

## **The interaction of Au with $\gamma$ -Al<sub>2</sub>O<sub>3</sub> surfaces**

This project aims to investigate the interaction of Au clusters with  $\gamma$ -Al<sub>2</sub>O<sub>3</sub> surfaces. Key is to find the global minimum structure for a given cluster size on clean, hydrated  $\gamma$ -Al<sub>2</sub>O<sub>3</sub> surfaces, and the surfaces with Al and O vacancies. All the possible surface reactions such as spillover reaction of H atoms as well as surface relaxations induced by the deposition of the Au clusters should be investigated.