Synthesis of Deuterodifluoromethylated Alcohols and gem-Difluoroalkenes in Continuous Flow

Significance: Fu and Jamison report the utilization of chlorodifluoromethane gas in a continuous-flow setup for the preparation of α-deuterodifluoromethylated benzyl alcohols and gem-difluoroalkenes from a range of aldehydes in good yields.

Comment: Interestingly, the authors performed NMR studies that led them to propose a plausible reaction mechanism involving an oxaphosphetane intermediate. Furthermore, the authors demonstrated the utility of this method by performing various derivatizations of the α-deuterodifluoromethylated benzyl alcohol, affording the corresponding, bromide, tosylate or ketone.