

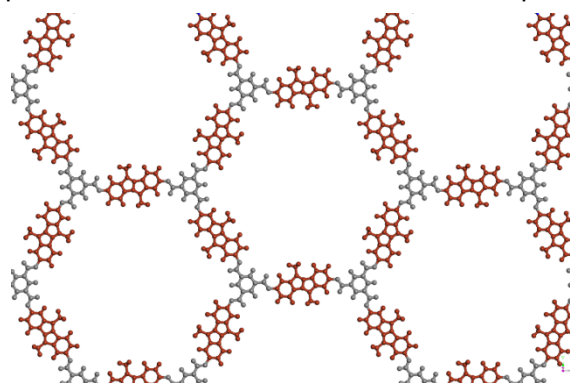
Novel Topologies in Covalent Organic Framework Chemistry

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Constructing extended covalent frameworks based on symmetric organic molecules is known as reticular chemistry. Such covalent organic frameworks (COFs) commonly have either 2-dimensional or 3-dimensional connectivity, resulting in either stacked 2D polymers or 3D intertwined networks, both with a high degree of crystallinity and high surface areas.

Our synthetic approach leaves the flatland of 2D COFs and the entanglement of 3D COFs. We aim at molecules that step beyond the known architectures by constructing non-planar, chiral, tubular, and electronically exotic topologies. Along this journey, we have taken detours at several stages to dig into the properties of new monomers from an opto-electronic, aromaticity, and a supramolecular perspective.

The seminar reports on a range of molecular monomers as well as entire frameworks with surprising molecular behavior and unexpected synthetic challenges. Strained structures, high supramolecular affinities, and useful electronic properties are some of the desirable characteristics of these materials.



CRC 1404 FONDA - Foundations of Workflows for Large-Scale Scientific Data Analysis

Ulf Leser, Department of Computer Science, Humboldt-Universität zu Berlin

This talk will present the Collaborative Research Center FONDA, which brings together researchers from computer science and several natural sciences to jointly perform research on the foundations of workflow systems for the analysis of large and complex scientific data sets.

