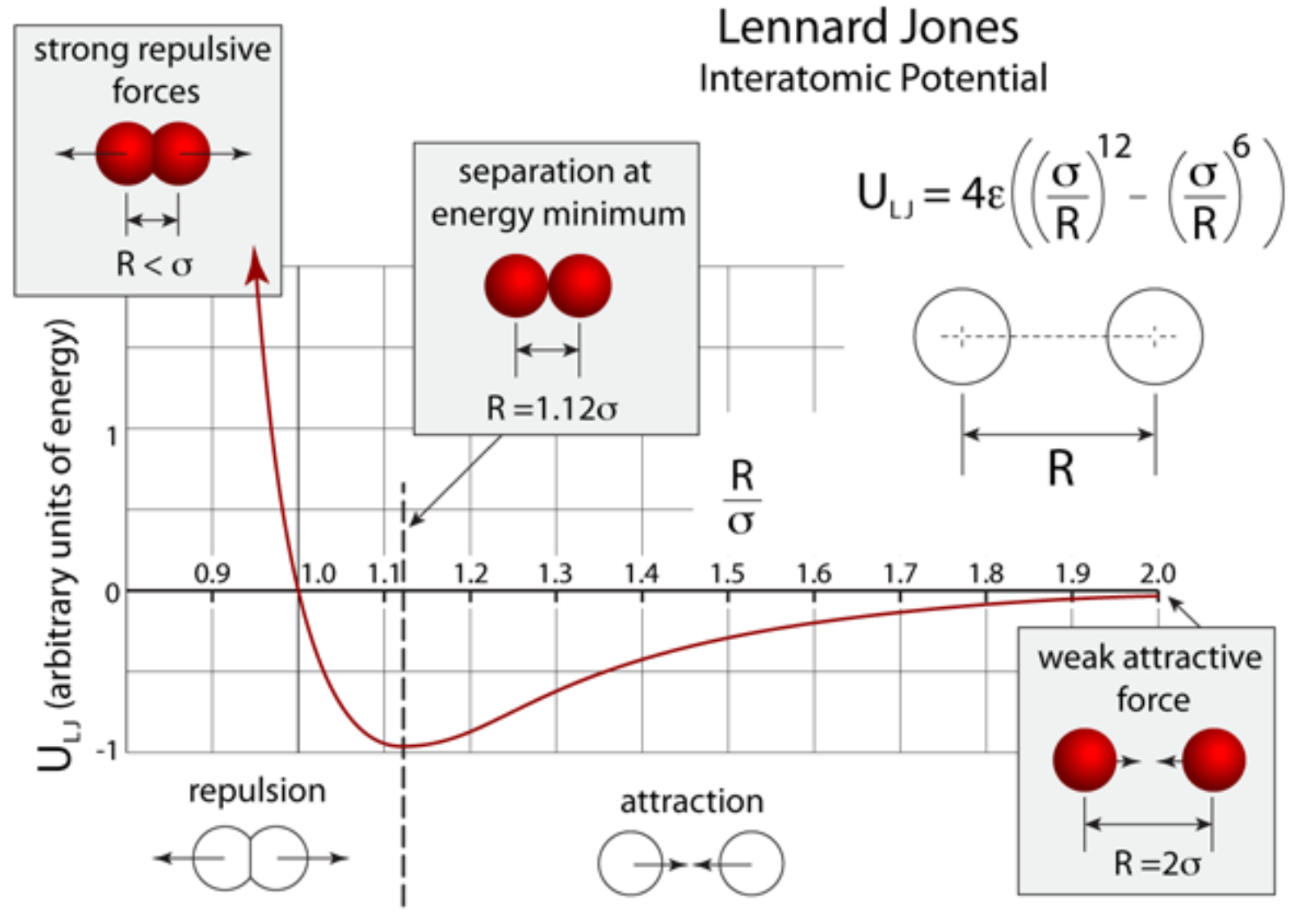
Lennard Jones
Interatomic Potential
$U_{LJ} = 4\varepsilon\left(\left(\frac{\sigma}{R}\right)^{12} - \left(\frac{\sigma}{R}\right)^{6}\right)$
strong repulsive forces
$R < \sigma$
separation at energy minimum
$R = 1.12\sigma$
R
$\frac{R}{\sigma}$
U_{LJ} (arbitrary units of energy)
1
0
-1
0.9
1.0
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
1.9
2.0
repulsion
attraction
weak attractive force
$R = 2\sigma$