

Group 3: Yttrium and Lutetium (& Lawrencium)

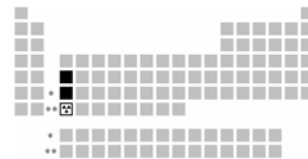


Figure 3.1 Periodic Trends, La vs. Lu

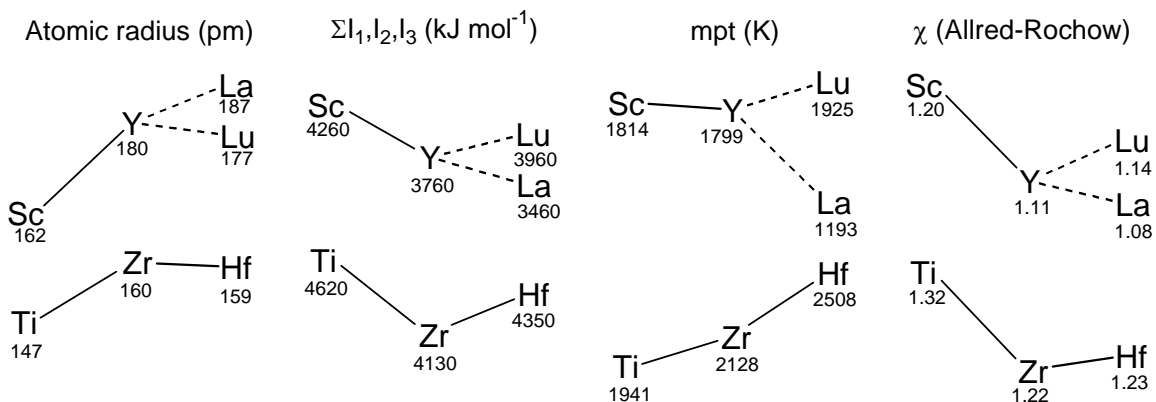


Table 3.1. Representative hard, intermediate and soft ligands and metals.

	Ligands	Metals
Hard	F ⁻ , Cl ⁻ , H ₂ O, NH ₃	Na ⁺ , K ⁺ , Y ³⁺ , Ln ³⁺ , Al ³⁺ , Fe ³⁺ , Co ³⁺
Intermediate	Br ⁻ , pyridine	Fe ²⁺ , Co ²⁺ , Ni ²⁺
Soft	I ⁻ , H ⁻ , CN ⁻ , CO, R ₃ P, π-acceptors	M ⁰ , Pd ²⁺ , Pt ²⁺

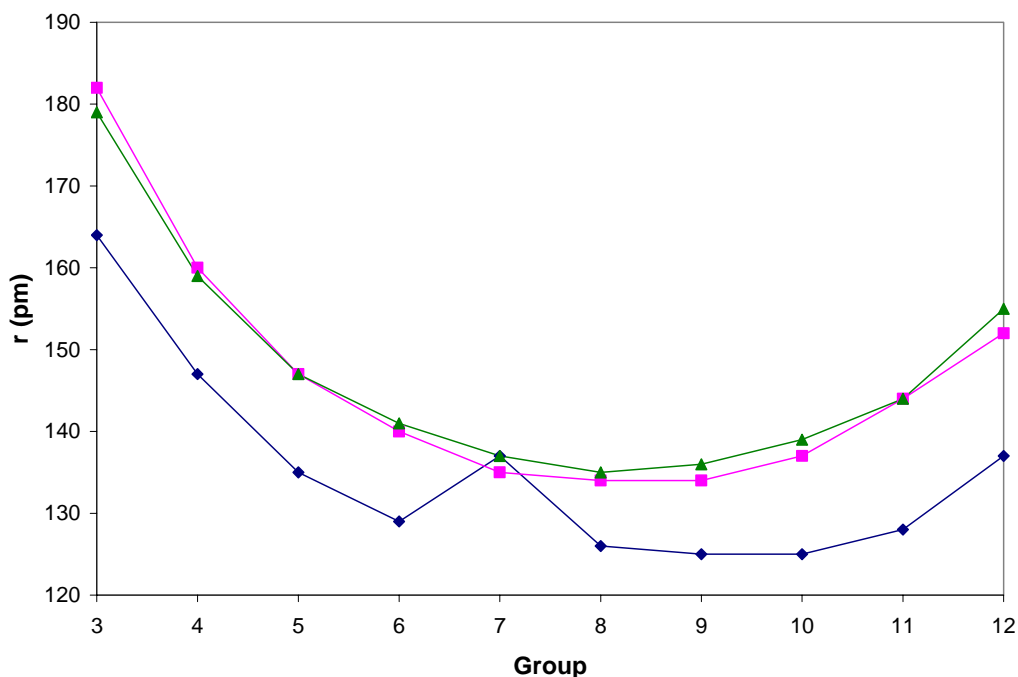


Figure 3.2. Metallic radii of the d-block elements

