

Transition METAL IONS \leftrightarrow LEWIS ACIDS
(d-ORBITALS)

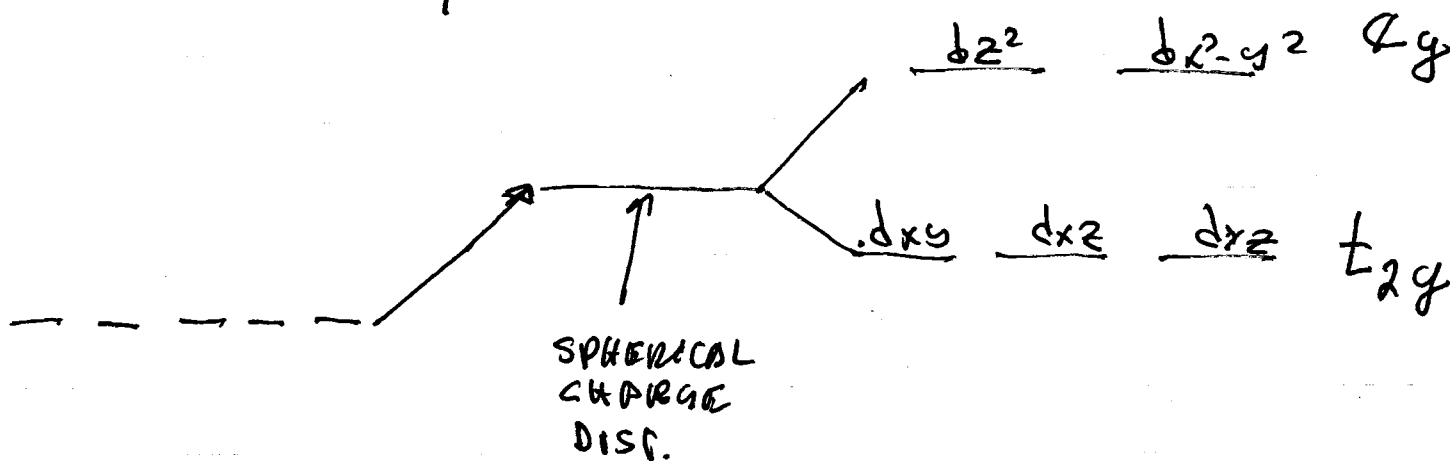
LIGANDS \leftrightarrow LEWIS BASES

CRYSTAL FIELD THEORY (1929)

Hans Bethe

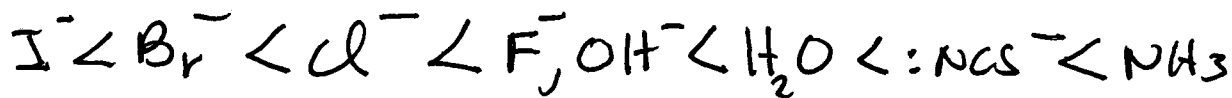
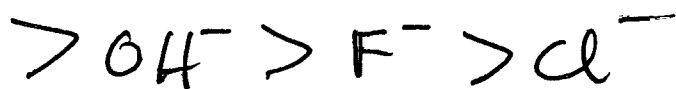
Non bonding d-electrons on
the central atom

Due to the geometry, THE
ENERGY LEVELS SHIFT



Δ_o CRYSTAL FIELD SPLITTING ENERGY

STRONG TO WEAK-FIELD LIGANDS



Weak Field
High Spin

STRONG FIELD
LOW SPIN