

Jueves 20 de JULIO 2023

12.00 h

Sala de Grados
Facultad de Ciencias

● INMA *Impulso*

Local structure and dynamics of functional materials studied by XAFS

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Prof. Takafumi Miyanaga is a Professor in the Department of Mathematics and Physics at Hirosaki University in Japan. He has exhaustive experience in applications of X-rays, particularly the X-ray absorption fine structure (XAFS) technique, to analyze the local structure and dynamics of functional materials: (1) structure phase transition in ferroelectric perovskites (PbTiO_3) and magnetic FeRhPd alloys; (2) nano-scaled fluctuations related to their magnetic properties in Ni–Mn alloys and Fe/Cr thin films; and (3) the Debye–Waller factors related to the chemical reactivity for ligand exchange reaction and catalysis in polyanions. These studies show that the local structure and dynamics are related to the characteristic function of the materials.