

cfaed Seminar Series

DATE: Wednesday, May 25th 2016
TIME: 1:30 pm – 3:00 pm
LOC: Seminar Room HEM 219,
Walter-Hempel-Building
Mommsenstr. 4, 01069 Dresden



GUEST SPEAKER: **Prof. Felix R. Fischer**
University of California Berkeley

TITLE: “Teaching Polymers the Meaning of Life & Quantum Confinement in Graphene Nanostructures”

ABSTRACT:

My group pursues a multidisciplinary research approach dedicated to the design and the synthesis of graphene-based functional organic materials with precisely defined properties, their controlled assembly into hierarchical structures, and the evaluation of their performance both at the molecular and the macroscopic scale. We strive to understand, control, and harness the exotic physical properties emerging from quantum confinement effects in nanomaterials. We develop a suite of novel synthetic strategies based on surface reactions that offer an unprecedented atomically precise control over key parameters (length, width, symmetry) that define the electronic structure of nanographene devices.

BIOGRAPHY:

Assistant Professor, born 1980
Diplom, Chemistry, Ruperto-Carola University, Heidelberg (2004)
Ph.D., Swiss Federal Institute of Technology, Zurich (2008)
Leopoldina Postdoctoral Fellow, Columbia University, New York (2008-2011)

Felix R. Fischer is an Assistant Professor in the Department of Chemistry at UC Berkeley. His research focuses on the rational design of novel organic functional materials for applications in molecular electronic devices such as field effect transistors, solar cells, and single molecule sensors. In an effort to control the structure of these materials both on the single molecule as well as on a macroscopic scale – a prerequisite for a superior performance – we take advantage of tools derived from supramolecular chemistry and concepts identified in biologically relevant molecular recognition events. Using a newly developed highly controlled ring-opening metathesis polymerization reaction of strained alkynes the Fischer Group explores routes towards highly defined low-dimensional conjugated carbon-rich materials.