

X-ray Corelab @HZB: A user lab for multi-purpose materials research

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In 2016 at Helmholtz-Zentrum Berlin, an X-ray user lab with various powder diffraction methods was founded and subsequently extended. The lab covers X-ray methods for standard powder diffraction, thin film analysis (grazing incidence, texture and epitaxial analysis) and diffraction experiments under non-ambient conditions (vacuum, nitrogen, temperatures from 12 K up to 1400 K). Besides experimental options the lab hosts X-ray diffraction schools for beginners (two weeks) consisting of general introduction into X-ray diffraction combined with hands-on experiments, and newly, a Rietveld school for advanced users (one week) covering introduction into crystallography, databases, and structural analysis applying the Fullprof suite [1]. The lab is open to users of all materials research disciplines and free of charge for non-profit organisations. The proposed contribution will illustrate the possibilities of the lab.



Figure 1. View into X-ray Corelab@HZB

[1] Rodriguez-Carvajal, J. (1993). *Physica B* (1993), **192**, 55.

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