SOLEIL SYNCHROTRON

Séminaires

Séminaire SOLEIL

Electronic and geometric structure probed by synchrotron radiation

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Invité par Svante SVENSSON

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The physics and chemistry of clusters are important aspects of fundamental nano-science. The development of the electronic and geometric structure from the isolated atom to the semi-infinte solid is one of the main motivations for cluster research. Free, neutral clusters play a special role in this case, as they allow these developments to be studied in their pure form. The knowledge thus gained on model systems of free, neutral clusters systems can be transferred to other systems.

Mixed metal clusters consisting of more than one component offer several mechanisms to achieve functionality, as size, stoichiometry and spatial distribution of the components can be varied. Such functional mixed metal clusters could be very interesting building-blocks in nano-technology.

Clusters and molecular systems have many similarities. Small clusters are often better regarded as molecules rather than small pieces of the infinite solid. Cluster-like aggregates form temporary sub-units in liquids. Molecular systems, both clusters and liquids, exhibit very complex behaviour.

In this presentation, recent results obtained by applying electron spectroscopies and synchrotron radiation to molecular clusters and liquids, as well as metallic clusters, will be presented. This includes surface segregation, in clusters leading to core-shell-like structures and in liquids to non-stochiometric surface composition, charge delocalization dynamics and solvation-induced changes in electronic and geometric structure.

***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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