

**S**éminaire de **C**himie **A**utour des **N**anoscience

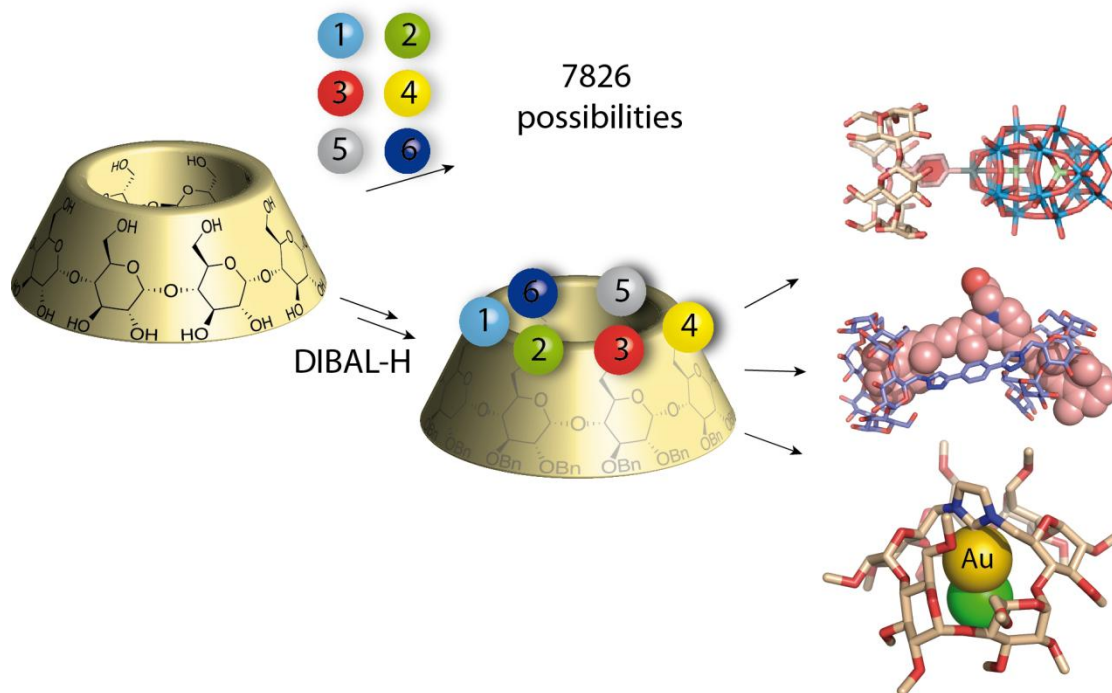
**MATTHIEU SOLLOGOUB**

Sorbonne Universités, UPMC Univ Paris 06, IUF, Institut Parisien de Chimie Moléculaire (UMR CNRS 8232), Paris

Donnera une conférence sur le thème :

**UP TO 6 DIFFERENT FUNCTIONS ON CYCLODEXTRINS:  
SELECTIVE SYNTHESIS AND APPLICATIONS IN  
MATERIALS AND CATALYSIS**

Site-selective functionalization of complex molecules, which consists in targeting only one position out of many similar ones, is a particularly demanding challenge. Concave molecules such as cyclodextrins desperately need efficient and regioselective poly hetero-functionalization methods to expand their field of applications, but this task is highly difficult because of their high symmetry. As an illustration there are 7826 ways to arrange six functions on the primary rim of  $\alpha$ -cyclodextrin. Based on the discovery of a regioselective debenzoylation reaction of sugars, and the understanding of its mechanism,<sup>1</sup> we delineated several strategies to access poly-hetero-functionalized cyclodextrins<sup>2</sup> and met the challenge of hexadifferentiation.<sup>3</sup> The access to such complex structures allows applications in a wide range of areas including functional materials,<sup>4</sup> catalysis<sup>5</sup> or medicine<sup>6</sup> that will be illustrated.



**LE VENDREDI 20 Février À 11H00**  
**Bat. Lavoisier, salle 774, 15 rue Jean de Baïf 75013 Paris**