- Course title: **Inorganic Chemistry II**.
- Course code: 5279
- Type of course: compulsory
- Level of course: fundamental
- Year of study: 2
- Semester: 2
- Number of credits allocated: 6
- Names of lecturers: Mª Remedios Pedrosa and Javier García
- Objective of the course: to define and implement tools to address transition metal chemistry, lanthanides and actinides; to study these elements by focusing on coordination compounds, organometallic compounds and solid state chemistry; to introduce the fundamentals of bioinorganic chemistry, catalysis and nanomaterials; to synthesize some compounds-type that exemplify concepts studied; to perform and interpret spectroscopic measurements.
- Prerequisites: It is recommended that students should have attended General chemistry I and Inorganic chemistry I before following this course.
- Course contents: an introduction to coordination chemistry; group theory and bonding models in coordination compounds; the stability of coordination compounds; reaction mechanisms for coordination compounds; bioinorganic chemistry; organometallic compounds; solid state chemistry; homogeneous and heterogeneous catalysis; nanomaterials, nanoscience and nanotechnology.
- Recommended reading:
  - Atkins, P.; Overton, T.; Rourke, J.; Weller, M.; Armstrong, F. "Inorganic chemistry" 4th Ed. Oxford University Press: New York, 2006.
  - Cotton, F. A. "Chemical applications of group theory" 3 th Ed. John Wiley & Sons: New York, 1990.
  - Douglas, B. E.; McDaniel, D. H.; Alexander, J. J. "Concepts and models in inorganic chemistry" 3 th Ed.; John Wiley & Sons: New York, 1994.
  - Huheey, James E.; Keiter, Ellen A.; Keiter, Richard L. "Inorganic Chemistry: Principles of Structure and Reactivity" 4 th Ed. Harper Collins: New York, 1993.
  - Housecroft, Catherine E. and Sharpe Alan G. "Inorganic chemistry" 3rd ed. Pearson Education Limited, 2008.
  - Nakamoto, K. "Infrared and raman spectra of inorganic and coordination compounds" 6th Ed. John Wiley & Sons: New York, 2009. (Vols. 1 and 2).
  - Ribas Gispert, J. "Coordination chemistry" Wiley-VCH: Weinheim, 2008.
- Teaching methods:
  - Lectures: teachers explain the contents of the lessons.
  - Seminars: students and teacher discuss the problems and other points raised in class.
  - Practice, where students apply knowledge gained in solving raised in the laboratory experiments.
- Assessment methods:
  - Continuous valuation of the theoretical sessions: 10%
  - Group and individual analysis, presentation and debate of practices and problems: 10%
  - Work in the laboratory: 20 %
  - Written work and exams: 60%
- Language of instruction: Spanish and/or English