



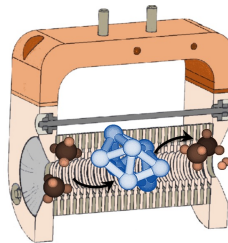
Physical Chemistry
Ueli Heiz

Cluster Catalysis and Advanced Spectroscopy

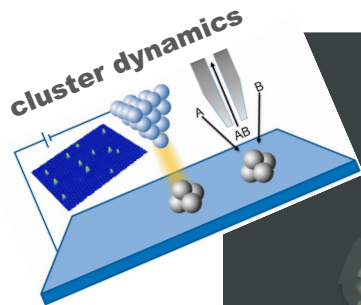
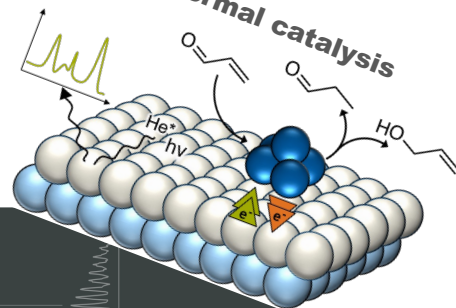
We explore the emergence of new properties of cluster-assembled materials in the non-scalable size regime. With their unique properties often based on quantum size effects, they pave the way towards a plethora of new applications in catalysis and energy conversion.

Our strategy is the assessment of physical and chemical properties in different environments – e.g. from ultra-high vacuum to ambient pressure or non-chiral to chiral environments. We research atomically precise matter with integral and local techniques, including spectroscopy and microscopy. For this purpose, we develop and advance sophisticated methodologies, as well.

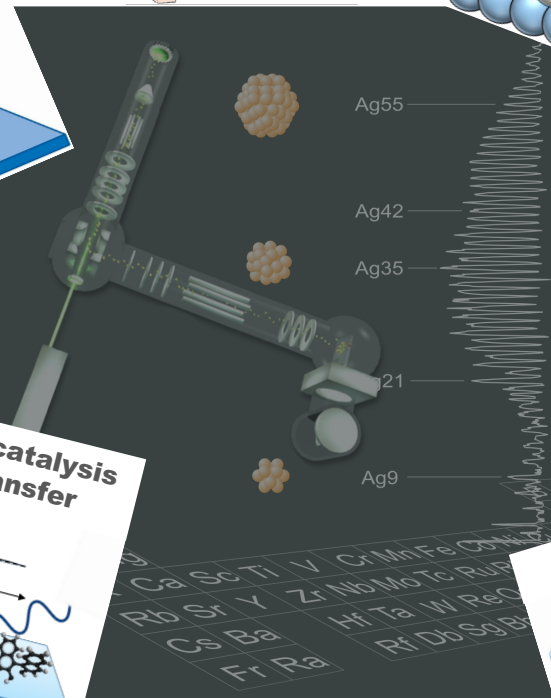
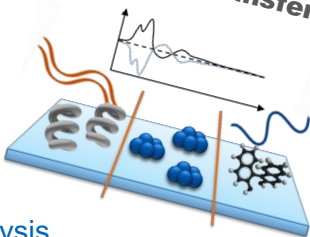
gasphase reactivity



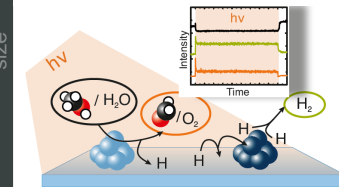
thermal catalysis



asymmetric catalysis
& chirality transfer



photocatalysis



electrocatalysis

