

FRONTIER TOPICS IN CHEMISTRY 2016-2017

Master Degree:	Chemistry and Biothecnology	760M
Course title:	Frontier Topics in Chemistry	5118
Year/Semester:	1 / 1	ECTS Credits: 5,00

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CONTENTS

- UNIT1. Green Chemistry
- UNIT2. Catalysis in Chemistry and Biochemistry
- UNIT3. From the lab to the cellule
- UNIT4. Photobiology and Photoactive Compounds
- UNIT5. Electronic Communication in organic and organometallic systems
- UNIT6. Supramolecular Systems
- Seminars in Advanced Chemistry

REFERENCES

Title
Introduction to Green Chemistry, 2nd Edition, Albert Matlack, CRC Press, 2010
Green Chemistry: An Introductory Text, 2n Ed. Mike Lancaster, Royal Society of Chemistry, 2013
Homogeneous catalysis: the applications and chemistry of catalysis by soluble transition metal complexes, Parshall, George W. / Ed: George W. Parshall, Steven D. Ittel . 2nd Ed New York [etc] : John Wiley & Sons, cop. 1992
Principles and Practice of Heterogeneous Catalysis. Thomas, J. M.. / Ed. J. M. Thomas, W. J. Thomas. 1st ed., 3rd repr. Weinheim [etc.] : VCH, 2005.

Asymmetric Organocatalysis in Natural Product Syntheses, M. Waser, Springer, Vienna, 2012

Bioorthogonal Reactions for Labeling Glycoconjugates, in Click Chemistry in Glycoscience: New Developments and Strategies. Friscourt, F., Boons, G.-J. (Ed.: Z. J. Witczak, R. Bielski), John Wiley & Sons, Inc., Hoboken, NJ, USA, 2013.

Asymmetric Organic Synthesis with Enzymes (Ed.: V. Gotor, I. Alfonso, E. García-Urdiales), Wiley VCH, Weinheim

Photochemistry and photophysics : concepts, research, applications, Vincenzo Balzani, Paola Ceroni, and Alberto Juris, Weinheim (Germany) : Wiley-VCH, [2014]

Principles and applications of photochemistry, Brian Wardle, Chichester, West Sussex, U.K. : Wiley, 2009

Inorganic Electrochemistry. Theory, Practice and applications, P. Zanello, Royal Society of Chemistry 2003

Supramolecular Chemistry, P. D. Beer, P. A. Gale, D. K. Smith. Oxford: Oxford University Press. Serie Oxford Chemistry Primers, 1999.

Supramolecular Chemistry, J. M. Steed, J. L. Atwood. 2ª edición. Chichester: Wiley, 2009.

EVALUATION SYSTEM

Written Exams (30%, recoverable)

Observation Techniques (10%, unrecoverable)

Projects and Homework (30%, recoverable)

Oral Tests (30%, unrecoverable)