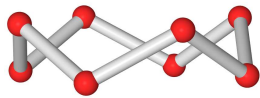
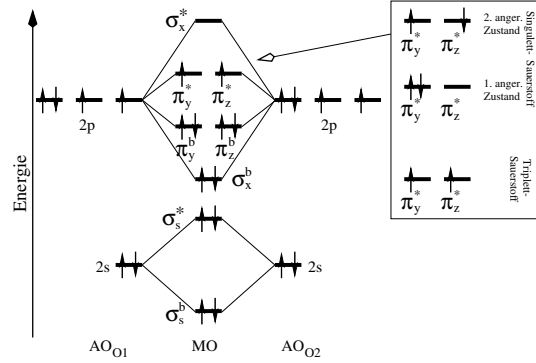


5. Chalkogene: O, S, Se, Te, Po

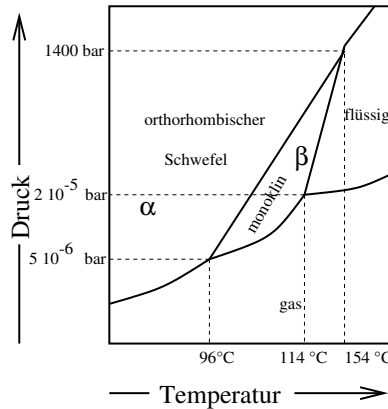
5.1. Elemente: Übersicht

	Sauerstoff	Schwefel	Selen	Tellur
E_A [eV]	-1.46	-2.07	-2.02	-1.97
EN	3.5	2.4	2.5	2.0
I_E [eV]	13.6	10.4	9.8	9.0
E_0 [V]	+1.23	+0.144	+0.40	-0.69
$EX_{2 \rightarrow 2X}$ [$\frac{kJ}{mol}$]	499	430	308	225
Mp [°C]	-219	120	217	452
d_{X-X} [pm]	66	104	117	137
$r_{X^{2-}}$ [pm]	140	184	198	222
sonstige	Affinität_zu_elektroneg._Elem. →			
	MetallischerCharakter			
	Affinität_zu_elektropos._Elem.			
Tendenzen	← Reaktionsfähigk.,Oxidationsvermögen			

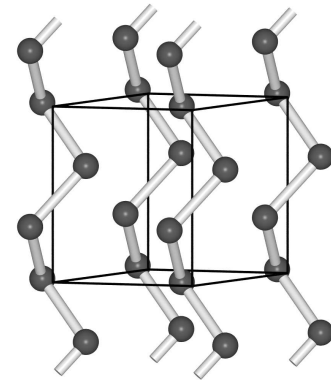
O₂: MO-Schema



Struktur von S₈



p-T-Phasendiagramm von S



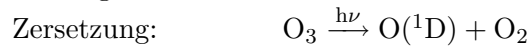
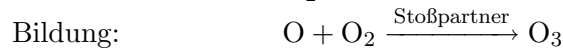
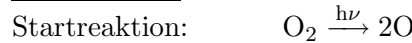
Se-Ketten im grauen Selen)

Element-Ionen

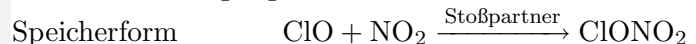
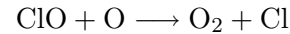
Sauerstoff			Schwefel		
Ion	Name	Beispiele	Ion	Name	Beispiele
O ²⁻	Oxid	MgO, Na ₂ O	S ²⁻	Sulfid	ZnS
O ₂ ²⁻	Peroxid	Na ₂ O ₂	S ₂ ²⁻	Disulfid	FeS ₂
O ₂ ⁻	Hyperoxid	KO ₂	..		
O ₃ ⁻	Ozonid	CsO ₃	S _n ²⁻	Polysulfide	
O ₂ ⁺	Dioxigenyl	O ₂ [PtF ₆]	S ₄ ²⁺	Tetraschwefel-Dikation	S ₄ [SO ₃ F] ₂
			S ₈ ²⁺	Octaschwefel-Dikation	S ₈ [SO ₃ F] ₂
			S ₁₉ ²⁺	Nonadecaschwefel-Dikation	

O₃: Bildung und Abbau in der Stratosphäre

Ozonbildung:



Ozonabbau:



Na-S-Zelle

