European XFEL

SEMINAR

Wednesday, 15th August 2012, 11:00
AER 19 / Seminar Room 3.11

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How to study low Z element's absorption edges at extreme conditions?

Understanding the physical and chemical properties of compounds containing low Z elements such as oxygen, lithium, magnesium, boron or silicon, plays an important role in materials and earth science. Often these materials are exposed to extreme conditions, i.e. high pressures and/or temperatures as present in the Earth's interior or during synthesis, which makes an in-situ spectroscopic study difficult.

Here, x-ray Raman scattering provides a unique tool to measure x-ray absorption edges of such compounds enclosed in highly absorbing sample environments, e.g. diamond anvil cells or reaction chambers. A short introduction to the technique will be given and the potential of the method for in situ spectroscopic investigations at extreme conditions will be discussed.

Host: Wojciech Gawelda