

Significance of Coordination Chemistry

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EDITORIAL

Coordination chemistry is the field which is concerned with the chemical interaction of organic and (or) inorganic ligand with transition and late transition group metal centres. It concentrates on understanding the physical and chemical properties as well as it investigates the synthesis and detailed structures of these coordination complexes. Prussian blue is one of the earliest known coordination complexes, whose properties were first tried to be understood in the early 1800s by Blomstrand and it was in the year 1893; when Alfred Werner gave one of the most universally accepted theories in Coordination Chemistry, till date. The idea of chirality in coordination complexes was also brought in by Werner. The structure of any coordination

complex can either be square planar, tetrahedral, square pyramidal and octahedral. The higher order complexes are also known which consist of multimetal centres bonded to a variety of ligands. The category of ligands binding to the metal center are also enormous and range from the alkyl to larger pincer and primer ligands. The importance of such complexes also range from a variety of applications, either biological or chemical or for charge balance (Na, K), quaternary protein structure (Zn, Ca), cell signaling, acid or base catalysis, atom (or group) transfer and redox catalysis. Based on the wide range of fields in which these compounds find their purpose, rigorous attempts were made to study their value in the biological processes.

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