



CHIM2242 Chemistry of inorganic solids

[22.5h+0h exercises] 2.5 credits

This course is taught in the 1st semester

Teacher(s): Michel Devillers
Language: French
Level: Second cycle

Aims

Course for the students in their last year interested in the physico-chemistry of inorganic solids and in the development of new materials. It aims at giving a fundamental comprehension in the chemical bonding in solids and illustrating the multiple applications that come from it.

Main themes

The following themes will be covered :

- the different types of defects in inorganic solids and their formation mechanisms.
- the description of chemical bonding in inorganic solids (band theory).
- the description of electrical (conductors, semi-conductors, superconductors), magnetic and optical properties of the main inorganic solids, and the main applications they are used for in the field of new materials.

Other information (prerequisite, evaluation (assessment methods), course materials recommended readings, ...)

Prerequisites: inorganic chemistry (CHIM2130). Basics in crystallography (CHIM1241A).

Evaluation: oral examination.

Support:

- Introduction à la chimie du solide, L. Smart and E. Moore (trad. J.P. Jolivet), Masson, 1997.
- Solid state chemistry and its applications, A.R. West, Wiley, 1984.
- Overhead transparencies used by the teacher.

Other credits in programs

CHIM22 Deuxième licence en sciences chimiques