Non resonant inelastic x-ray scattering at SPring-8: electronic excitations with 25 meV resolution & phonons with meV and sub-meV resolution

SEMINAIRE

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Amphithéâtre SOLEIL

Inelastic x-ray scattering (IXS) probes the dynamics of atoms and electrons, providing both more complex information about materials (e.g. phonon and d-d excitation spectra) and access to conceptually simpler quantities such as sound velocities and electronic gaps. This talk will describe the non-resonant meV-scale IXS program at SPring-8, including both instrumentation and recent results from the two beamlines [1][2] designed and built by the presenter, both being well optimized to take advantage SPring-8's strengths. After providing background, the talk will focus on some selected topics including work in extreme conditions where we have made progress narrowing down the possible composition of the earth's liquid and solid core [3][4] (with most recent work to >250 GPa, or up to ~3000K) and on recent commissioning of a new type of spectrometer for electronic excitations [5][6] which we expect will provide high-resolution information complementary to resonant IXS.

Ce séminaire sera suivi d'une pause café

Formalités d'entrée : accès libre dans l'amphi du pavillon d'Accueil.
Si la manifestation a lieu dans le Grand Amphi SOLEIL du Bâtiment Central merci de vous munir d'une piece d'identité (à échanger à l'accueil contre un badge d'accès)

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