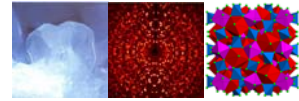


PhD Course Structural State of Minerals and its Applications



Geocenter Copenhagen, Øster Voldgade 10, 3-9 November 2013

Preliminary program:

3 November afternoon: Introduction to the course and come-together.

4 November: Basics of structural crystallography and diffraction. Introduction to the single-crystal diffraction method. Tutorial in crystallographic formalism.

5 November: Measuring crystal lattice and obtaining structure factors. Introduction to databases.

6 November: Refining the crystal structure. Basics of powder diffraction. Rietveld method.

7 November: Compression and elasticity, thermal expansion of crystals. Methods of in-situ high pressure and high temperature analyses. Crystal chemical analysis of structure. Ab initio modeling of crystal structures.

8 November: Applications of the diffraction techniques. Treatment of solid solutions, ordering grade, twinning, quantitative analysis of mixtures, crystallite size and shape. Calculating equation of state and crystal chemical parameters.

9 November: Applications in Geoscience and Material Science. Constitution of the Earth and Planets. Theoretical modeling of the structure and properties. Course dinner.

Lectures are followed by demonstrations, exercises and practical work with X-ray diffraction instruments and crystallographic software.

No course fee.

The come-together party and the course dinner are covered by the organizer.

Application deadline: 20 October 2013 (unless the maximum number of participants – 16 - is filled up earlier).

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