UCL Faculté des sciences

SC

CHIM2340 Radiocristallographie

[22.5h+15h exercises] 2.5 credits

This course is taught in the 2nd semester

Teacher(s): Jean-Paul Declercq
Language: french
Level: 2nd cycle course

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 monocristals. 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).