

Surface x-ray diffraction for operando characterisation of chemical reactions on surfaces

Roberto FELICI

(SPIN-CNR, Tor Vergata, Italy)

Lundi 27 février 2017 – 14h00
Amphithéâtre SOLEIL

X-rays are an ideal probe for studying structural properties of matter and, thanks to the brilliance of synchrotron sources, they are also employed to determine the atomic structure and morphology of surfaces and interfaces.

Surface x-ray diffraction has been originally developed to determine the static structure of surfaces. However with the development of x-ray sources, detectors and analysis tools it is now possible to characterise in detail processes which occur at surfaces.

Aim of this talk is to present recent results obtained at the id03 surface diffraction beamline of the ESRF dealing with the in-situ characterisation of the structure and morphology of a catalyst during a surface reaction. Examples will deal with heterogenous catalytic oxidation of CO on single crystal surfaces 1,2/ and supported nanoparticles 3/.

References :

1/ R. van Rijn et al., *Phys. Chem. Chem. Phys.* **13** (2011) 13167

2/ B.L. Hendriksen et al., *Nat. Chem.* **2** (2010) 730

3/ O. Balmes, et al., *Phys. Chem. Chem. Phys.* **14** (2012) 4796



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

SYNCHROTRON SOLEIL

L'Orme des merisiers - Saint-Aubin - BP48 - 91192 GIF S/YVETTE cedex

www.synchrotron-soleil.fr/Soleil/ToutesActualites

CONTACT : sandrine.vasseur@synchrotron-soleil.fr

SEMINAIRE