

lädt ein

gemeinsam mit der Gesellschaft
Deutscher Chemiker
zum

Vortrag

von Herrn

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**„Non-Statistical
Assembly of
Multifunctional
Coordination Cages“**

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um: 09:30 Uhr

WO: im Raum A12.232

Gäste sind herzlich willkommen!



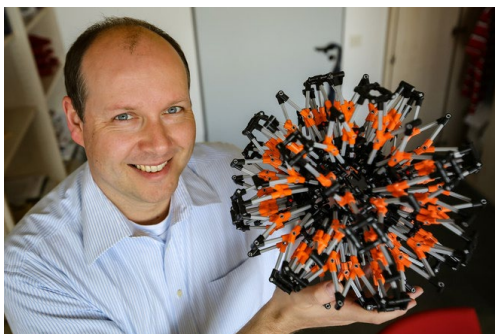
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„Non-Statistical Assembly of Multifunctional Coordination Cages“

Advanced self-assembly strategies enable the targeted synthesis of supramolecular systems and materials with increasing structural and functional complexity. In the field of nanosized coordination cages, we develop non-statistical assembly methods based on ‘shape complementary assembly’ (SCA), ‘coordination sphere engineering’ (CSE) and ‘adjacent backbone interactions’ (ABI). With a focus on multi-chromophore systems, we investigate the suitability of modular assemblies for light-induced charge separation and vectorial excitation transport. We also study ‘complex systems’ behaviour by following the stimuli-responsive population and evolution of co-existing species in mixtures. Furthermore, we investigate the supramolecular chemistry of DNA G-quadruplexes (GQs). Inspired by metalloprotein coordination environments, we incorporate ligands such as imidazoles into guanine-rich oligonucleotides that fold into GQs with a binding site for transition metals. Metal binding induces GQ formation and folding into specific topologies. Paramagnetic copper(II) ions, rigidly placed inside modified GQs, are used as EPR spin labels with applications in structural biology.

