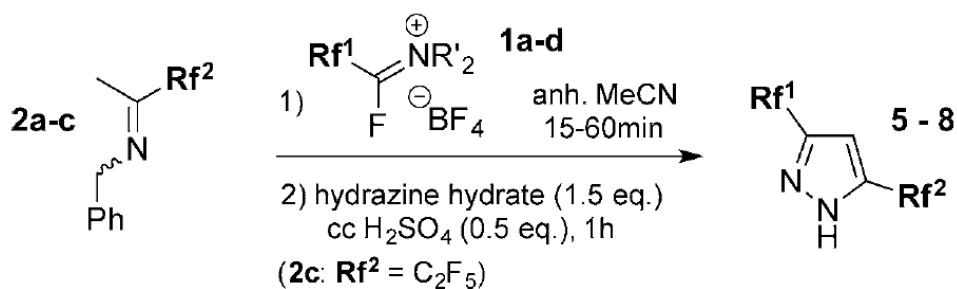Fluoroalkyl Amino Reagents

A Major Advance in the Synthesis of Fluoroalkyl Pyrazoles: Tuneable Regioselectivity and Broad Substitution Patterns

Etienne Schmitt, Armen Panossian, Jean-Pierre Vors, Christian Funke, Norbert Lui, Sergiy Pazenok, and Frédéric R. Leroux
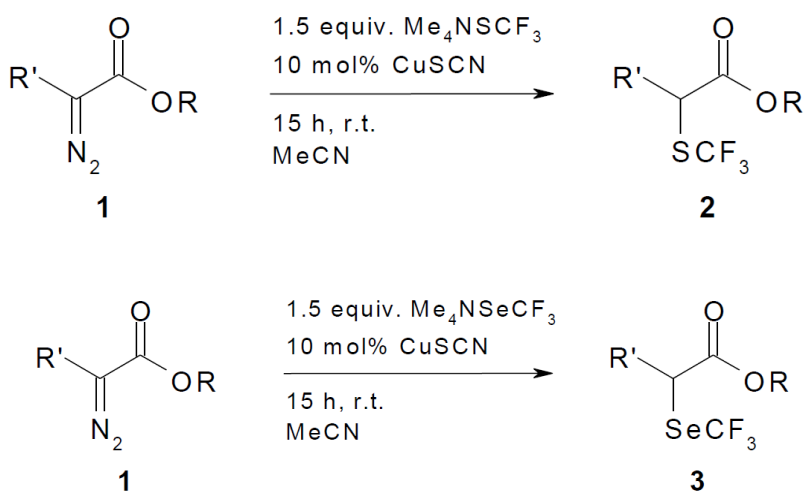
CHEMISTRY A Eur.J., 2016, 22, 11239-11244

Trifluoromethylthiolation and Trifluoromethylselenolation of α-Diazo Esters Catalyzed by Copper

Christian Matheis, Thilo Krause, Valentina Bragoni and Lukas J. Goossen

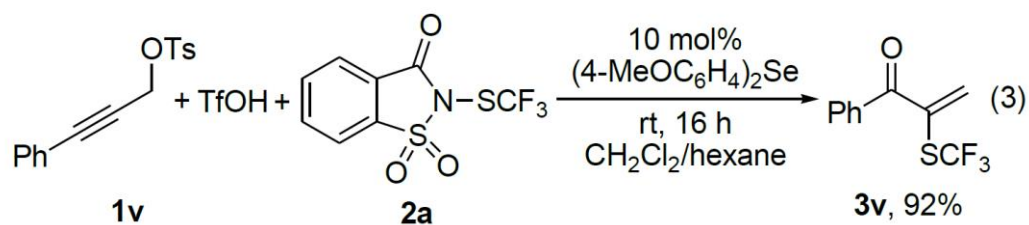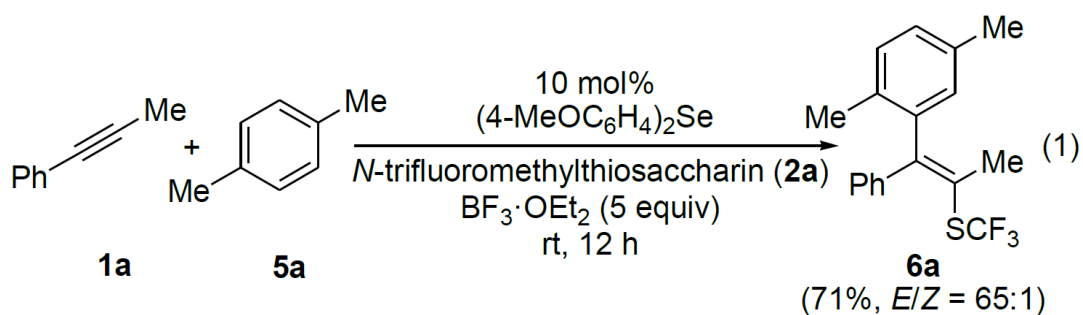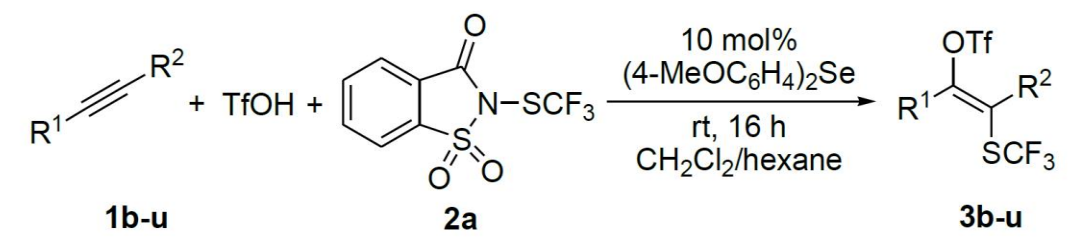## CHEMISTRY A Eur.J., 2016, 22, 12270-12273

Selenide-Catalyzed Stereoselective Construction of Tetrasubstituted Trifluoromethylthiolated Alkenes with Alkynes

Jin-Ji Wu, Jia Xu, and Xiaodan Zhao
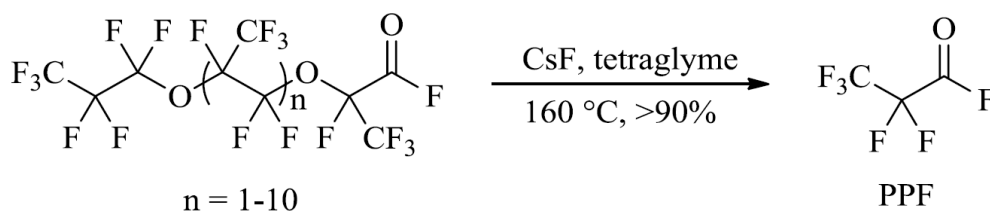
One stone two birds: Degradation of persistent organic pollutants to a valuable industrial chemical production of pentafluoropropionyl fluoride from HFPO oligomers catalyzed by cesium fluoride in tetraglyme

Qian Geng, Xin Xiao, Guang-Rui He, Su-Mei Yao, Guang-Xin Liang

$$\underset{\substack{n=1\text{-}10}}{F_3C\overset{F\ F}{\underset{F\ F}{\diagdown}}O\overset{F\ CF_3}{\underset{F\ F}{\diagdown}}O\overset{O}{\diagup}F} \xrightarrow[\substack{160\ ^{\circ}C,\ >90\%}]{\text{CsF, tetraglyme}} \underset{\text{PPF}}{F_3C\overset{O}{\underset{F\ F}{\diagup}}F}$$

Rhodium-Catalyzed Asymmetric Arylation/Defluorination of 1-(Trifluoromethyl)alkenes Forming Enantioenriched 1,1-Difluoroalkenes

Yinhua Huang and Tamio Hayashi

$$\text{1a-h} + (ArBO)_3 \quad \xrightarrow[\substack{\text{KOH (2.2 equiv)}\\ \text{dioxane/H}_2\text{O (10/1)}\\ 35\ ^{\circ}C,\ 16\ h}]{\substack{[\text{RhCl}((R,R)\text{-Fc-tfb})]_2\\ (5.0\ \text{mol\% Rh})}} \quad \text{3}$$

$$\text{1i–j} + Ar^2ZnCl \quad \xrightarrow[\text{THF, 23 }^{\circ}C,\ 16\ h]{\substack{[\text{RhCl}((R,R)\text{-Fc-tfb})]_2\\ (5\ \text{mol\% Rh})}} \quad \text{3} \quad \left(+\ \text{5}\right)$$

Ar^1 = 4-MeOC$_6$H$_4$ (**1i**); Ar^2 = Ph: **3ic**: 85%, 99% ee 0%
Ar^1 = 4-EtOCOC$_6$H$_4$ (**1j**); Ar^2 = Ph: **3jc**: 82%, 99% ee 0%
Ar^1 = 4-MeOC$_6$H$_4$ (**1i**); Ar^2 = 4-ClC$_6$H$_4$: **3ij**: 87%, 99% ee 0%
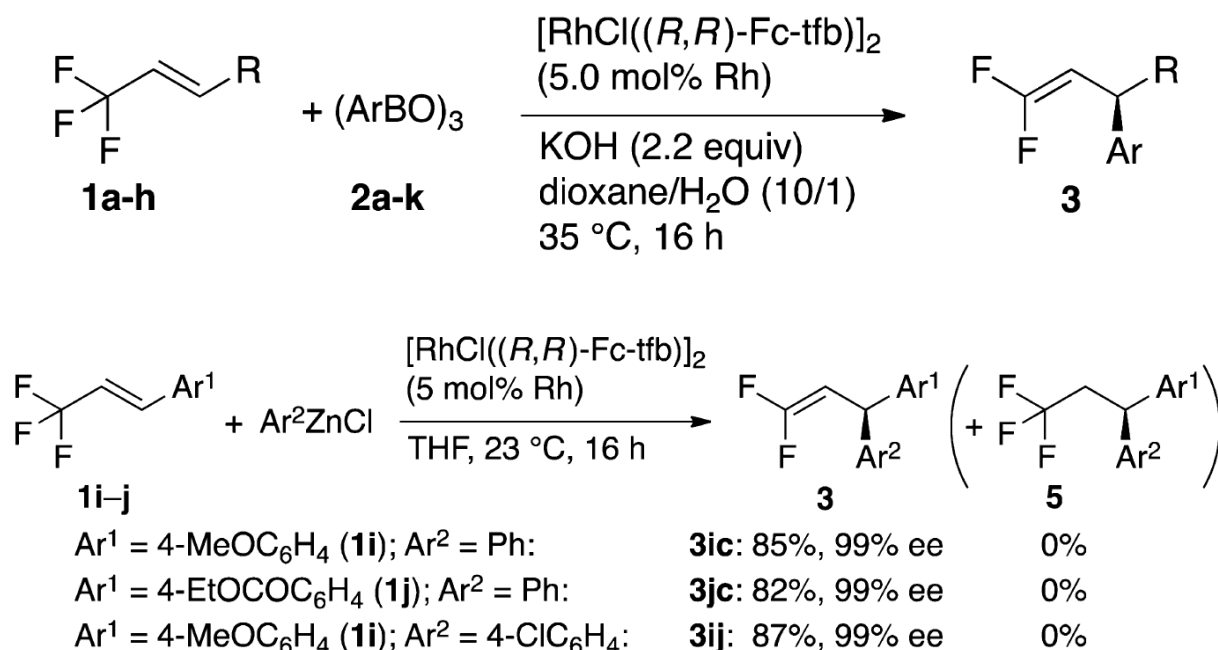
Polyfluoroalkyl sulfines derived from 1,1-dihydropolyfluoroalkanesulfinyl chlorides: Decomposition and [4+2]-cycloaddition reactions

Volodymyr M. Ogurok, Sergiy A. Siry, Eduard B. Rusanov, Yuriy G. Shermolovych

a: $R_F = H(CF_2)_2$;
b: $R_F = H(CF_2)_4$

$$2\ R_FSO_2Cl \xrightarrow[\text{CHCl}_3]{\text{NEt}_3} R_FCH=CHR_F$$
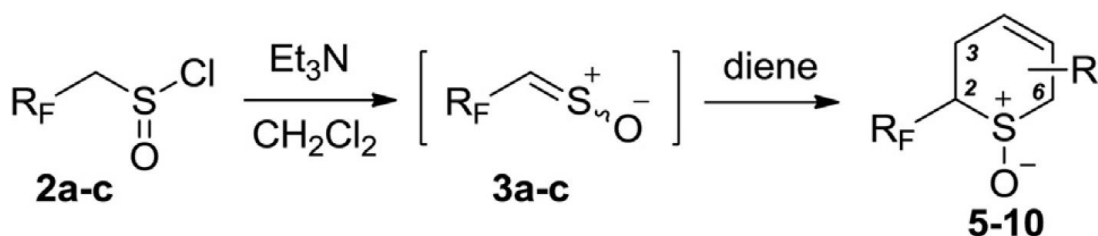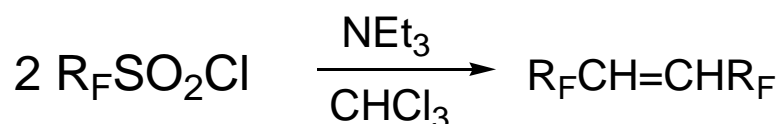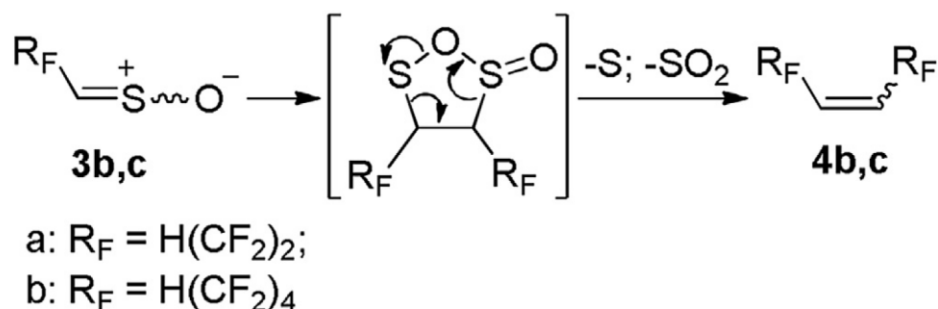
Radical reactivity of a,b,b-trifluoroacrylic ester: Facile approach to g-silyloxy-a,b,b-trifluorobutyric acid derivatives involving regioselective nucleophilic radical addition reaction

Ken Tamamoto, Shigeyuki Yamada, Masao Higashi, Tsutomu Konno*, Takashi Ishihar
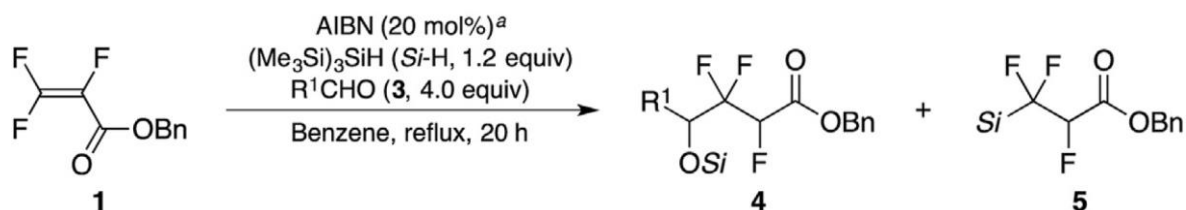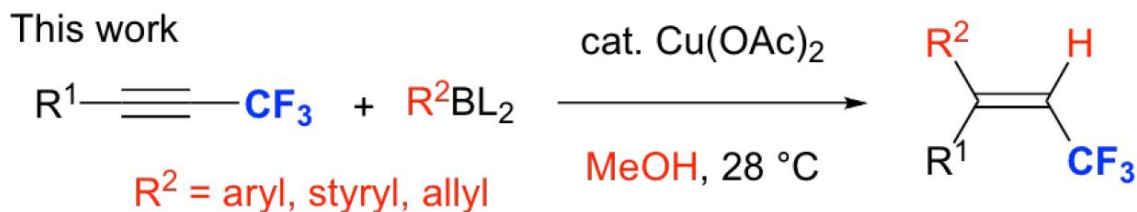
Green Chemistry

Selective synthesis of trisubstituted (trifluoromethyl)alkenes *via* ligand-free Cu-catalyzed *syn* hydroarylation, hydroalkenylation and hydroallylation of (trifluoromethyl)alkynes

Y.Yamamoto, E.Ohkubo, and M. Shibuya
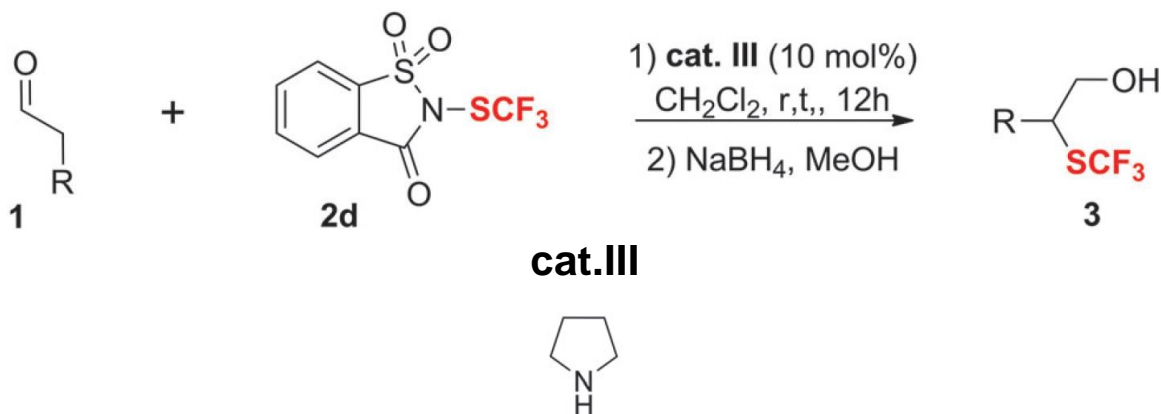
Green.Chem., 2016, 18, 4628-4632

This work

$$R^1 \!\!-\!\!\!\equiv\!\!\!-\!\! CF_3 \ + \ R^2BL_2 \xrightarrow[\text{MeOH, 28 °C}]{\text{cat. Cu(OAc)}_2}$$

$R^2 =$ aryl, styryl, allyl

Product:

$$\begin{array}{c} R^2 \quad\quad H \\ \diagdown\!\!\diagup \\ R^1 \quad\quad CF_3 \end{array}$$

New Journal of Chemistry

Efficient catalytic α-trifluoromethylthiolation of Aldehydes

Liqiang Hu, Minghu Wu, Huixin Wan, Jian Wang, Gangqiang Wang, Haibin Guoa and Shaofa Sun

New J. Chem., 2016, 40, 6550-6553

Scheme:

1 (aldehyde, R) + 2d (N–SCF$_3$ saccharin derivative)
$\xrightarrow[\text{2) NaBH}_4\text{, MeOH}]{\text{1) cat. III (10 mol\%), CH}_2\text{Cl}_2\text{, r,t,, 12h}}$
3 (R–CH(SCF$_3$)–CH$_2$OH)

cat.III

pyrrolidine

Difunctionalization of Styrenes with Perfluoroalkyl and tert-Butylperoxy Radicals: Room Temperature Synthesis of (1-(tert-Butylperoxy)-2-perfluoroalkyl)-ethylbenzene

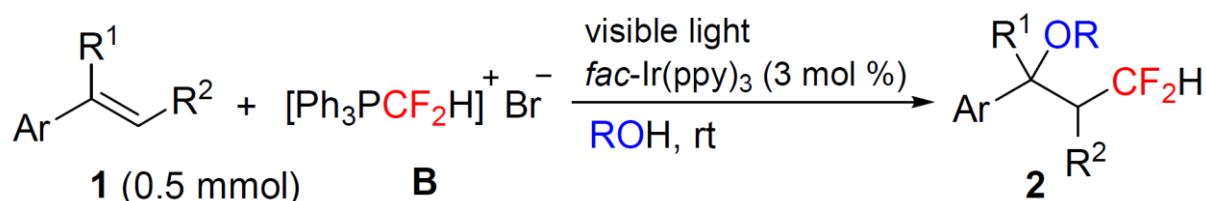Erbo Shi, Jiajun Liu, Chunmei Liu, Ying Shao, Hanghang Wang, Yuanzheng Lv, Meishan Ji, Xiaoguang Bao, and Xiaobing Wan
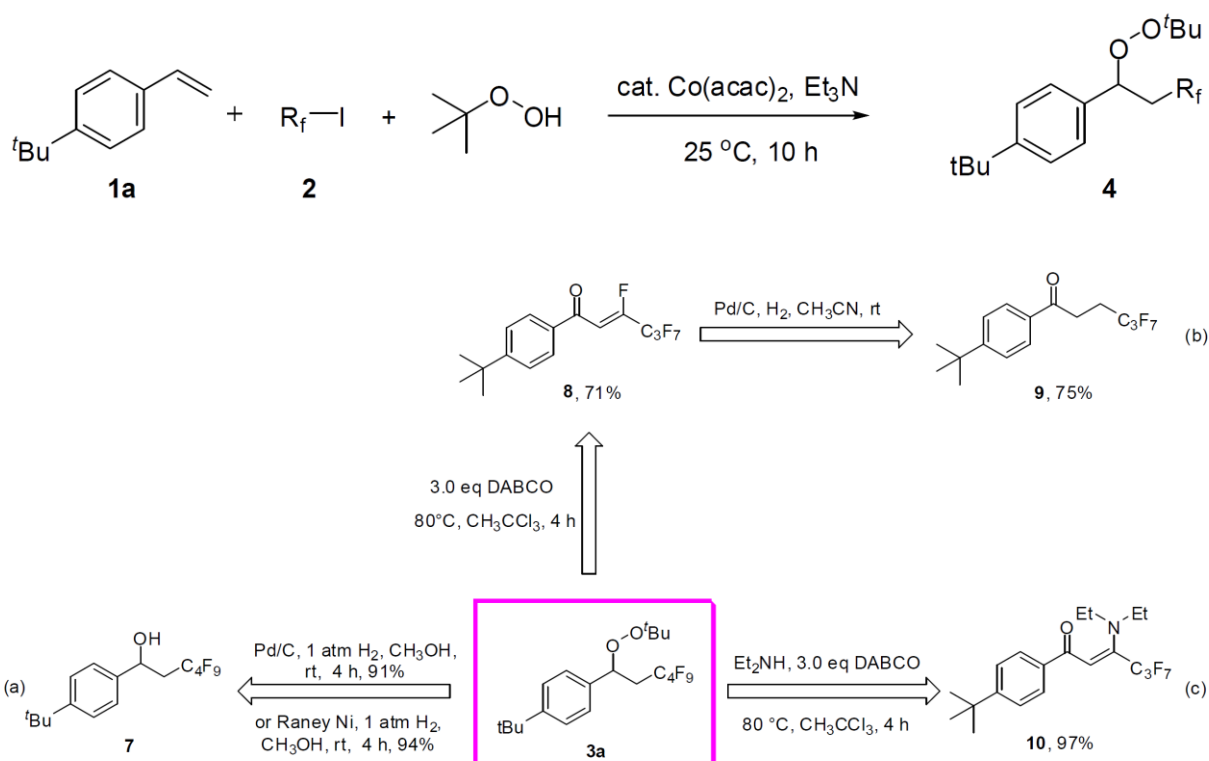
Visible Light-Induced Oxydifluoromethylation of Styrenes with Difluoromethyltriphenylphosphonium Bromide
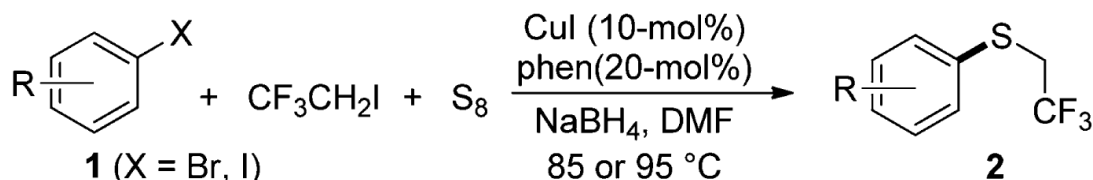
Yang Ran, Qing-Yu Lin, Xiu-Hua Xu, and Feng-Ling Qing

Copper-Catalyzed 2,2,2-Trifluoroethylthiolation of Aryl Halides

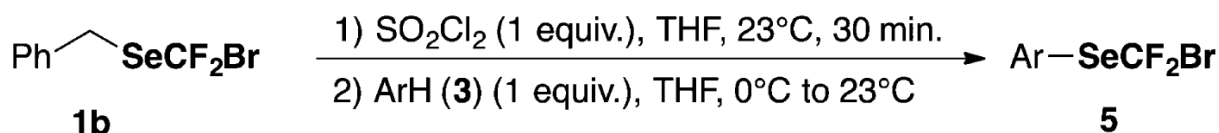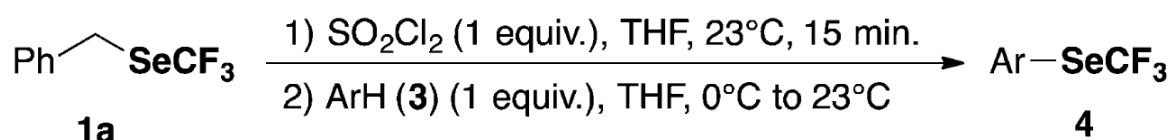Shouxiong Chen, Mengjia Zhang, Xuebin Liao, and Zhiqiang Weng

J. Org. Chem., 2016, 81, 7993-8000

Benzyltrifluoromethyl (or Fluoroalkyl) Selenide: Reagent for Electrophilic Trifluoromethyl (or Fluoroalkyl) Selenolation

Quentin Glenadel, Ermal Ismalaj, and Thierry Billard

J. Org. Chem., 2016, 81, 8268-8275

Asymmetric Allylation/RCM-Mediated Synthesis of Fluorinated Benzo-Fused Bicyclic Homoallylic Amines As Dihydronaphthalene Derivatives

Daniel M. Sedgwick, Pablo Barrio, Antonio Simón, Raquel Román, and Santos Fustero

J. Org. Chem., 2016, 81, 8876-8887