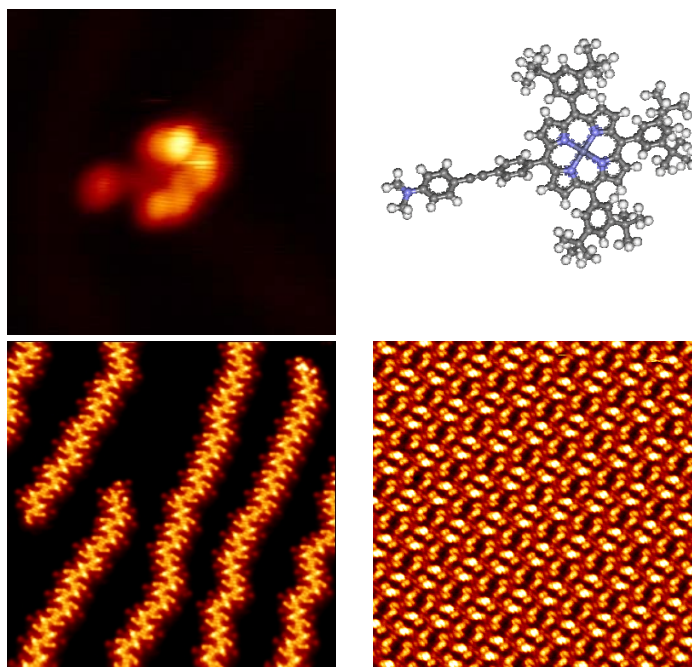


Master project description

Self-assembling porphyrin units

The generation of supramolecular structures by self assembly at surfaces where they can be addressed by molecular networks on the nanometer scale is one of the most promising routes towards creating future electronic devices. An elegant method towards such a goal is provided by self-assembly of functional organic molecules, thus exploiting the principles of supramolecular chemistry. Therefore it is of utmost importance to obtain a fundamental understanding of the delicate interplay between molecule-molecule and molecule-substrate interactions.

Our systems consist of porphyrin molecules, modified by attaching different ligands in the meso positions, adsorbed on coinage metal surfaces. The work will be performed at the Nanolab in the Department of Physics at the University of Basel. The samples will be analyzed in ultra high vacuum conditions at low temperatures, using mainly scanning tunneling microscopy and spectroscopy (STM and STS) and low energy electron diffraction (LEED).



Starting date: Anytime in 2011
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