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Chelation Strategies for Heavy Metal Ions:
Applications in Medicine and Industry

Abstract: Outside of the d-block, the thermodynamic stability and kinetic inertness of coordination complexes decreases dramatically as the ionic radius of the metal increases. This general trend, which arises from a decrease in Coulombic attraction, presents a challenge in controlling heavy main group and f-block metal ions in medical and industrial applications.

In this presentation, we will discuss our efforts in chelator design for large metal ions spanning the s-, p-, and f-block of the Periodic Table. Furthermore, these ligand design efforts will be shown in conjunction with applications of these chelators in the realms of nuclear medicine and the petroleum industry.

This presentation will discuss both the fundamental coordination chemistry of these complexes and metal ions, as well as strategies for their optimal use in various applications.

Wednesday, May 29th, 2019
3440 Mol Sci
4:30 p.m.