



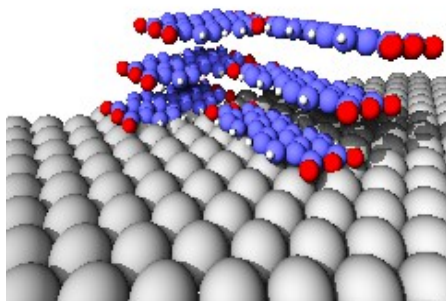
Master and Bachelor Project: Thermal Desorption Spectroscopy of Organic Thin Films

Project description:

Electronic devices built from π -conjugated organic molecules offer great possibilities and advantages. Yet, there are many open questions related, inter alia, to the growth process and to the interaction of the molecules with metal substrates. In the latter case, the interaction strength typically varies strongly for different molecules and metal substrates. Thermal Desorption Spectroscopy (TDS) can be used to measure the adsorption energy of molecules on surfaces. Hence, this quantitative technique helps to understand the complex interaction between molecule and surface more deeply.

Our group is aiming at the fundamental structural and optical properties of organic thin films as well as properties of organic monolayers at the interface with metal surfaces [1,2]. In this specific project, you will work with state-of-the-art equipment and learn about

- Mass spectrometry for large organic molecules
- Work with an ultra-high vacuum chamber
- *In situ* preparation and characterization of organic thin films



Low Energy Electron Diffraction (LEED) and X-ray Photoelectron Spectroscopy (XPS) used as complementary techniques.

Working place: Institut für Angewandte Physik, Tübingen

Starting time: *immediately*

Candidates with a strong background condensed matter physics, physical chemistry or a related field are encouraged to apply for this project.

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References and further information:

<http://www.soft-matter.uni-tuebingen.de> (see under publications and open positions)

1. A. Gerlach et al., Phys. Rev. Lett. **106** (2011) 156102
2. U. Heinemeyer et al., Phys. Rev. Lett. **104** (2010) 257401