**Name of the Host Laboratory**  | Laboratory of Organic Synthesis (LSO)  
**Website of the Host Laboratory**  | http://lso.polytechnique.fr/  
**Research Group**  | Six Team  
**Internship Supervisor**  | Dr Yvan Six  
**Internship Subject**  | Titanium-mediated expedient synthesis of complex nitrogen heterocycles  
**Student's level**  |  
- Advanced Undergraduate Students (3rd or 4th year)  
- Master's students (1st or 2nd year)  
- PhD students  
**Proposed Duration**  |  
- 3 months  
- 4 months  
- 5 months  
- 6 months  
**Prerequisites**  | High motivation. Strong background and good theoretical knowledge in Organic Chemistry. Good communication skills.  
**Internship description (max. 15 lines)**  | In this internship, the student will work with one of our PhD students, whose research goal is the development of an ambitious extension of our earlier work on thioamides. From well-chosen substrates, we will try to generate cyclised metallated iminium intermediates. This process can lead to the production of highly functionalised heterocyclic compounds, with the formation of two new carbon-carbon bonds, in a single synthetic step. Diastereoselectivity and enantioselectivity aspects will be investigated, and all the new products will be included in the national chemical library for future biological activity tests.  
**Keywords:** Heterocycles, Titanium, Organometallic Chemistry, Alkynes.

The boxes marked with cross implies eligible