

Overcoming the x-ray average in nano and materials science experiments

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Amphithéâtre SOLEIL

In conventional x-ray experiments on nanomaterials, the x-ray beam is performing a spatio-temporal ensemble average which is smearing out information on individual nano objects. Using coherent, nano-focused x-ray beams imaging of single nano objects becomes feasible. In my presentation I will highlight present methods such as coherent diffractive and ptychographic x-ray imaging. Further on, I will illustrate, which novel science can be addressed by x-ray beams produced at future synchrotron storage rings equipped with multi-bent achromatic accelerator technology in combination with complementary nano characterization methods. Conventional surface sensitive diffraction methods can be combined with beam sizes in the 10 nm regime, allowing one to collect local structural and chemical information. A special strength of x-ray methods is their compatibility with harsh operando or in-situ growth conditions.



Ce séminaire sera suivi d'une pause café

SEMINAIRE

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 pièce d'identité (à échanger à l'accueil contre un badge d'accès)

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