

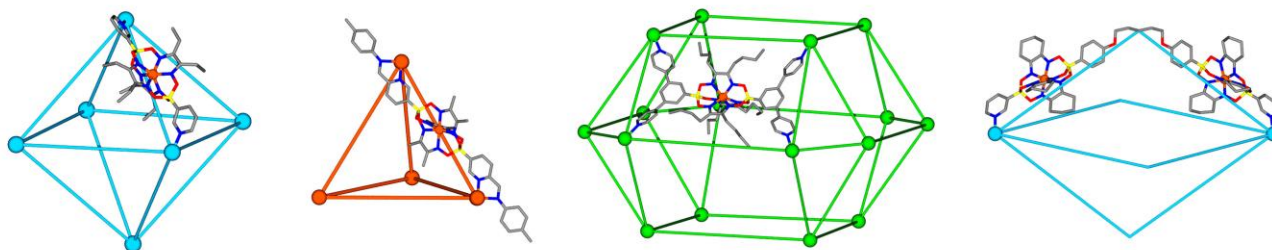
Construction and Destruction of Coordination Cages

Kay Severin

Ecole Polytechnique Fédérale de Lausanne, Switzerland.

E-mail: kay.severin@epfl.ch

The lecture summarizes efforts to build coordination cages. Different molecular architectures are described, including cages with unusual gyrobifastigium or square orthobicupola-like structures. I will show that metalloligands are particularly well suited to build large assemblies (> 3 nm) with minimal synthetic efforts. Furthermore, I will describe attempts to synthesize cages of low symmetry. In the final part of the lecture, I will discuss different possibilities to destroy coordination cages. It is shown that the relative stability of such cages is highly context-dependent.



Selected recent references:

1. S. Sudan, D. W. Chen, C. Berton, F. Fadaei-Tirani, K. Severin, *Angew. Chem. Int. Ed.* **2023**, 62, e202218072.
2. S. Sudan, F. Fadaei-Tirani, K. E. Ebbert, G. H. Clever, K. Severin, *Angew. Chem. Int. Ed.* **2022**, 61, e202201823.
3. R.-J. Li, A. Tarzia, V. Posligua, K. E. Jelfs, N. Sanchez, A. Marcus, A. Baksi, G. H. Clever, F. Fadaei-Tirani, K. Severin, *Chem. Sci.* **2022**, 13, 11912–11917.
4. R.-J. Li, C. Pezzato, C. Berton, K. Severin, *Chem. Sci.* **2021**, 12, 4981–4984.
5. S. Sudan, R.-J. Li, S. M. Jansze, A. Platzek, R. Rudolf, G. H. Clever, F. Fadaei-Tirani, R. Scopelliti, K. Severin *J. Am. Chem. Soc.* **2021**, 143, 1773–1778.
6. S. M. Jansze, K. Severin *J. Am. Chem. Soc.* **2019**, 141, 815–819.

More information: <https://www.epfl.ch/labs/lcs/>