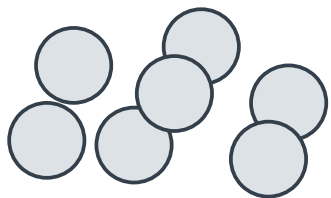


Building the SAFT residual Helmholtz energy, term by term

1. Hard-sphere reference fluid



hard, impenetrable
segments,
random packing

$$a_{hs}$$

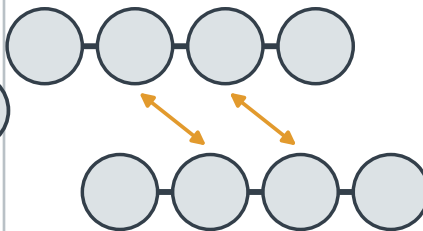
2. Chain formation (bonded segments)



m tangent segments
bonded into a chain
(amber bonds)

$$a_{hs} + a_{chain}$$

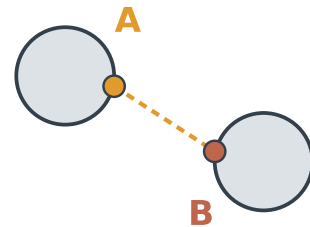
3. Dispersion (segment attraction)



attraction between
segments on different
chains (amber)

$$a_{hs} + a_{chain} + a_{disp}$$

4. Association (sites A, B)



short-range,
directional A-B
bonding site pairs

$$a_{hs} + a_{chain} + a_{disp} + a_{assoc}$$