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Mass Spectrometry in Biology

A. J. R. Heck and C. Uetrecht

Gold Catalysis

H. A. Wegner and M. Auzias

Boronic Acids

K. J. Szabó and L. T. Pilarski

Asymmetric Brønsted Acid Catalysis

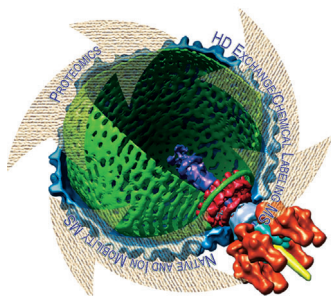
A. M. Beauchemin and I. Dion



Cover Picture

Patrick Braun, Bettina Nägele, Valentin Wittmann,* and Malte Drescher

State-of-the-art EPR techniques provide structural evidence for multivalent protein–ligand interactions in solution. In their Communication page 8428 ff., V. Wittmann and co-workers report experiments that give a detailed picture of the molecular mechanism of the binding of divalent ligands to a lectin in solution. Chelating binding is detected directly and can be differentiated from the monovalent binding of multiple molecules.

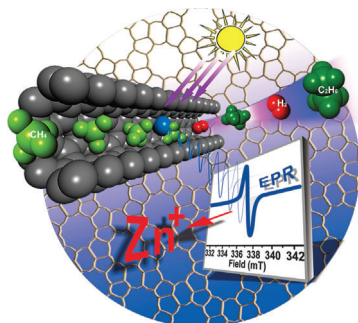
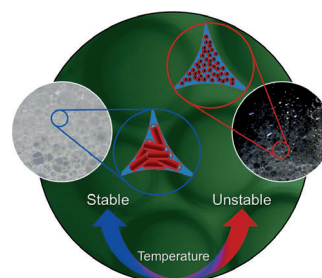


Mass Spectrometry

In their Review on page 8248 ff., A. J. R. Heck and C. Uetrecht present modern mass spectrometric methods and their use in structural biology. They focus on virology and investigations ranging from the structure of viruses to the interaction of the virus with the host.

Foams

A. L. Fameau, J.-P. Douliez et al. describe in their Communication on page 8264 ff. how a temperature-dependent transition from a tube to a micellar arrangement enables the stability of foams formed from hydroxy fatty acids to be tuned reversibly.



C–H Activation

A Zn²⁺-modified ZSM-5 material shows photocatalytic activity for the dehydrogenative coupling of methane to ethane under sunlight. Full details are reported by J.-S. Chen and co-workers in their Communication on page 8299 ff.