



Secteur des Sciences
et Technologies

Invitation à la soutenance publique de thèse de
Monsieur Audric NAGY
Master en Sciences chimiques

Pour l'obtention du grade de Docteur en sciences

« Copper-catalysed transformations of acylsilanes »

qui se déroulera
le mardi 18 décembre 2018 à 16h
Auditoire LAVO 51
Place Louis Pasteur, 1
1348 Louvain-la-Neuve

Membres du jury :

Prof. Olivier Riant (UCLouvain), supervisor
Prof. Tom Leyssens (UCLouvain), supervisor
Prof. Yann Garcia (UCLouvain), chairperson
Prof. Raphaël Robiette (UCLouvain), secretary
Prof. Syuzanna Harutyunyan (University of Groningen, Netherlands)
Prof. Johan Winne (Ghent University, Belgium)



 **UCLouvain**

Acylsilanes are an intriguing class of organic compounds that display unique reactivity modes. For several years, innovative methodologies have been developed using their key features for the synthesis of valuable organic molecules. Yet, the copper chemistry of acylsilanes is underdeveloped in the literature. Furthermore, when this PhD work was initiated, no copper-catalysed reaction of acylsilane had been reported.

Our research groups being active in the fields of copper chemistry and silicon chemistry, it was decided to take a look in the copper chemistry of acylsilanes with the goal of discovering copper-catalysed transformations.

The first project was devoted to the development of a copper-catalysed domino reaction with acylsilanes as electrophilic partners. These investigations led us to work on various subprojects related to copper-catalysis, acylsilanes and silicon chemistry.

The second project led us to the discovery of an intriguing copper-catalysed 1,2-selective hydroborylation reaction of acylsilanes. The resulting α -hydroxysilanes are obtained with great typical yield, enantioselectivity and regioselectivity. These optically active products were further derivatised with excellent chiral transfer.

Finally, every section of this thesis is concluded with a summary of the developed reactions, their advantages and limitations. Additionally, suggestions of new related research topics are given.