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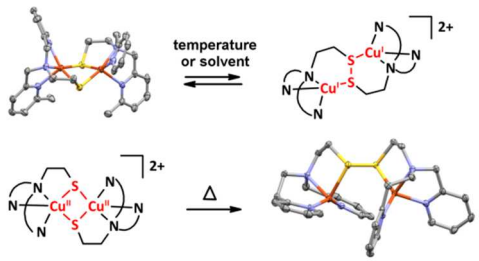

The redox equilibrium between dinuclear Cu^{II} μ-thiolate and Cu^{I} disulfide structures has been studied. It was found that the equilibrium between the two species can depend on both solvent and temperature, and that the μ-thiolate complex forms under kinetic control, whereas the disulfide complex is the most stable species. The energies of the μ-thiolate and disulfide complexes for two series of related ligands have been calculated with DFT; the results rationalize the experimentally observed structures.