

ANR Doctoral Research Assistantship

“Development of new chiral hypervalent reagents applicable to the concise total synthesis of protoilludane-type natural products”

Description: a doctoral position in organic synthesis, funded by the Agence Nationale de la Recherche, is opened for a 36-month stay in the laboratory of Prof. S. Quideau at the University of Bordeaux (ISM, CNRS-UMR 5255). The project, which should start in October 2019, will concern the chemistry of hypervalent heteroatomic reagent-mediated asymmetric transformations. It will be specifically aimed at developing new (catalytic) methodologies for the stereocontrolled formation of allenes, which will then be used within the framework of the total synthesis of complex natural products, such as the protoilludanes (+)-melleolide or (+)-armillasin.

Key words: asymmetric synthesis, hypervalent reagents, “metal-free” reactions, total synthesis.

Application: candidates must hold a master degree in organic chemistry, should have a strong background in asymmetric synthesis, and should ideally have an experience in multi-step reaction sequences (an experience in natural product synthesis will be appreciated). Excellent written and oral communication skills are mandatory.

A detailed curriculum vitae and 2 letters of recommendation should be sent before **September 1st, 2019** to :

Dr. Philippe A. Peixoto

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05 40 00 63 94

Bibliography:

- [1] For a recent exemple on the use of chiral hypervalent iodine reagents, see: Antien, K.; Pouységu, L.; Deffieux, D.; Massip, S.; Peixoto, P. A.; Quideau, S. Synthesis of [7]Helicene Enantiomers and Exploratory Study of their Conversion into Helically Chiral Iodoarenes and Iodanes. *Chem. Eur. J.* **2019**, *25*, 2852.
- [2] For a review on protoilludanes total syntheses, see: P. Siengalewicz, J. Mulzer, U. Rinner, *Eur. J. Org. Chem.* **2011**, *35*, 704.