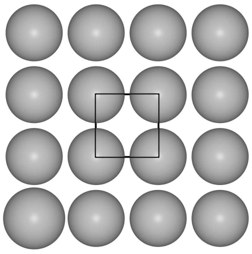
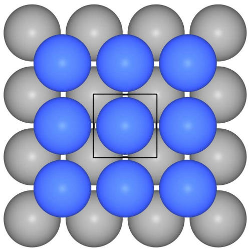
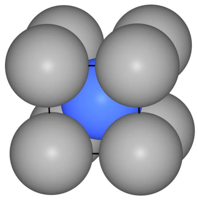
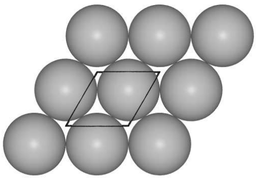
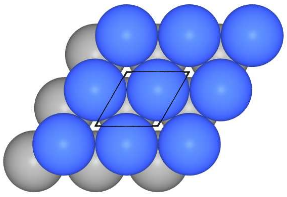
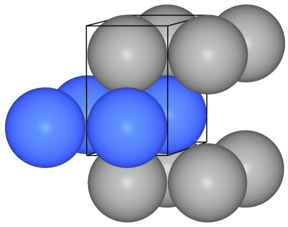
Strukturchemie von Metallen und Ionenkristallen I

I. Strukturen der Metalle

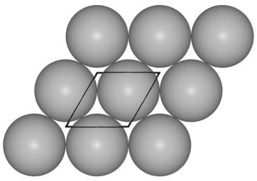
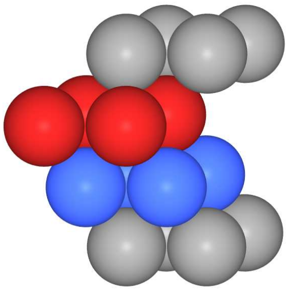
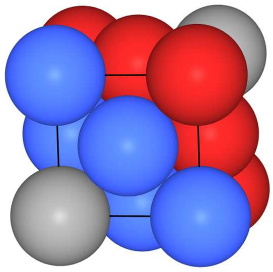
❶ kubisch innenzentrierte Kugelpackung (b.c.c.), CN 8+6, Raumerfüllung: 68 %

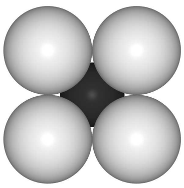
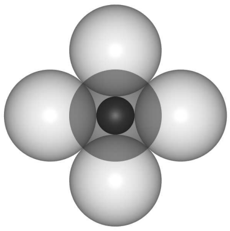
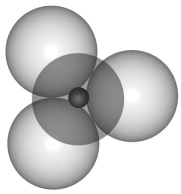
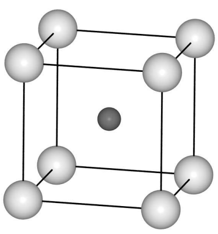
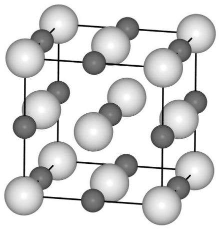
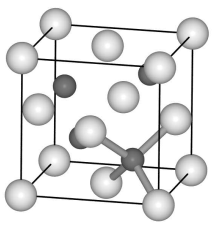
❷ hexagonal dichteste Kugelpackung (h.c.p), CN 12, Raumerfüllung: 74 %

❸ kubisch dichteste Kugelpackung (c.c.p=f.c.c.), CN 12, Raumerfüllung: 74 %

II. Strukturen von Ionenkristallen AB

$CN_{\text{Anion/Kation}} =$	8	6	4
$\frac{r_{\text{Kation}}}{r_{\text{Anion}}}$	> 0.73	$0.73 - 0.41$	$0.41 - 0.22$
Kationen-koordination			
Elementarzelle			
Strukturtyp	**CsCl**	**NaCl**	**ZnS** (Zinkblende)
M^{I}-Halogenide	CsCl, CsBr, CsI	LiF, LiCl, NaF, NaCl, KF, KCl, RbF, RbCl, CsF	-
M^{II}-Chalkogenide	-	MgO, CaO, SrO, BaO, CaS, SrS	BeO, MgTe