

Research Project

Electrons, atoms and molecules in supramolecular porous networks

Third-party funded project

Project title Electrons, atoms and molecules in supramolecular porous networks

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Organisation / Research unit

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Department

Project Website <https://nanolab.unibas.ch/>

Project start 01.03.2014

Probable end 28.02.2017

Status Completed

Experimental research will be carried out to investigate surface state electrons, ad-atoms and ad-molecules confined in supramolecular porous assemblies. Results obtained from these studies will be informative towards the formation of supramolecular structures, the understanding of the involved interactions stabilizing these molecular structures and their controlled alteration/functionalization by inclusion of additional guest atoms and molecules. In this project, correlated parts are included: (1) the development of stable, tunable supramolecular architectures by using building blocks on the basis of DPDI and TAPP and (2) the temperature dependent aggregation libration and mobility of small molecules ensembles in porous confinements. Scanning tunneling microscopy (STM), Scanning tunneling spectroscopy (STS) and X-ray photoelectron spectroscopy (XPS) will be combined to carry out the experiments. The combination of these techniques will give a systematic understanding of the supramolecular porous network and novel properties emerging from its interaction with the supporting surface.

Keywords Condensation and Phase Transitions in single nanometer sized confinements

Financed by

Swiss Government (Research Cooperations)

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