J. TAO, R. TRAN, G. K. MURPHY* (UNIVERSITY OF WATERLOO, CANADA)
Dihaloiodoarenes: α,α-Dihalogenation of Phenylacetate Derivatives
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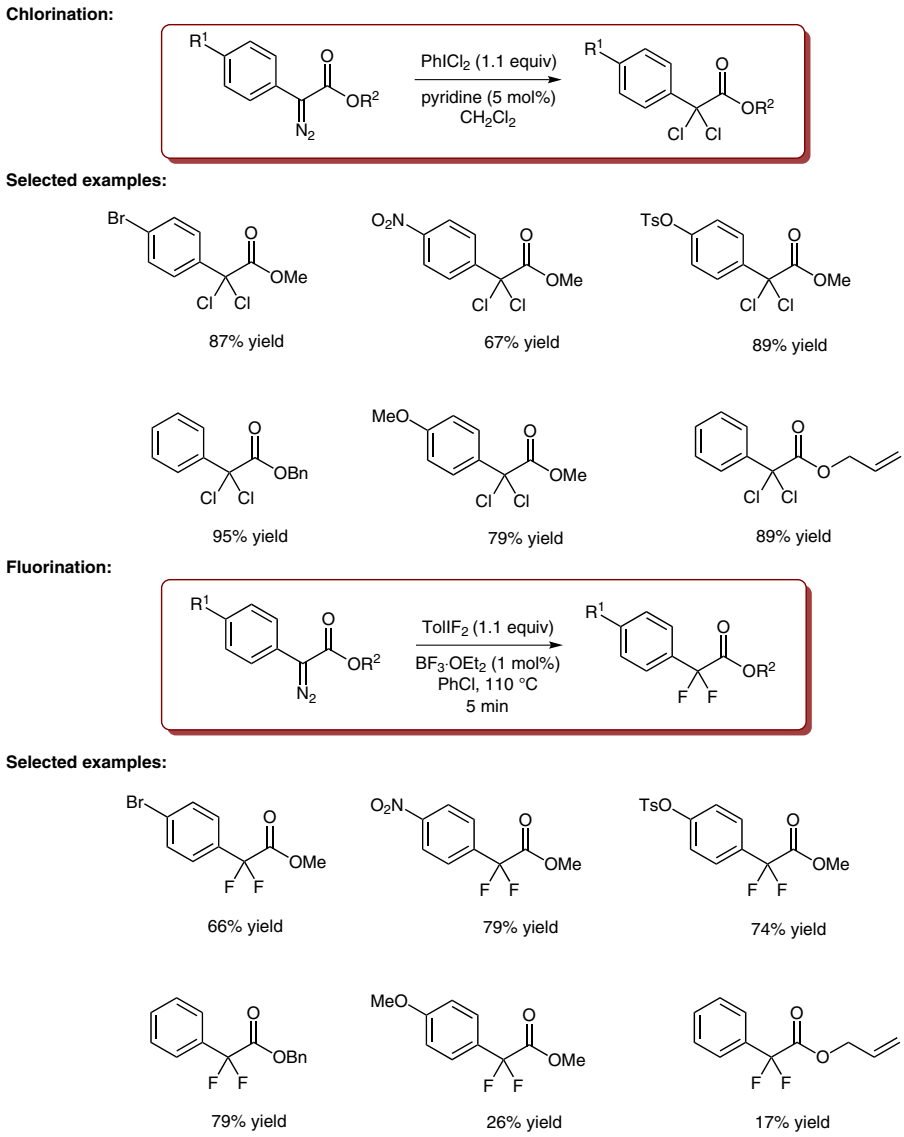
Hypervalent Iodine for α,α-Dihalogenation



Significance: Functionalization at the α-position of carbonyls represents one of the most versatile and useful types of transformations in organic chemistry. In this paper, the authors describe the use of a hypervalent iodine species to doubly halogenate the α-position of esters with either chlorine or fluorine.

Comment: While the chlorination procedure was shown to be broadly functional group tolerant, the need for $BF_3{\cdot}OEt_2$ in the case of fluorination limits the possible functionality in the starting material. The authors report that substrates with labile moieties such as OMe or NHAc decompose upon heating with $BF_3{\cdot}OEt_2$.

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Category

Synthesis of Materials and Unnatural Products

Key words

α-halogenation

hypervalent iodine