Research Interests
Metals in Biological Systems. Approximately one third of all known proteins contain metal ions as cofactors and serve a wide variety of functions, such as structure stabilization, catalysis, electron transfer reactions or complex tasks, including signal transduction and gene regulation. Numerous diseases such as haemochromatosis or Menkes disease were found to be related with a defect in metal metabolism. Research is concerned with development of metal specific fluorescent probes for the investigation of the intracellular chemistry of trace elements, the mechanistic study of metalloprotein catalyzed reactions with unusual coordination geometries as well as the development of protein-based, semisynthetic organometallic catalysts in aqueous solution.

References