W. C. FU, T. F. JAMISON* (MASSACHUSETTS INSTITUTE OF TECHNOLOGY, CAMBRIDGE, USA)

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

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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.

SYNFACTS Contributors: Paul Knochel, Alexander Kremsmair

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