Institut de Minéralogie et de Physique des Milieux Condensés
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SÉMINAIRE
Lundi 26 novembre, 10h30

Salle de Conférence, 4ème étage, Tour 22-23, Salle 1
IMPMC, Université P. et M. Curie, 4, Place Jussieu, 75005 Paris

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2P3D RESONANT X-RAY EMISSION OF COBALT BEARING NANOPARTICLES

Metal and metal oxide nanoparticles play a big role in nanotechnology and catalysis, but their valence interactions are difficult to probe. Here I will show that *2p3d* resonant x-ray emission spectroscopy (RXES) is highly sensitive to *3d-3d* excitations and the ligand field, that low energy (0.1 eV above ground state) excitations are experimentally accessible, and that *2p3d* RXES can be used as a highly surface sensitive tool on metallic substrates. The discussed data include molecular cobalt complexes, cobalt monoxide single and nanocrystals and cobalt-nickel metallic nanoparticles. The data were obtained at the ADRESS beamline of the Swiss Light Source (SLS) and interpreted with crystal field multiplet (CFM) and density functional theory (DFT) codes.

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