

第 491 回物性セミナー

Modern methods in x-ray absorption spectroscopy: theory, experiment, data analysis

講 師 Dr. Andris Anspoks

(Institute of Solid State Physics, University of Latvia)

日 時 2016 年 6 月 24 日 (金) 10 : 30-

場 所 理学研究科 C212 会議室

I will present the summary of the experimental technique of the x-ray absorption spectroscopy (XAS) and physical principles of the XAS with emphasis on the condensed matter (from amorphous materials till monocrystals). I will cover x-ray absorption near edge structure (XANES) and extended x-ray absorption fine structure (EXAFS) spectra, how they are extracted from the XAS, and basic theory used in data analysis. Differences and similarities between data obtained from x-ray and neutron diffraction will be discussed.

Theoretical modelling of EXAFS will be covered, as well as how to obtain local atomic structure parameters from experimental data. I will explain different data analysis methods, including conventional fitting procedures, and advanced methods like radial distribution function reconstruction, atomic structure reconstruction using reverse Monte-Carlo, combination of molecular dynamics and EXAFS.

5 研究科共同セミナーの認定科目です

担当 : 中島伸夫 (理学研究科) ・ 内線 7361



【世話人】
高根 美武 (内 7653) 浴野 稔一 (内 6552)
松村 武 (内 7021) 木村 昭夫 (内 7471)
犬丸 啓 (内 7741)
【広報担当】
稲垣 (内 5720)

