

## INTERNSHIP PROGRAM FOR INTERNATIONAL STUDENTS

### INTERNSHIP SUBJECT FORM

Name of the Host Laboratory	Laboratoire de Chimie Moléculaire
Website of the Host Laboratory	<a href="https://portail.polytechnique.edu/lcm/fr">https://portail.polytechnique.edu/lcm/fr</a>
Research Group	
Internship Supervisor	Dr. Audrey Auffrant
Internship Subject	
Student's level	<input checked="" type="checkbox"/> Advanced Undergraduate Students (3 <sup>rd</sup> or 4 <sup>th</sup> year) <input checked="" type="checkbox"/> Master's students (1 <sup>st</sup> or 2 <sup>nd</sup> year) <input type="checkbox"/> PhD students
Proposed Duration	<input checked="" type="checkbox"/> 3 months <input type="checkbox"/> 4 months <input type="checkbox"/> 5 months <input type="checkbox"/> 6 months
Prerequisites	Knowledge and/or experience in synthetic chemistry
Internship description (max. 15 lines)	<p>With the aim to develop efficient and selective catalysts which corresponds to the societal demand for more sustainable chemistry, we are specialized in the synthesis of original phosphorus based ligand (see examples hereafter) and the study of their coordination to various metals. Our goal is the development of new catalytic systems incorporating preferentially earth-abundant metals such as iron, copper, manganese and cobalt. The families of ligands we are working with are called non-innocent since they can directly participate to the transformation, either via the modification of its redox state or via the presence of an acid/base relay.</p> <p>In the research projects we developed, the student should learn how to handle sensitive compounds (schlenk line techniques), to characterize organometallic compounds (using NMR, UV spectroscopy and X-ray analysis) and to perform catalytic tests.</p>

