

Séminaire de Chimie Autour des Nanosciences

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Donnera une conférence sur le thème :

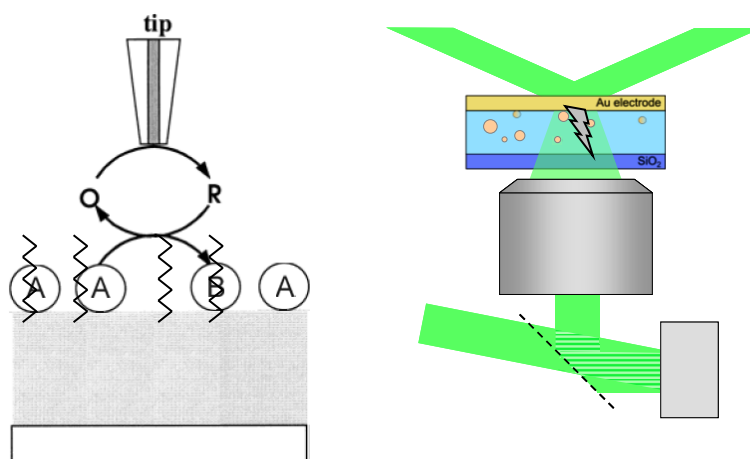
VISUALIZING LOCAL CHEMICAL PROCESSES BY ELECTROCHEMICAL AND OPTICAL MICROSCOPIES

Our objective is to control and visualize the local (electro)chemical reactivity of samples under operation. The imaging of local fluxes of chemical reagents or local chemical reactions at the micro or nanometer scale is essential in various fundamental and applied areas. Electrochemistry provides a particularly elegant methodology to monitor chemical transformations with high spatial and temporal resolutions.

One approach, based on local probes microscopies, consists of scanning a probe above a sample to interrogate and control its local physical and/or chemical properties. For example, Scanning Electrochemical Microscopy, based on micro- or nanoelectrodes tips, allows probing and modifying various interfaces from the controlled generation of local fluxes of chemical reagents.

Another approach consists of coupling the electrochemical activation of a sample to a local in situ and real time optical detection, by microscopy imaging techniques. In this field, apart from fluorescence microscopy, new optical imaging approaches have been recently introduced (Surface Plasmon Resonance SPR,...) to map local electrochemical transformation at an electrode or at individual nanoobjects.

This contribution will illustrate recent works from our group where both approaches of local in situ electrochemical inspections are carried out for getting insight into surface transformation reactions.



LE VENDREDI 26 Septembre À 11H00
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