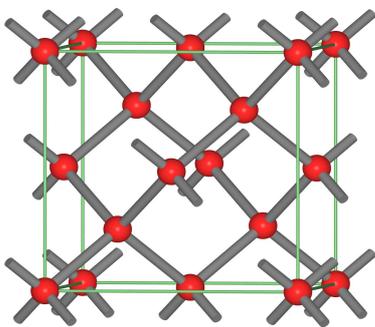


7. Tetrele (4. Hauptgruppe): C, Si

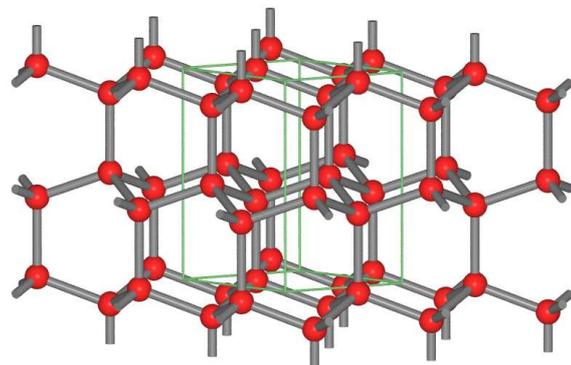
7.1. Elemente

	C (Graphit)	C (Diamant)	C ₆₀	Si
EN		2.5		1.7
IE [eV]		11.3		8.1
Farbe/Glanz	schwarz glänzend	farblos	dunkelrot glänzend	metallisch glänzend
Härte nach Mohs	< 1	10		
d _{X-X} [pm]	141.5 / 335.4	154.5	141	234
Schmp. [°C]	3550		400 (subl.)	1410
elektr. Widerst. [Ω cm]	2 · 10 ⁻⁴ (Schichten) 0.2 - 1 (⊥ Schichten)	10 ¹⁵		50
Bandlücke [eV]	0	5.8		1.17
ΔH _{Verbr.} [kJ mol ⁻¹]	393.5	395.4		
ΔH _B ⁰ [kJ mol ⁻¹]	0.0	1.9	38	

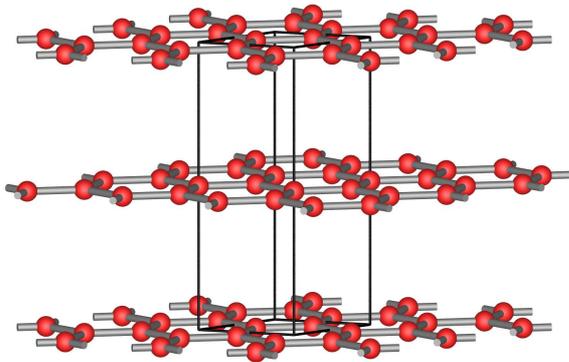
C: Graphit, Diamant



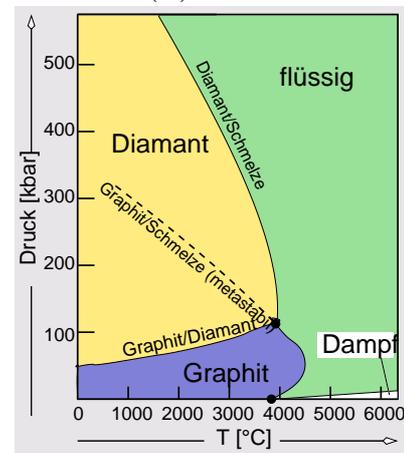
Diamantstruktur (C, Si)



hexagonaler Diamant (C)

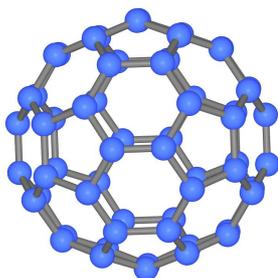


Graphit

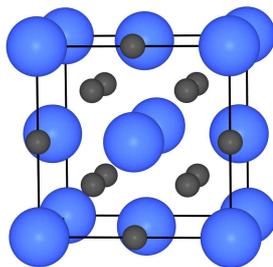


pT-Diagramm von C

C: Fullere, Fulleride

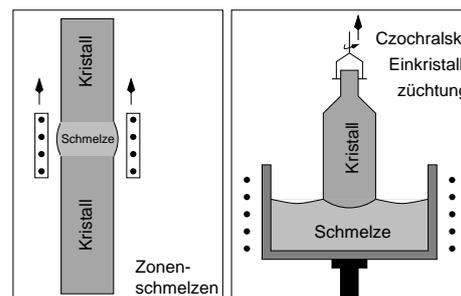


C₆₀ (Molekül)



K₃C₆₀ (Packung der Moleküle)

Silicium



Kristallzüchtungsmethoden für HL-Silicium