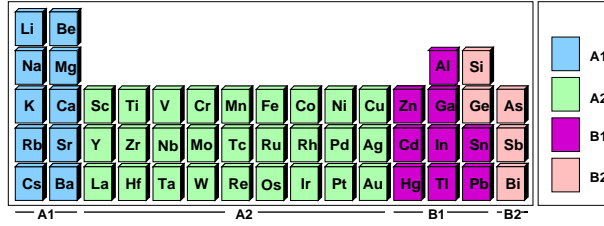


3. Strukturchemie von Metallen und Legierungen

3.1. Bindung, Konzepte, Radien

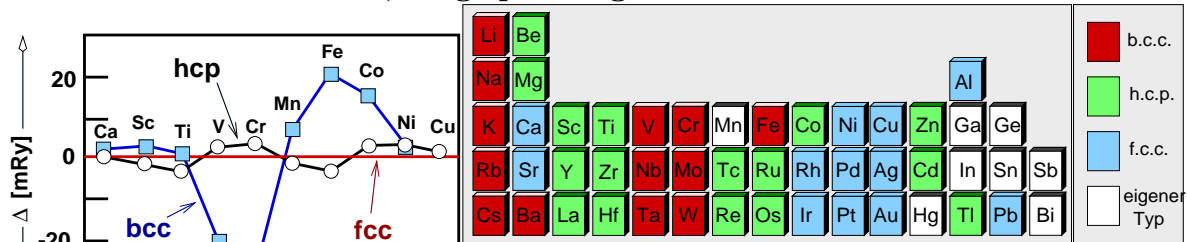


Einteilung der Metalle:

| | A1 | | A2 | | | | | | | | | | | | | B1/B2 | | | |
|---------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|----|--|--|
| EN | Li | Be | | | | | | | | | | | | | | | | | |
| r _{Metall} | 156 | 113 | | | | | | | | | | | | | | Al | Si | | |
| Valenz | 1 | 2 | | | | | | | | | | | | | | 3 | 4 | | |
| EN | Na | Mg | | | | | | | | | | | | | Al | Si | | | |
| r _{Metall} | 191 | 160 | | | | | | | | | | | | | 143 | 132 | | | |
| Valenz | 1 | 2 | | | | | | | | | | | | | 3 | 4 | | | |
| EN | K | Ca | Sc | Ti | V | Cr | Mn | Fe | Co | Ni | Cu | Zn | Ga | Ge | As | Se | | | |
| r _{Metall} | 238 | 197 | 164 | 146 | 135 | 128 | 126 | 127 | 125 | 125 | 128 | 139 | 141 | 137 | 200 | 140 | | | |
| Valenz | 1 | 2 | 3 | 4 | 5 | 6 | 6 | 6 | 6 | 6 | 1 | 2 | 3 | 4 | 5 | 6 | | | |
| EN | Rb | Sr | Y | Zr | Nb | Mo | Tc | Ru | Rh | Pd | Ag | Cd | In | Sn | Sb | Te | | | |
| r _{Metall} | 255 | 215 | 180 | 160 | 147 | 140 | 136 | 134 | 135 | 138 | 145 | 157 | 166 | 155 | 159 | 160 | | | |
| Valenz | 1 | 2 | 3 | 4 | 5 | 6 | 6 | 6 | 6 | 6 | 1 | 2 | 3 | 4 | 5 | 6 | | | |
| EN | Cs | Ba | La | Hf | Ta | W | Re | Os | Ir | Pt | Au | Hg | Tl | Pb | Bi | Po | | | |
| r _{Metall} | 273 | 224 | 188 | 158 | 147 | 141 | 138 | 135 | 136 | 139 | 144 | 157 | 172 | 175 | 170 | 176 | | | |
| Valenz | 1 | 2 | 3 | 4 | 5 | 6 | 6 | 6 | 6 | 6 | 1 | 2 | 3 | 4 | 5 | 6 | | | |

Strukturbest. Größen: Valenzen, Elektronegativitäten, metallische Radien für CN 12

3.2. Elementare Metalle, Kugelpackungen



Strukturen der Metalle

| | b.c.c. | f.c.c. | h.c.p. |
|------------------------|--------|--------|--------|
| Struktur | | | |
| Koordinations-Polyeder | | | |

Einfache Kugelpackungen