



UNIVERSITÀ DI PAVIA

Anno Accademico 2020/2021

CHEMISTRY AND TECHNOLOGIES OF POLYMERS

Enrollment year	2020/2021
Academic year	2020/2021
Regulations	DM270
Academic discipline	CHIM/06 (ORGANIC CHEMISTRY)
Department	DEPARTMENT OF CHEMISTRY
Course	CHEMISTRY
Curriculum	PERCORSO COMUNE
Year of study	1°
Period	1st semester (12/10/2020 - 22/01/2021)
ECTS	6
Lesson hours	48 lesson hours
Language	Italian
Activity type	ORAL TEST
Teacher	PASINI DARIO (titolare) - 6 ECTS
Prerequisites	None at the MSc level
Learning outcomes	<p>The course aims at introducing the student to the chemistry of macromolecules, and to treat advanced aspects, both synthetic and applicative, of functional macromolecules as nanostructured materials for applications in the energy, biomedical and environmental fields.</p>
Course contents	<p>The course will initially focus on the classification and presentation of the different classes of macromolecules, and on the differences amongst the main polymerization methods (polycondensation, polyaddition). The main methods of analysis and characterization of polymers will be illustrated. The main techniques for controlled polymerization will be introduced, in particular with respect to radical polymerization. Some modern techniques for the preparation of bioconjugates for applications in the biomedical field will be illustrated.</p>

In addition, advanced approaches for the preparation of conjugated polymers for energy applications will be analyzed.

The programme therefore deals with topics related to two of the 2030 agenda on sustainability:

GOAL 7: AFFORDABLE AND CLEAN ENERGY

GOAL 12: RESPONSIBLE CONSUMPTION AND PRODUCTION

Teaching methods

Lectures

Reccomended or required readings

George Odian, "Principles of Polymerization", Wiley 2004

Assessment methods

Oral exam

Further information

Sustainable development goals - Agenda 2030

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