



Chair of Inorganic Chemistry with Focus on Novel Materials

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Synthetic Methods in Inorganic Chemistry

A distinctive combination of synthesis methods allow for the investigation of inorganic materials and soluble main group element compounds.

For *solids* the major activities include the development of energy conversion and storage materials such as new lithium and sodium ion conductors or semiconductors.

For *molecular atom clusters* species such as anionic nine-atom clusters are exciting starting point for the development of nano-scaled materials or catalytically active main-group element molecules.

A broad range of synthetic methods, structural characterization techniques (X-ray and neutron diffraction), spectroscopic methods, and physical property measurements such as impedance and magnetic measurements are applied. State-of-art quantum chemical methods are used to deepen the understanding of non-classical bonds in atom clusters and the electronic band structure of solids.

