

5CI408 Supramolecular Chemistry									
Keywords: self-assembly, dynamic combinatorial chemistry, functional molecular structures, dendrimers, metallosupramolecular chemistry, molecular machines, biological supramolecular complexes, chirality.									
Responsable, Guillaume Vives, Associate Prof, IPCM, Sorbonne Université									
<i>ECTS</i>	<i>Cours (h)</i>	<i>TD (h)</i>	<i>TP (h)</i>	<i>Tutorat (h)</i>	<i>Ecrit (%)</i>	<i>CC (%)</i>	<i>TP (%)</i>	<i>Oral (%)</i>	<i>Eval. répartie</i>
6	25	21		14	50	30		20	oui
<p><i>Description</i></p> <p>This course aims to demonstrate the concepts and applications of chemistry based on molecular recognition. It seeks to showcase the possibilities offered by the dynamics of reversible assemblies and to outline the pathways towards complex molecular and supramolecular architectures. The properties of transition metals play a key role in the examples discussed, alongside organic and bioorganic assemblies. Teaching will take the form of lectures and tutorials, with opening conferences on nano-object assembly and chirality. The course is aimed at a diverse audience interested in mastering the nanoscale world. It can complement a training program focused on molecular synthesis or the properties of molecular materials. This course is complementary to 5MUCi401 and 5MUCi402.</p>									
<p><i>Learning Objectives</i></p> <p>On completion of the course, students will be able to explain the concepts of molecular recognition, self-assembly, dynamic combinatorial chemistry and supramolecular chirality, and recognize their applications in recent literature. He/she will also be able to take a critical look at this literature and devise improvements or extensions. Beyond that, we aim to stimulate students' creativity and teach them to transpose the concepts they have learned to new fields of application in organic, inorganic or biological chemistry.</p>									
<p><i>Prerequisite</i></p> <p>The student should be able to discuss and apply basic concepts in molecular chemistry and coordination.</p>									
<i>Tongue</i>	<i>Course, TD</i>						<i>Documents</i>	<i>Bibliography</i>	
English	English						English	English	