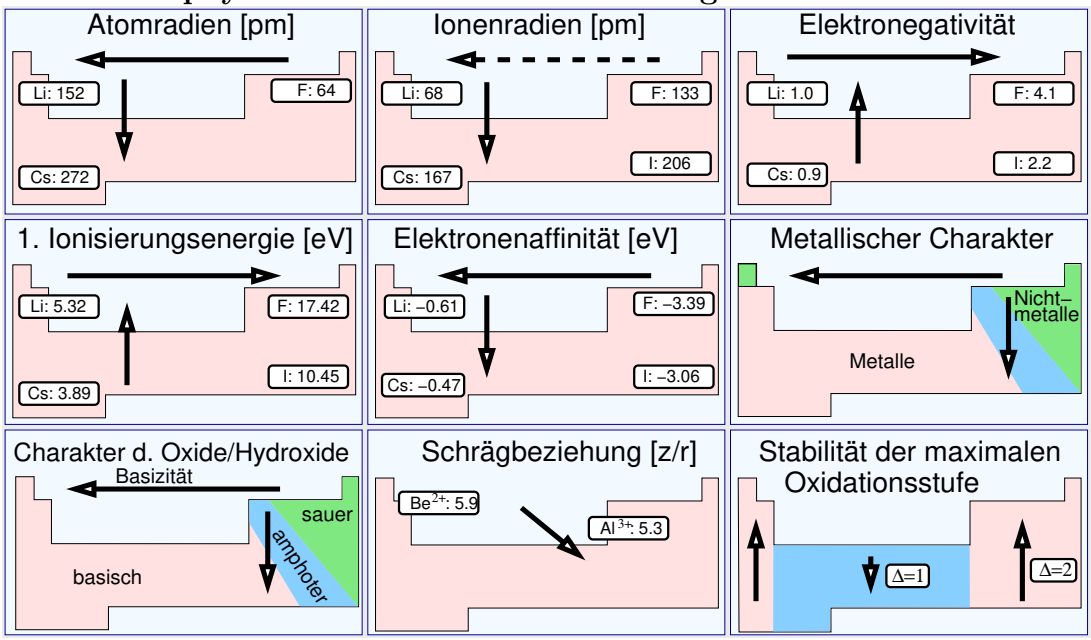
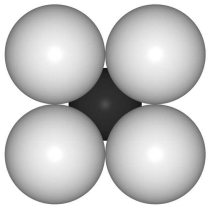
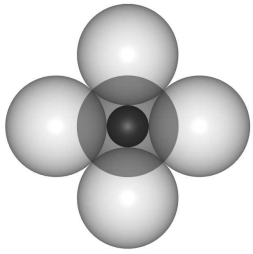
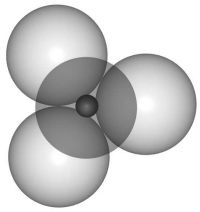
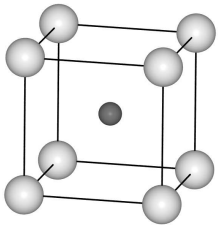
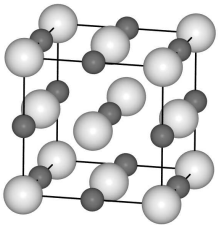
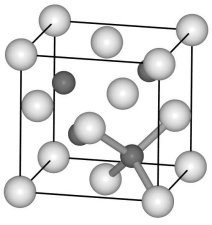
3. Tendenzen physikalischer und chemischer Eigenschaften im PSE



4. Koordinationszahlen in/Strukturen von Ionenkristallen (AB-Typen)

$CN_{Anion} = CN_{Kation}$	8	6	4
$\frac{r_{Kation}}{r_{Anion}}$	> 0.73	0.73 – 0.41	0.41 –0.22
Kationen-Koordination			
Elementarzelle			
Strukturtyp	CsCl	NaCl	ZnS (Zinkblende)
Beispiele	CsCl, CsI	LiF, LiCl, NaF, NaCl, KF, KCl, RbF, RbCl, CsF, MgO, CaO, SrO, BaO, CaS, SrS	BeO, MgTe

5. Alkali-/Erdalkalimetalle (Eigenschaften, wichtige Verbindungen)

	Alkalimetalle				Erdalkalimetalle				
	Li	Na	K	Rb/Cs	Be	Mg	Ca	Sr	Ba
Elemente	⟵ weiße, weiche, sehr luftempfindliche Metalle ⟶								
Darstellung	⟵ elektrochemisch ⟶		⟵ chemisch ⟶		⟵ elektrochemisch ⟶				chemisch
Oxide	Li_2O	Na_2O Na_2O_2	⟵ MO_2 ⟶	Suboxide	BeO	MgO (Magnesia)	CaO (Ätzkalk, gebr Kalk)		
Carbonate	Li_2CO_3 ↓	$Na_2CO_3 \cdot 10H_2O$ (Soda)	K_2CO_3 (Pottasche)				$CaCO_3$ (Calcit, Aragonit,Vaterit)		
Nitrate (alle löslich)		$NaNO_3$ (Chilesalpeter)	KNO_3 (Salpeter)						
Sulfate		$Na_2SO_4 \cdot 10H_2O$ (Glaubersalz)				$MgSO_4 \cdot 7H_2O$ (Bittersalz)	$CaSO_4 \cdot 2H_2O$ (Gips) $CaSO_4 \cdot \frac{1}{2}H_2O$	$SrSO_4$ ↓	$BaSO_4$ ↓
Halogenide	⟵ alle leicht löslich ⟶				kov.	⟵ Fluoride schwerlöslich ⟶			
sonst. Verb.	⟵ $M[Sb(OH)_6]$ ↓ ⟶		$K_2[PtCl_6]$ ↓ $KClO_4$ ↓			$MgNH_4(PO_4) \cdot 6H_2O$ ↓	$Ca_5[PO_4]_3(OH)$ (Apatit)		$BaCrO_4$ ↓
Spektren	violett-rot	gelb	violett	viol.-rosa	-	-	rot	rot	fahlgrün
Linienlagen	780	589	768.2		-	-	622.0	650-660	524.2
in [nm]	421.5		404.4		-	-	553.3	460.7	513.9