

Bachelorarbeit/Masterarbeit/Diplomarbeit

Spectroscopy and Surface Reaction Mechanisms

If you are interested in learning and making research in chemistry of surfaces using spectroscopic techniques, this is the right place to contact!

We are looking for enthusiastic people who like to investigate fundamental questions in natural sciences assessing them from a physicochemical point of view.

We focus on semiconductor photocatalysis and nanotechnology, a tiny world, which offers lots of opportunities to learn about surface processes at different interfaces with gasses and liquids.

In particular, we explore the fascinating material TiO₂ (titanium dioxide). This indirect semiconductor is able to undergo photo-excitation upon ultra-violet irradiation. But the real exciting moment begins when the photo-generated electron-hole pairs enter in action. A wide branch of reaction mechanisms is opened depending on the type and nature of the compound nearby or directly adsorbed at its surface. We can trace those species by Attenuated Total Reflection in combination with Fourier Transformed Infrared spectroscopy.

A lot of questions and queries have been challenging our minds, that's why we need curious people who would like to join our group to help us to find the answers.

If you would like to know more about this topic, I'll be very willing to meet you and discuss in detail our projects. Do not hesitate to contact me either by phone: 762 – 16044, or by e-mail: mendive@iftc.uni-hannover.de

See you!

Cecilia Mendive