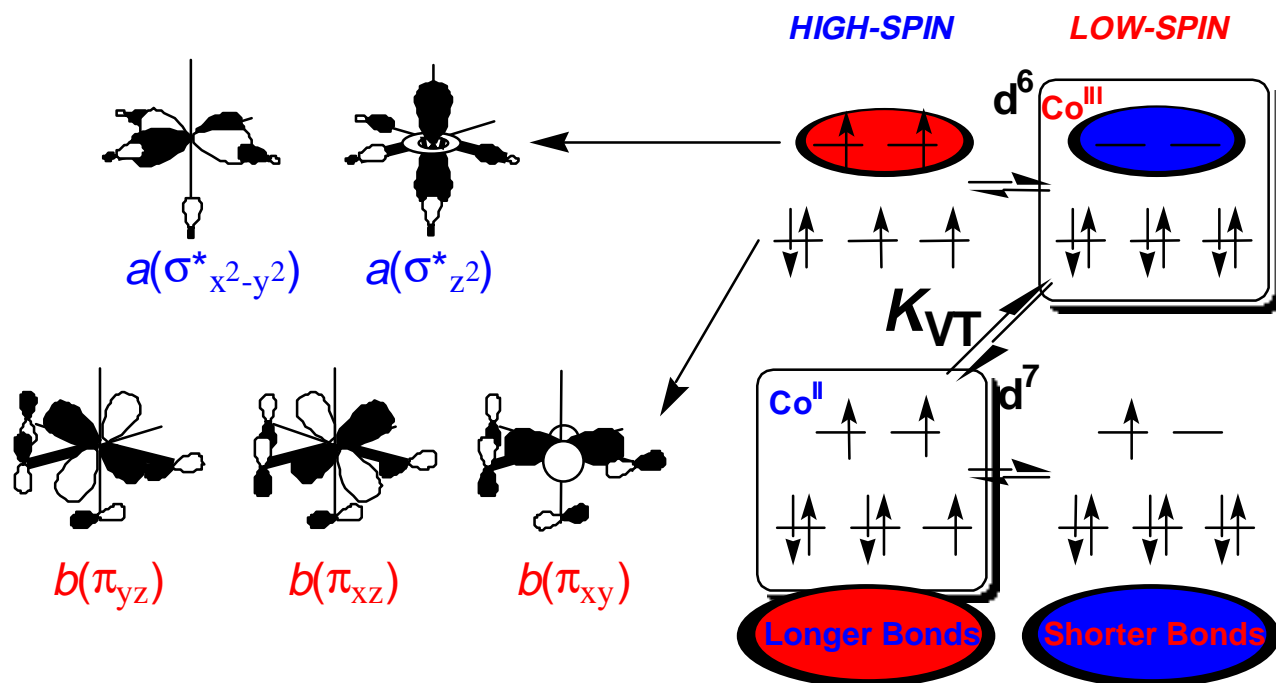


$$-RT \cdot \ln K_{VT} = \Delta G^\circ = \Delta H^\circ - T \cdot \Delta S^\circ$$

Generally, $\Delta H^\circ < 0$, $\Delta S^\circ > 0$

Both tautomers are thermally accessible
for the correct balance of

ΔH° and ΔS°



In the high spin, Co^{II} tautomer, increased vibrational entropy exists due to longer bonds and smaller force constants (sigma antibonding orbitals are occupied). Electronic entropy also increases slightly in the Co^{II} tautomer due to metal orbital degeneracy and magnetic coupling between metal and ligand.

Note the similarity to spin-crossover.