- Course title: **Inorganic Chemistry Laboratory**.
- Course code: 5276
- Type of course: compulsory
- Level of course: fundamental
- Year of study: 2
- Semester: 1
- Number of credits allocated: 4.5
- Names of lecturers: Mª Remedios Pedrosa and Arancha Carbayo
- Objective of the course: to foster an interest in learning chemistry in the student; to provide students with the means to acquire chemistry knowledge, practical skills and attitudes needed for the various forms of professional practice; to develop the ability to apply their chemical knowledge in students by reporting on debates and solving problems in chemistry; to ensure students acquire knowledge and skills in inorganic synthesis; to introduce students to the general approach of research in inorganic synthesis; to familiarize students with the literature and its consultation; to encourage individual and team work.
- Prerequisites: it is recommended that students should have attended Unit Operations Laboratory, General chemistry I and unit II, Inorganic Chemistry I before following this course.
- Course contents: Synthesis of $Na_2CO_3 \cdot 10H_2O$ and Na_2CO_3 and the study of the elemental reactivity of group 1; synthesis of $(NH_4)MgPO_4 \cdot 6H_2O$ and $Mg_2P_2O_7$ and the study of the elemental reactivity of group 2; synthesis of HgI_2 and the study of the elemental reactivity of group 12; synthesis of $B(OH)_3$ and the study of the elemental reactivity of group 13; synthesis of a lead salt and the study of the elemental reactivity of group 14; synthesis of liquid NH_3 and the study of the elemental reactivity of group 15; synthesis of $Na_2S_2O_3 \cdot 5H_2O$ and the study of the elemental reactivity of group 16; synthesis of a chlorine clathrate and $HClO_4 \cdot 5H_2O$ and the study of the elemental reactivity of group 17; synthesis of SnI_4 and $[SnI_4(PPh_3)]$ and the study of their reactivity.
- Recommended reading:
  - Advanced Inorganic Chemistry F. A. Cotton, G. Wilkinson, 6th Ed., 1999, John Wiley & Sons.
  - Chemistry of the Elements N. N. Greenwood, A. Earnshaw, 2nd Ed. reprinted with corrections, 2005, Butterworth-Heinemann.
  - Comprehensive Inorganic Chemistry, Vol. 1, Nicholls & Massey, 1973, Pergamon Press Ltd.
  - Concise Inorganic Chemistry, J. D. Lee, 6th Ed., 1996, Chapman & Hall.
  - Handbook of Chemistry and Physics, Editor in chief: D. R. Lide, 85th Ed. 2004, CRC Press.
  - Structural Inorganic Chemistry, A. F. Wells, 5th ed., 1986, Oxford University Press.
- 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:
  - Group and individual analysis, presentation and debate of practices and problems: 20%
  - Laboratory work: 20%
  - Participation and attitude in lectures and seminars: 20 %
  - Written work and exams: 40%
- Language of instruction: Spanish and/or English