

Light-Responsive and Spin-Crossover Metallosupramolecular Cages

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Metallosupramolecular cages^[1] can be self-assembled from labile metal ions and organic ligands where the reversible metal-ligand bonds provide the necessary error-checking for the self-assembly of the thermodynamically most stable structure/s. Synthetic^[2] and characterisation^[3] tools for aiding the discovery of new cages will be discussed before introducing M-CPOnes^[4] (transition metal complexes containing ligands functionalised with cyclopropanones) as light-responsive motifs in proof-of-principle studies. The design of spin-crossover cages^[5] will also be discussed and we demonstrated that subtle ligand modifications to the coordination motif and linker can tune the spin-crossover temperature by up to 186 K in a family of Fe^{II}₄L₆ cages.^[5a]

References

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Short Bio and Photo

Anna McConnell obtained a B.Sc. (Hons) in Chemistry from the University of Canterbury in New Zealand before completing a D.Phil. under the supervision of Prof. Paul Beer from the University of Oxford. She completed postdoctoral research stays in the group of Prof. Jacqueline Barton at the California Institute of Technology and at the University of Cambridge with Prof. Jonathan Nitschke. From 2016-2023 she was a Junior Professor at Christian-Albrechts-Universität zu Kiel and in 2023 she joined the University of Siegen as a Junior Professor. Her research focuses on stimuli-responsive metallosupramolecular cages as well as the synthesis and dynamic covalent chemistry of amidoboronates.

