

CELEST Member Short Profile



Mario Ruben

The research activity at the research unit chair "Molecular Materials" at the Karlsruhe Institute of Technology is oriented towards the design of functional nanosystems by state-of-the-art organic/inorganic synthesis and supramolecular self-assembly techniques for their implementation and integration into functional devices.

The research activities of the Ruben-group at the Institute of Nanotechnology (INT) deal with the design of functional nano-systems by state-of-the-art organic/inorganic synthesis and supramolecular self-assembly techniques. We are thematically organised in the interdisciplinary research topics of Functional Molecules, Molecular Electronics and Carbon-based Nanostructures.

Institute of Nanotechnology
Karlsruhe Institute of Technology (KIT)
 Helmholtz-Platz 1
 76344 Leopoldshafen-Eggenstein

Contact details
 Prof. Dr. Mario Ruben
 +49 721 608 26781
 mario.ruben@kit.edu

Research areas

Their main research subjects are the development of novel advanced electrode materials of molecular nature for supercapacitors, lithium, post-lithium ion batteries (mainly Mg and Na batteries), and hybrid devices.

Lab equipment

NMR spectrometer (Bruker Ultrashield plus 500), IR spectrometer (Perkin-Elmer Spectrum GX FT-IR), UV-vis spectroscopy (Varian Cary Scan), Fluorescence spectroscopy (Varian Cary Eclipse), ESI-ToF Mass spectrometer (Bruker Daltonics micrOTOF-Q II), MALDI-ToF Mass spectrometer (Waters Synapt), SQUID magnetometer (Quantum Design MPMS 5), Cyclovoltammetry (Autolab PGstat10), High-Vacuum Sublimation (Pfeiffer HiCube 80 Eco), Elemental analysis (Vario Micro Cube), Dynamic light scattering spectrometer (ALV NIBS); STOE Single Crystal X-ray diffractometer (Ga-jet), FIB, Battery Test Station

Mario Ruben @ INT

<https://www.int.kit.edu/ruben.php>

Link INT

<https://www.int.kit.edu/index.php>

Link lab equipment

<https://www.int.kit.edu/2812.php>

Partners