

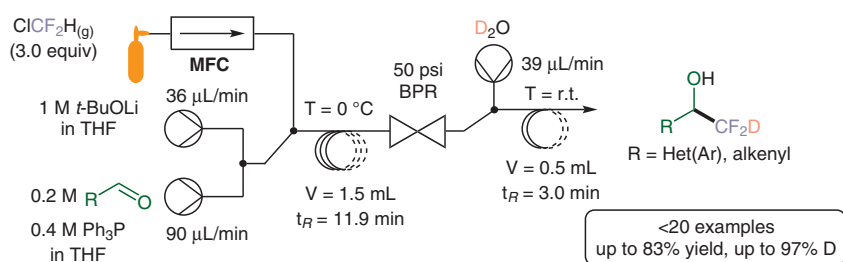
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Deuteriodifluoromethylation and *gem*-Difluoroalkenylation of Aldehydes Using ClCF_2H in Continuous Flow

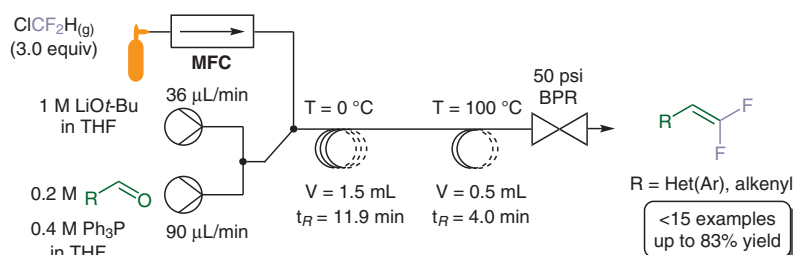
Angew. Chem. Int. Ed. 2020, DOI: 10.1002/anie.202004260.

Synthesis of Deuterodifluoromethylated Alcohols and *gem*-Difluoroalkenes in Continuous Flow

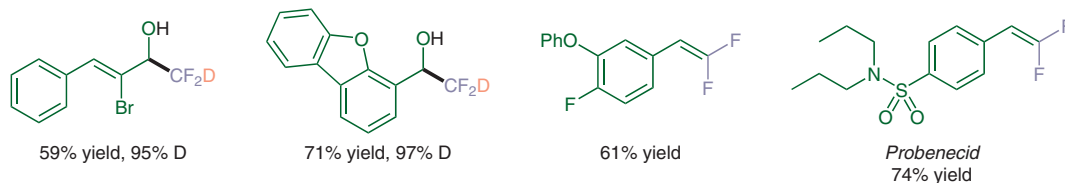
Preparation of deuterodifluoromethylated alcohols in continuous flow:



Preparation of *gem*-difluoroalkenes in continuous flow:



Selected examples:



Significance: Fu and Jamison report the utilization of chlorodifluoromethane gas in a continuous-flow setup for the preparation of α -deuteriodifluoromethylated 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 -deuteriodifluoromethylated benzyl alcohol, affording the corresponding, bromide, tosylate or ketone.