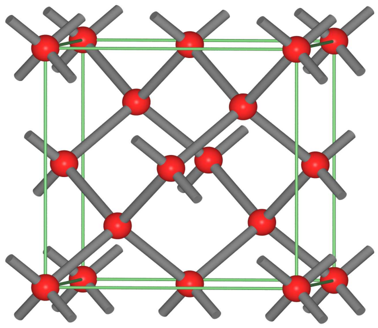
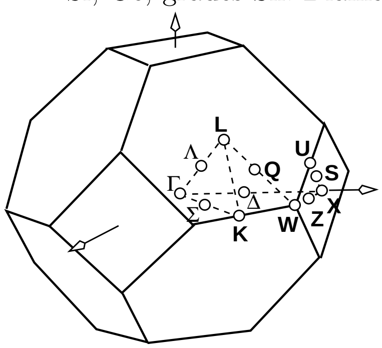
2. Elementare Metalle, Metallischer Zustand

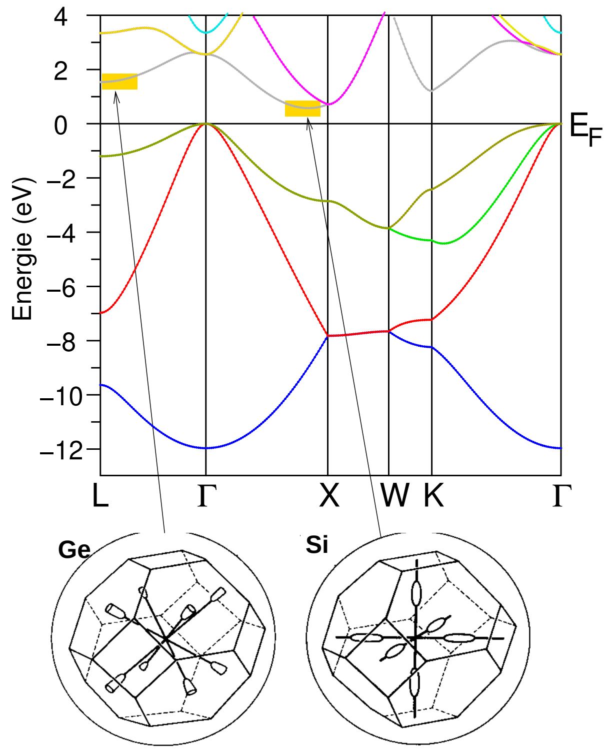
2.6. Strukturchemie IV: Elemente mit kovalenten Bindungsanteilen



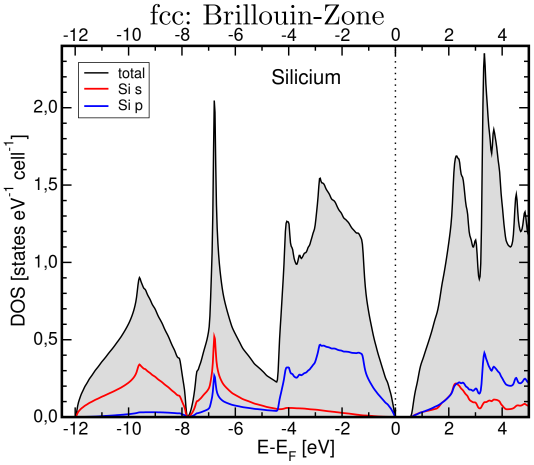
Si, Ge, graues Sn: Diamant-Str.



fcc: Brillouin-Zone



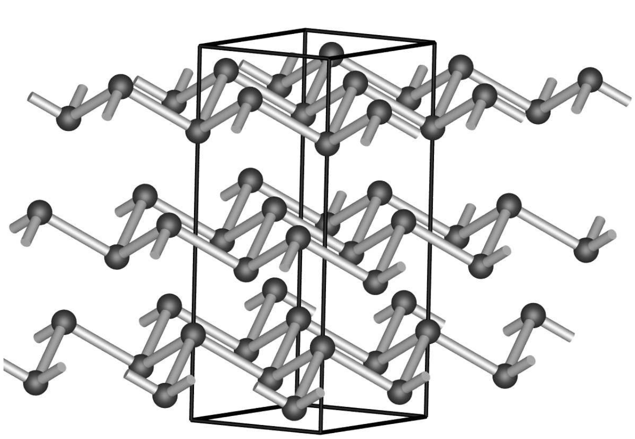
Halbleiter: charakteristische Bandstruktur



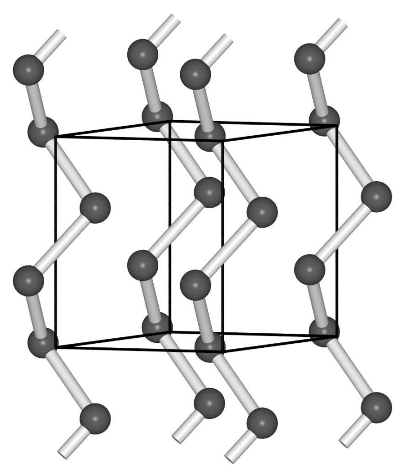
Zustandsdichte von Si

Substanz	Bandlücke	E_g [eV] bei 0 K
C (Diamant)	i	5.4
Si	i	1.17
Ge	i	0.744
Sn (α)	d	0
As		klein
Sb	d	0
Bi	d	0
Se		2.2
Te	d	0.33

Bandlücken



Arsen: Schichten (3+3-Koordination)



Selen: Ketten (2+4-Koordination)