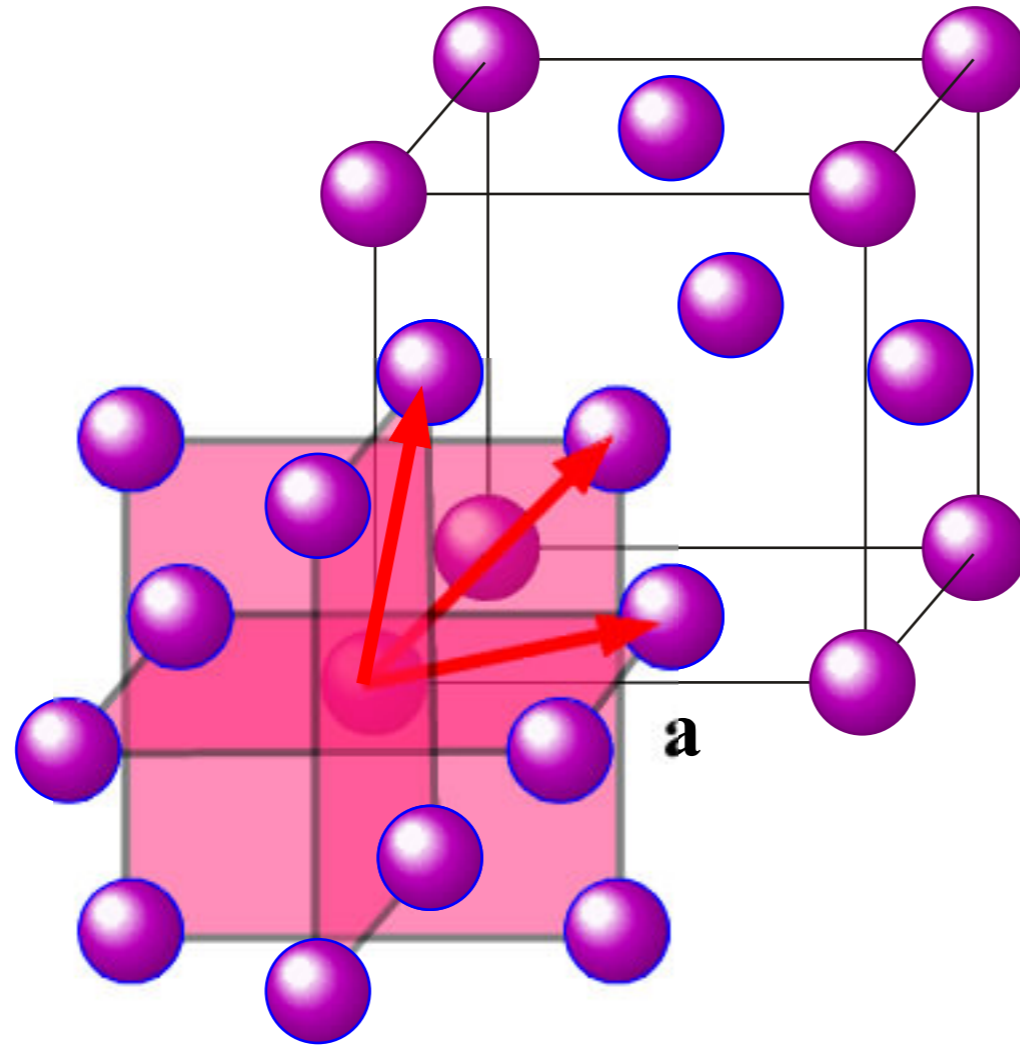
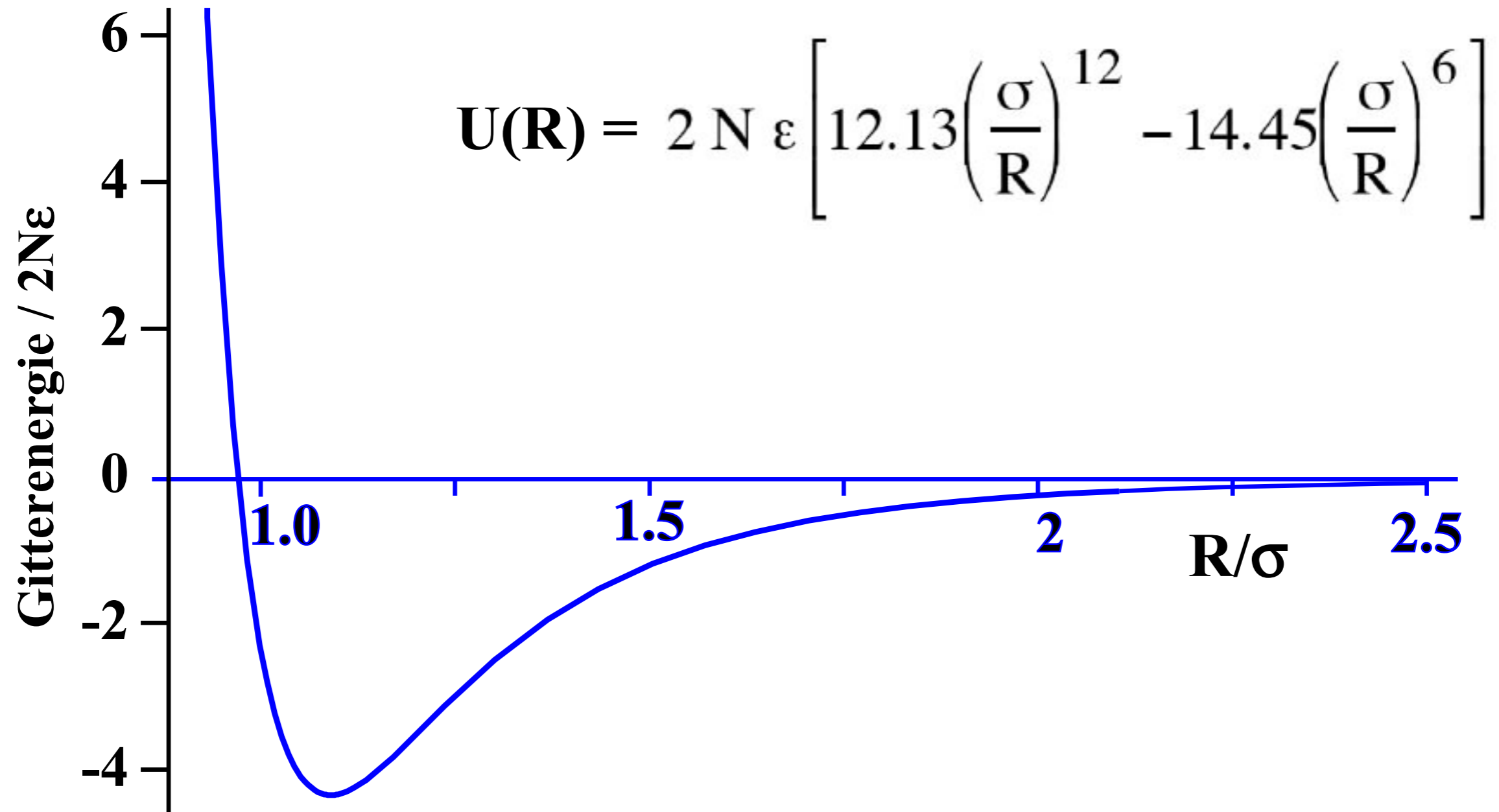


Nächste Nachbarn (fcc)

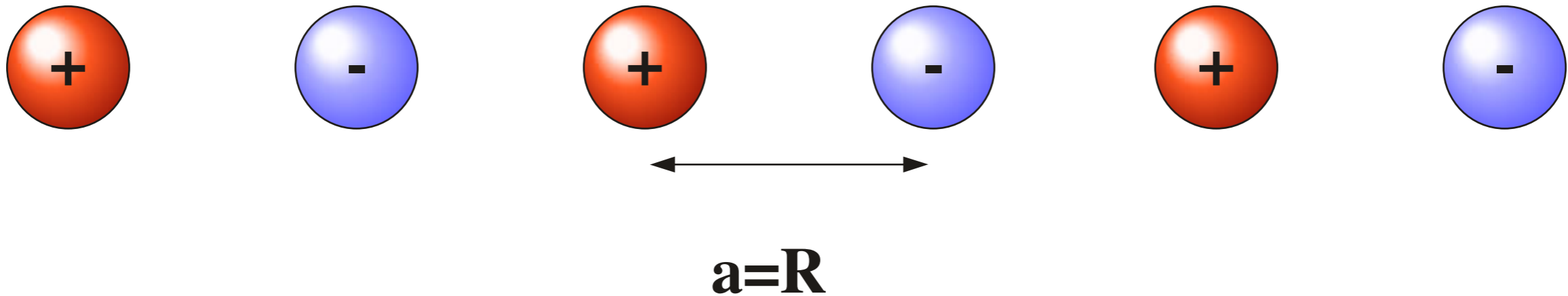


**Flächen-
zentriert
(fcc)**

Van der Waals Gitterenergie



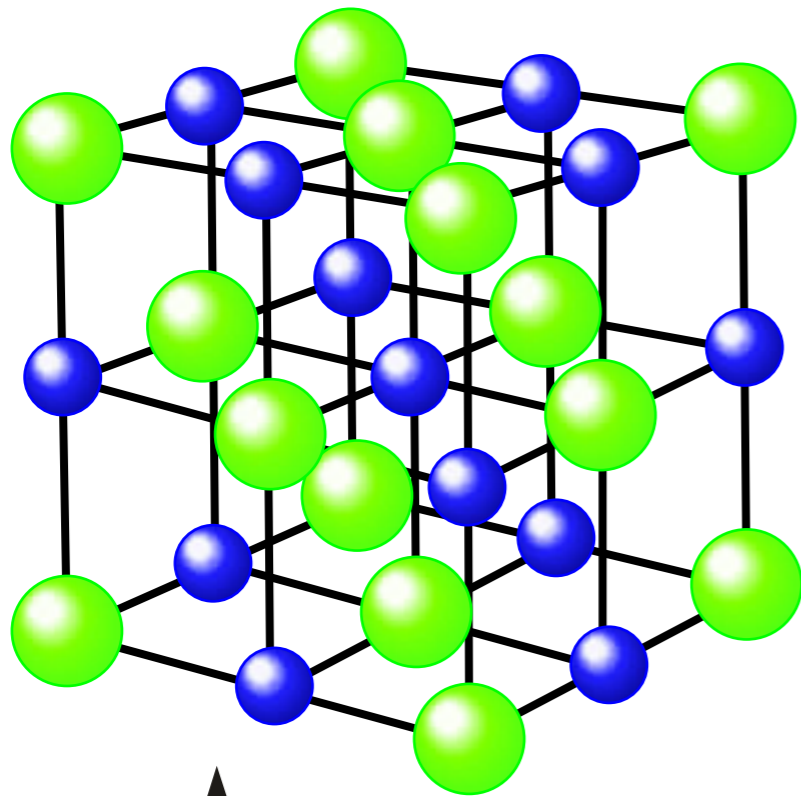
Ionische Bindung



$$\alpha = 2 \left[1 - \frac{1}{2} + \frac{1}{3} - \frac{1}{4} + \dots \right] = 2 \ln 2$$

$$\ln(1+x) = x - \frac{x^2}{2} + \frac{x^3}{3} - \frac{x^4}{4} + \dots$$

Madelungskonstante NaCl



Schale	$\pm p_{ij}$	# Nachbarn	$\sum_i \frac{1}{p_{ij}}$
1	+1	6	6
2	$-\sqrt{2}$	12	-2.49
3	$+\sqrt{3}$	8	2.13
4	-2	6	-0.87
5	$+\sqrt{5}$	24	9.87
6	$-\sqrt{6}$	24	0.07
7	$-\sqrt{8}$	12	-4.17
8	+3	30	5.83

