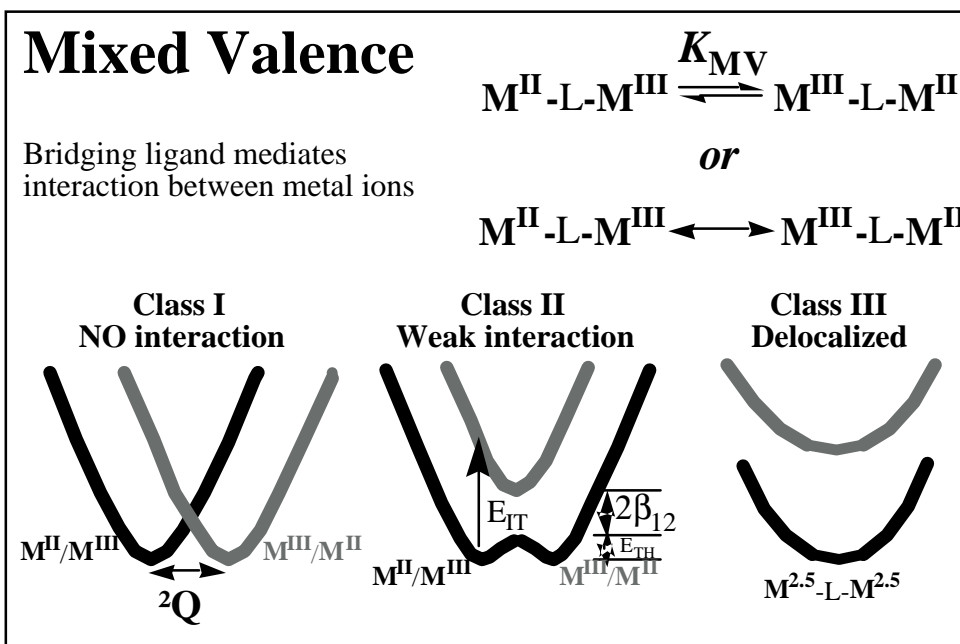
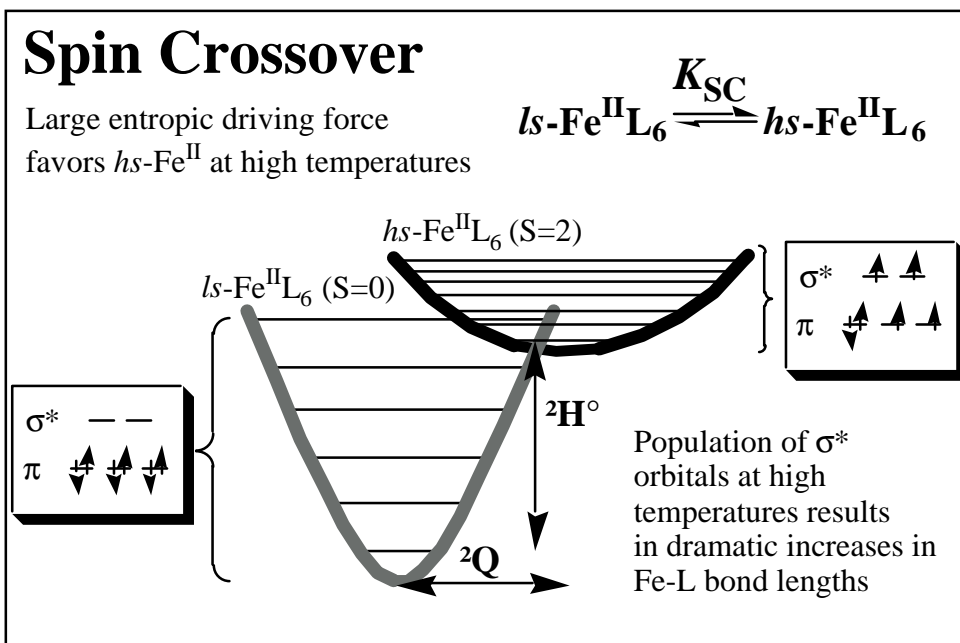


OPEN SHELL MOLECULES AND MATERIALS ARE WELL-SUITED FOR PREPARING ELECTRONICALLY LABILE MATERIALS

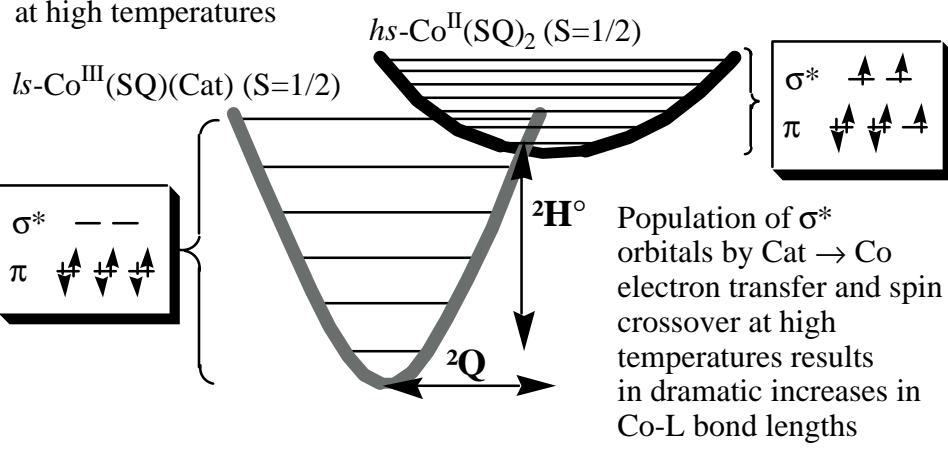
There are several classes of molecules and materials whose electronic structures are a function of temperature, pressure, or other external stimuli. Such materials are important in developing our understanding of electron transfer, conductivity, magnetism, light absorption, and related phenomena. In addition, electronically labile¹ materials form the basis for new materials.

Electronically labile molecules are those that exhibit spin crossover (SC), mixed valence (MV), or valence tautomerism (VT). Molecules with unpaired electrons are uniquely suited for preparing electronically labile materials.



Valence Tautomerism

Large entropic driving force favors $hs\text{-Co}^{\text{II}}$ at high temperatures



- (1) See the following and references cited therein: Adams, D.M.; Hendrickson, D.N. *J. Am. Chem. Soc.* **1996**, *118*, 11515-11528.