

## HYDRODIFLUOROMETHYLATION OF ALKENES WITH DIFLUOROACETIC ACID

Claudio F. Meyer<sup>a,b</sup>, Sandrine M. Hell<sup>a</sup>, Antonio Misale<sup>b</sup>, Andrés A. Trabanco<sup>b</sup>  
and Véronique Gouverneur<sup>a</sup>

<sup>a</sup>University of Oxford, Chemistry Research Laboratory, 12 Mansfield Road, Oxford, OX1 3TA, United Kingdom

<sup>b</sup>Discovery Chemistry, Janssen Research and Development, Toledo, E-45007, Spain

A facile method for the regioselective hydrodifluoromethylation of alkenes with difluoroacetic acid and phenyliodine(III) diacetate under visible light activation is presented. This metal-free approach stands out as it uses inexpensive reagents and does not require a photocatalyst. The mild conditions of the established protocol tolerate a broad variety of functional groups, which favors its use in late-stage functionalization of bioactive molecules. Furthermore, the utility of this methodology has been demonstrated on the multigram-synthesis of pharmaceutically relevant building blocks, where it has been shown to be more efficient, safer and cheaper compared to the use of traditional deoxyfluorination protocols.

