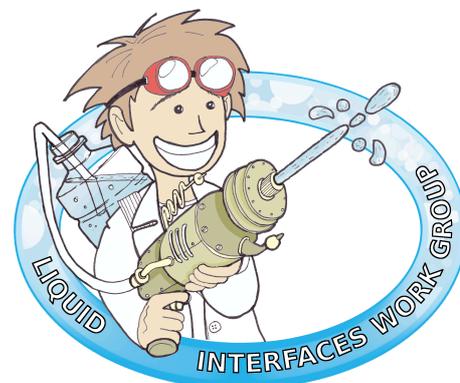




Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich



The **Liquid Interfaces group** is a work group within the Laboratory for Surface Science and Technology (LSST) in the Department of Materials at ETH. We are currently five team members and seek a highly motivated research candidate as we expand our interests in colloidal nanoscience.

Master student (thesis) in simulation of electron spectra for surface analysis

The **work group** is principally concerned with fundamental properties such as geometric and electronic structures at vapor-liquid and liquid-nanoparticle interfaces using modern surface science instrumentation that operate in liquid environments. A large portion of our research is conducted at the Swiss Light Source synchrotron radiation facility using our near ambient pressure photoemission (NAPP) spectrometer. We have just received the latest version of SESSA software, a powerful analytical tool for the Simulation of Electron Spectra for Surface Analysis. The simulation of X-ray photoelectron spectra will be integrated into our routine analysis based on the ion and density profiles derived from molecular dynamics (MD) simulations to greatly improve the accuracy and our understanding of the NAPP results.

We are looking for a new member Master student (thesis) to simulate the XPS intensity distributions of organic-water solutions at the liquid-vapor interface using SESSA. These simulations will be complemented by in situ XPS measurements using our NAPP endstation at the Swiss Light Source. For this reason the candidate must be willing to travel to PSI occasionally with other members of the work group. The position requires a Bachelor degree or equivalent in physics, chemistry, materials science, chemical engineering, or a related field, and a keen interest in surface and interface science using state-of-the-art instrumentation. The successful candidate must be willing and able to work effectively in a dynamic team environment, have interest in developing advanced instrumentation and methodology, and have proficiency in english. The start date is flexible based on the candidates academic schedule, but is anticipated to be spring/summer 2015.

For further information please visit our website at www.surface-science.ethz.ch or e-mail, Dr. Giorgia Olivieri, at giorgia.olivieri@mat.ethz.ch

Applications should be submitted electronically at giorgia.olivieri@mat.ethz.ch.