UE Polymers for flexible electronics

Level
Baccalaureate +5

ECTS
3 credits

Component
UFR Chimie-Biologie

Semester
Automne

- **Teaching language(s):** English
- **Open to exchange students:** Yes
- **Code d'export Apogée:** YAPO9U00

Presentation

Description

This course addresses the elaboration and characterization methods of main polymer materials (polymer electrolytes, electrode binder) for alternative energies: i.e. fuel cells, batteries, super-capacitor, flexible solar cells, etc.
The course will also provide a background on critical issues on the main conjugated and conducting polymers used as the active materials (polymers, semiconductors and organic conductors) for the electronics applications. The different methods of chemical, electrochemical synthesis and recent synthetic methodologies will be reviewed. The underlying scientific principles that guide the study of structure-property relationships and the supramolecularity effects on the modulation of electronic properties will be discussed. Applications of these polymers in their undoped (organic solar cell, antistatic layers…) and doped state (corrosion, actuators, electrochromic, sensors ...) will be described.

Course parts

UE Polymers for flexible electronics - CM	Lectures (CM)	20h

Period : Semester 9

Useful info

Campus

Grenoble - University campus