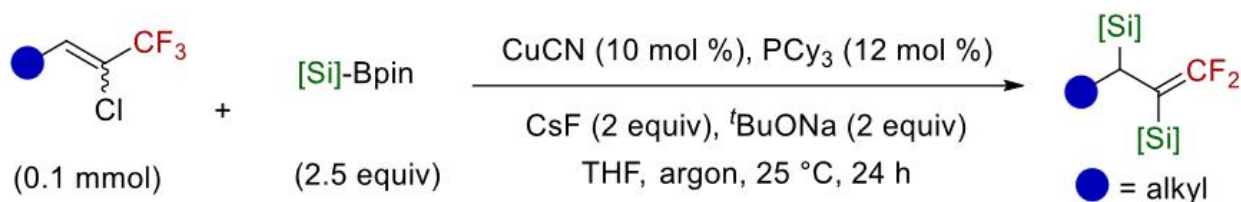
Mingxing Ye, Haotian Yang, Xuzhao Du, Shanglin Chen, Yuhan Wang, Peiyuan Yu, Xingxing Ma\*, and Qiuling Song

J. Am. Chem. Soc. 2026, 148, 16367-16378

<https://doi.org/10.1021/jacs.6c02927>



56 examples  
yield up to 96%



24 examples  
yield up to 88%

● = alkyl

