



CHIM2340 Radio cristallography

[22.5h+15h exercises] 2.5 credits

This course is not taught in 2006-2007

This course is taught in the 2nd semester

Teacher(s): Jean-Paul Declercq

Language: French

Level: Second cycle

Aims

Introduction to the study of crystalline state by diffraction of X-rays.

Main themes

First part (15hrs): X-ray properties. Reminder of basic relations of X-ray crystallography . Study of powder diagrams and application to mineral identification. Experimental methods applicable to monocrystals. Determination of lattice parameters. Calculation of diffracted intensities. Determination of space groups. Second part (7,5hrs): Determination of molecular structures. Calculation of electronic density. Phase problems and resolution methods (Patterson, direct methods, isomorphous replacement, anomalous scattering).

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

Prerequisites: CHIM1241A, first part: crystallography.

Evaluation: oral examination with written preparation.