



PhD position – ANR *funding*  
Organic Synthesis Team - IC2MP UMR 7285-Université de Poitiers  
**« Use of superacid conditions to highlight and exploit  
unprecedented transient intermediates in glycochemistry »**

One of the main challenges in glycosciences remains the stereoselective assembly of carbohydrates by a glycosylation reaction. Its highly empirically interpreted mechanism, illustrated by the involvement of generally accepted but to date theoretical glycosyl cations, has a detrimental impact on the practice and pace of research and development in this field. Using superacid activation, we have been able to demonstrate the reality of these ions and to spectroscopically characterize them for the first time using NMR and computation.<sup>1</sup> Our aim is now to exploit this approach further and to study the structure and reactivity of more complex and modern glycosyl cations that are derived from current glycosyl donors, via their generation and nucleophilic trapping. This project, conducted in the context of the ANR program SWEETCAT, will improve our knowledge of the glycosylation mechanism and should allow us to link the glycosyl cation structure with the stereochemical outcome of its nucleophilic trapping.

For this project, we are seeking highly motivated candidates with a strong background in organic chemistry. Candidate applications should include a curriculum vitae and a cover letter explaining their interest in and suitability for this position. Candidates should also provide names of at least two referees for whom they have carried out practical organic chemistry. The deadline for this call is 1<sup>st</sup> November 2016.

Applications should be sent to:

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**and** yves.bleriot@univ-poitiers.fr

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<sup>1</sup> "Catching elusive glycosyl cations in a condensed phase with HF/SbF<sub>5</sub>" A.Martin, A. Arda, J. Désiré, A. Martin-Mingot, N. Probst, P. Sinaÿ, J. Jimenez-Barbero, S. Thibaudeau, Y. Blériot, *Nat. Chem.* **2016**, 8, 186-191.