SOLEIL SYNCHROTRON

Réunions scientifiques

Séminaires

Séminaire SOLEIL

Photoelectron photoion coincidence studies with electron velocity focusing. The road to ± 0.1 kJ/mol thermochemistry.

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Invité par L. NAHON

Mercredi 29 Avril 2009 à 14h00
Amphi Bat. Accueil SOLEIL

Threshold photoelectron photoion coincidence (TPEPICO) is used to energy select reactant ions in order to study the dissociation dynamics (rates, branching ratios to various products, product energy distributions) of polyatomic ions. Analysis of the ion time of flight distributions and breakdown diagrams using the statistical theory of unimolecular dissociation permits modeling multiple parallel and sequential dissociation steps, and thus permits extracting quantitative onset energies for higher energy dissociation channels. A recent implementation of this experiment at the Swiss Light Source (SLS) has improved the electron resolution to ± 1 meV, which will lead to 0.1 kJ/mol thermochemistry. Among the molecules investigated at the SLS are the sequential dissociation of MCl_4^+ to M^+ + 4 Cl, (M = Sn and Ge). The heat of formation of the neutral MCl_4 can be determined by using the final products as an energy anchor.

***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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