

Supporting Information

Figure S1. Plots of the metal-metal bonding energy (ΔE_{mbe}) as a function of the square of the spin density (ρ_s^2) in the $S=S_{\text{max}}$ state for same-valence $d^n d^n$ $[\text{M}_2\text{Cl}_9]^{3-}$ and $[\text{M}'\text{M}''\text{Cl}_9]^{3-}$ systems.

Figure S2. Plots of the spin polarization energy (ΔE_{spe}) as a function of the square of the spin density (ρ_s^2) in the $S=S_{\text{max}}$ state for same-valence $d^n d^n$ $[\text{M}_2\text{Cl}_9]^{3-}$ and $[\text{M}'\text{M}''\text{Cl}_9]^{3-}$ systems.

Figure S3. Plots of the metal-metal bonding energy (ΔE_{mbe}) and spin polarization energy (ΔE_{spe}) as a function of the square of the spin density (ρ_s^2) in the $S=S_{\text{max}}$ state for mixed-valence $d^{n-1} d^n$ $[\text{M}_2\text{Cl}_9]^{2-}$ systems.

Figure S1

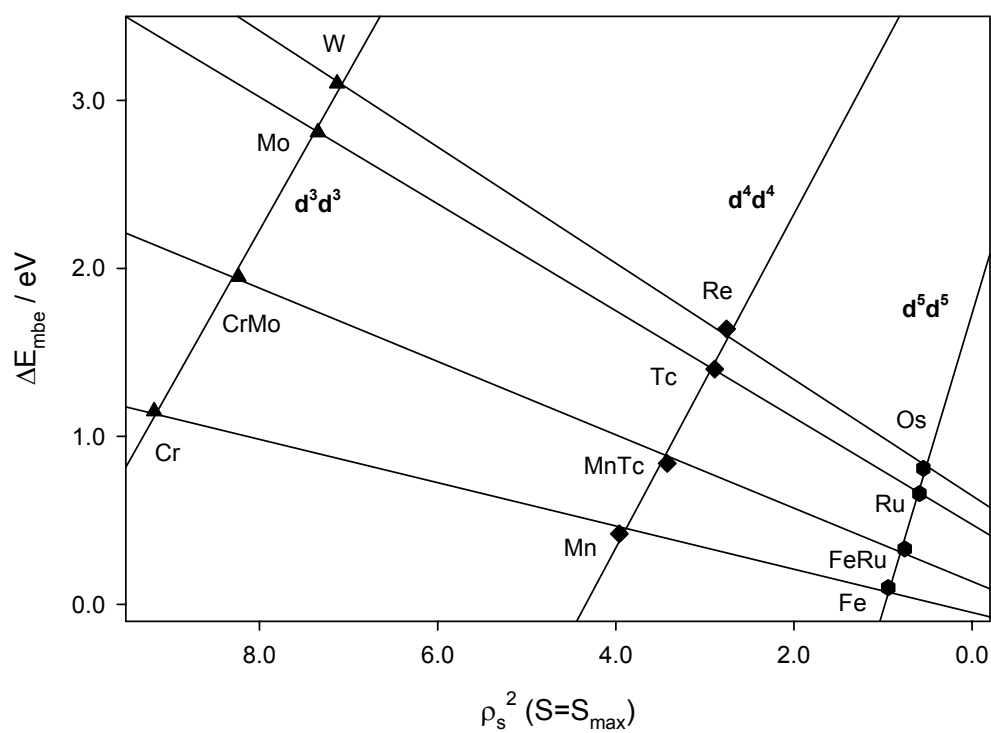
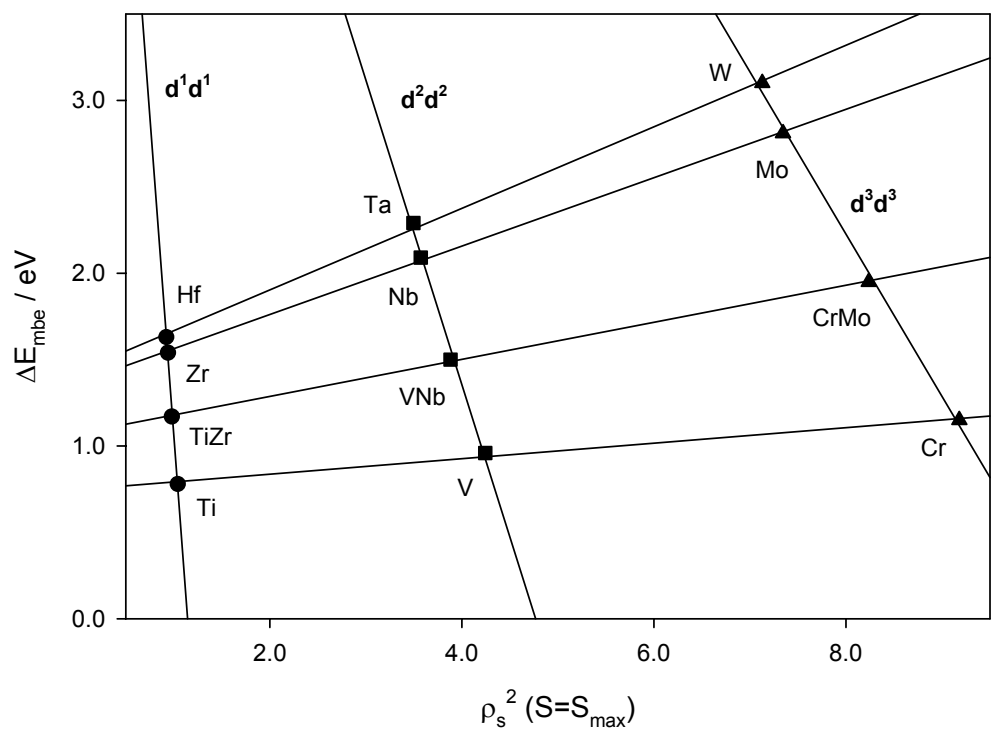


Figure S2

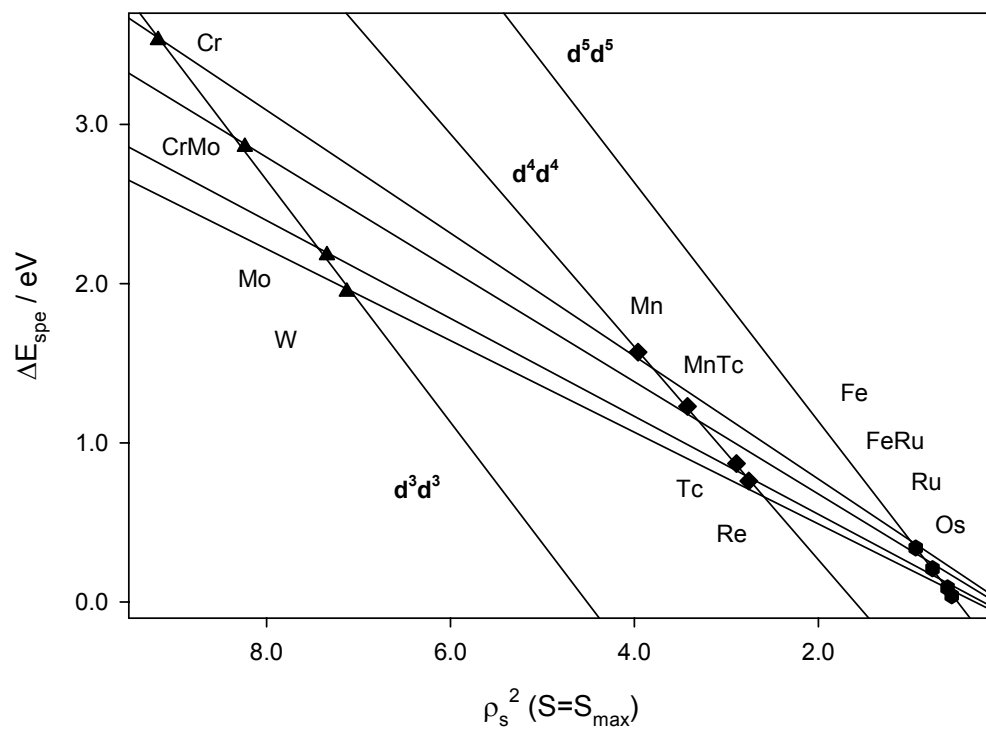
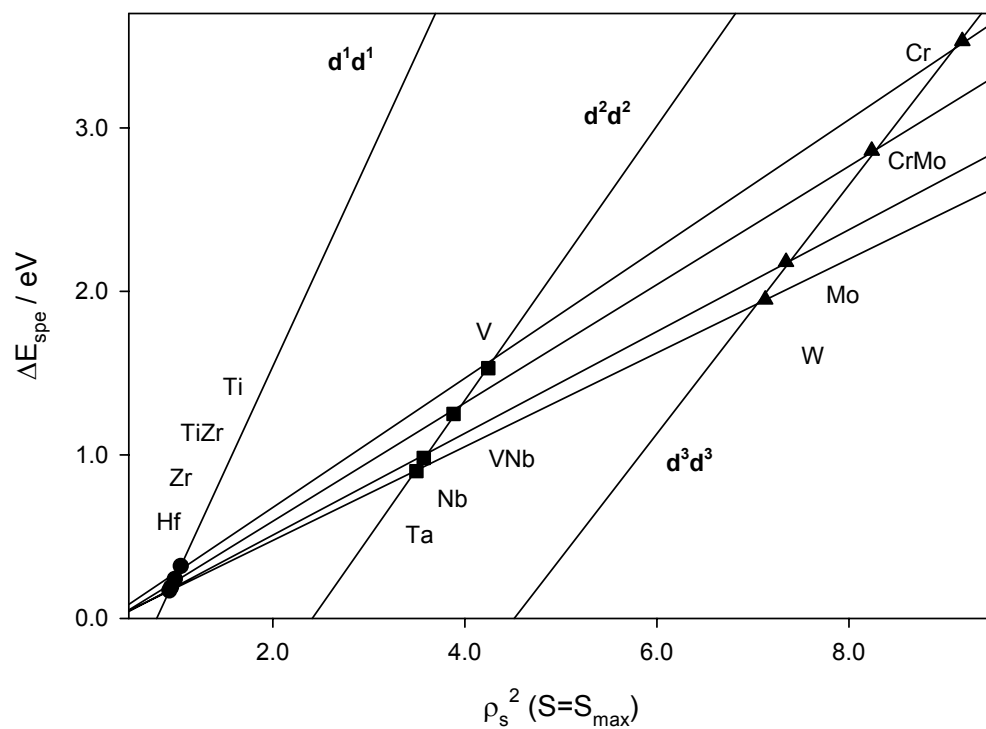


Figure S3

