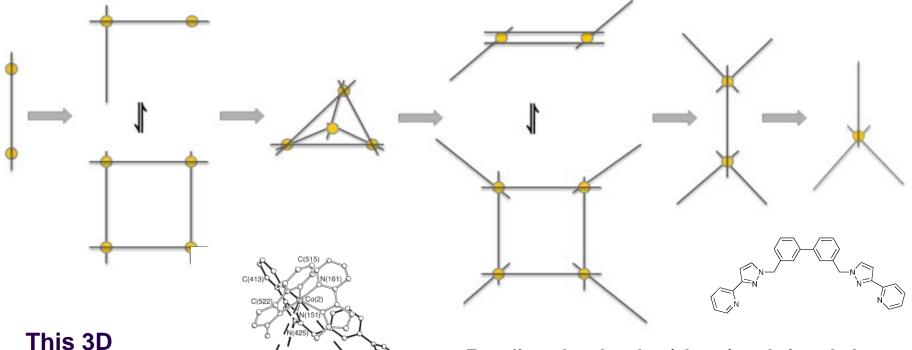
## **Equilibrium Studies of Self-Assembly Events**

Douglas A. Vander Griend, Department of Chemistry & Biochemistry, Calvin College, Grand Rapids, MI 49546



This 3D supramolecular assembly is entropy driven!

R.L. Paul, S.P. Argent, J.C. Jeffery, Harding, L.P. J.M. Lynam, M.D. Ward J. Chem. Soc., Dalton Trans. **2004**, *3453-3458*.

Four ligand molecules (above) and six cobalt dications (yellow spheres) can form a tetrahedral nanocage (left). What happens as the 2 components are slowly added together in solution? From spectroscopic 'snapshots' taken throughout the process, we have identified and characterized at least 5 additional partial structures, all without having to chemical isolated any of them!