Hypervalent Iodine for $\alpha,\alpha$-Dihalogenation

Significance: Functionalization at the $\alpha$-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 $\alpha$-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$_3$·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$_3$·OEt$_2$. 

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