

LECTURE 30 TRANSITION METALS

I. Crystal Field Theory: Tetrahedral Case

- A. Tetrahedral crystal field splitting energy, Δ_T
- B. Orbital destabilization
- C. Δ_T compared to Δ_O

II. Crystal Field Theory: Square Planar Case

III. Spectrochemical Series

- A. Strong field ligands
- B. Weak field ligands

IV. Color in octahedral coordination complexes

V. Magnetism

- A. Paramagnetic
- B. Diamagnetic