UFR de Chimie

Master Molécules, Matériaux, Surfaces

université PARIS DIDEROT PARIS 7

Séminaire de Chimie Autour des Nanosciences

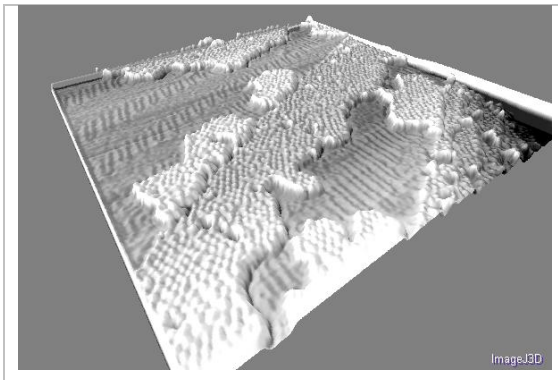
FOUAD MAROUN

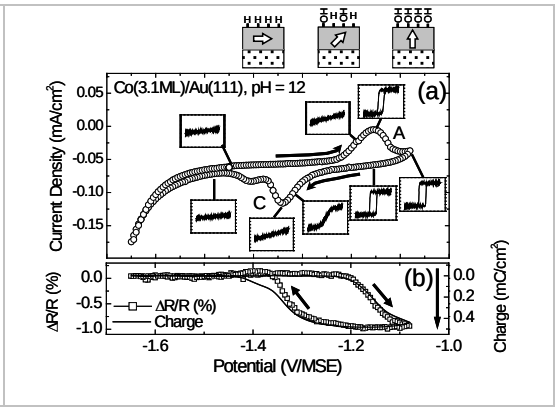
Physique de la Matière Condensée, Ecole Polytechnique, Palaiseau

Donnera une conférence sur le thème :

STRUCTURE AND MAGNETIC PROPERTIES OF ULTRATHIN FILMS GROWN AT THE SOLID–LIQUID INTERFACE.

The need for higher capacity storage devices requires new strategies for synthesizing magnetic material as ultrathin films and nanostructures and a precise knowledge of their properties as a function of their morphology and structure. In this presentation, a short survey will be given on the electrochemical growth of ultrathin ferromagnetic films, which may be considered as model systems for understanding the origin of their specific magnetic properties. In this survey, state of the art in–situ surface characterization techniques will be presented as Scanning Tunneling Microscopy and X–Ray diffraction. In the second part of the presentation, in–situ magnetic characterizations of these films will be shown. It will be demonstrated how a refined analysis of these magnetic observations allows to probe processes at the electrochemical interface. In particular, we will present results on cation and CO coadsorption on cobalt films, on the mechanism of H_2 evolution on CO covered cobalt films as well as on the molecular adsorption of CO and S–R molecules on cobalt films. Finally, we will present magnetic and X–ray data on the electrochemical oxidation of ultrathin cobalt films.





LE VENDREDI 25 Septembre À 11H00

Bat. Lavoisier, salle 774, 15 rue Jean de Baïf 75013 Paris

Contacts : Claire Fave et Vincent Noël,
Tél : +33 (0)1 57 27 72 26/72 08