

Metals and their Compounds

Lecture 8.2

Stability of Coordination compounds

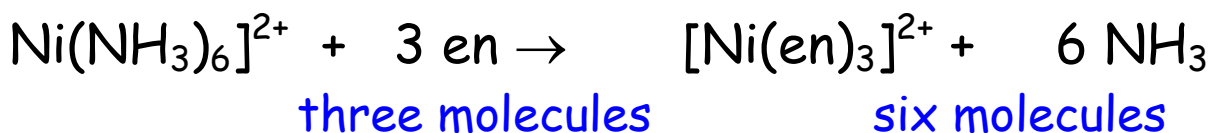
Second factor is entropy (disorder). In Term 2

Gases have most entropy

liquids have less entropy

solids have least entropy

so the reaction (en is ethylene diammine - a *chelate* ligand)



results in an *increase* in disorder - this is favored.

This is called the *chelate* effect. Complexes with *chelate* ligands are preferred - hence stability of bio-molecules of transition metal ions (bio-molecules are BIG chelates)

What about bond-strength ??

Answer - not always easy to generalise, but idea of *hard* and *soft* ions and ligands useful.