

## **Anion Coordination Chemistry and the Chelate Effect**

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#### ***Abstract***

Transition metal coordination chemistry began with the incredible insight of Alfred Werner over a century ago and grew in scope to encompass many different areas and applications involving transition metal chemistry. Anion coordination chemistry was born in the late 1960s with the discovery by Park and Simmons of the supramolecular encapsulation of halides by bicyclic diprotonated diaza katapinands as anion hosts. It has now grown to encompass the chemistry of anions that ranges in scope from molecular- to nano-scales. It also relies on multiple interactions such as in transition metal chelates. This talk will begin with an overview of anion coordination with carboxamide-based pincers as ligands for anions ranging in size from small to complex. It will culminate in very recent findings for a new project focused on the “super-anion” phytate, myo-inositol-1,2,3,4,5,6-hexakisphosphate, an extremely important biomolecule in plants and soils.



**Phytate**