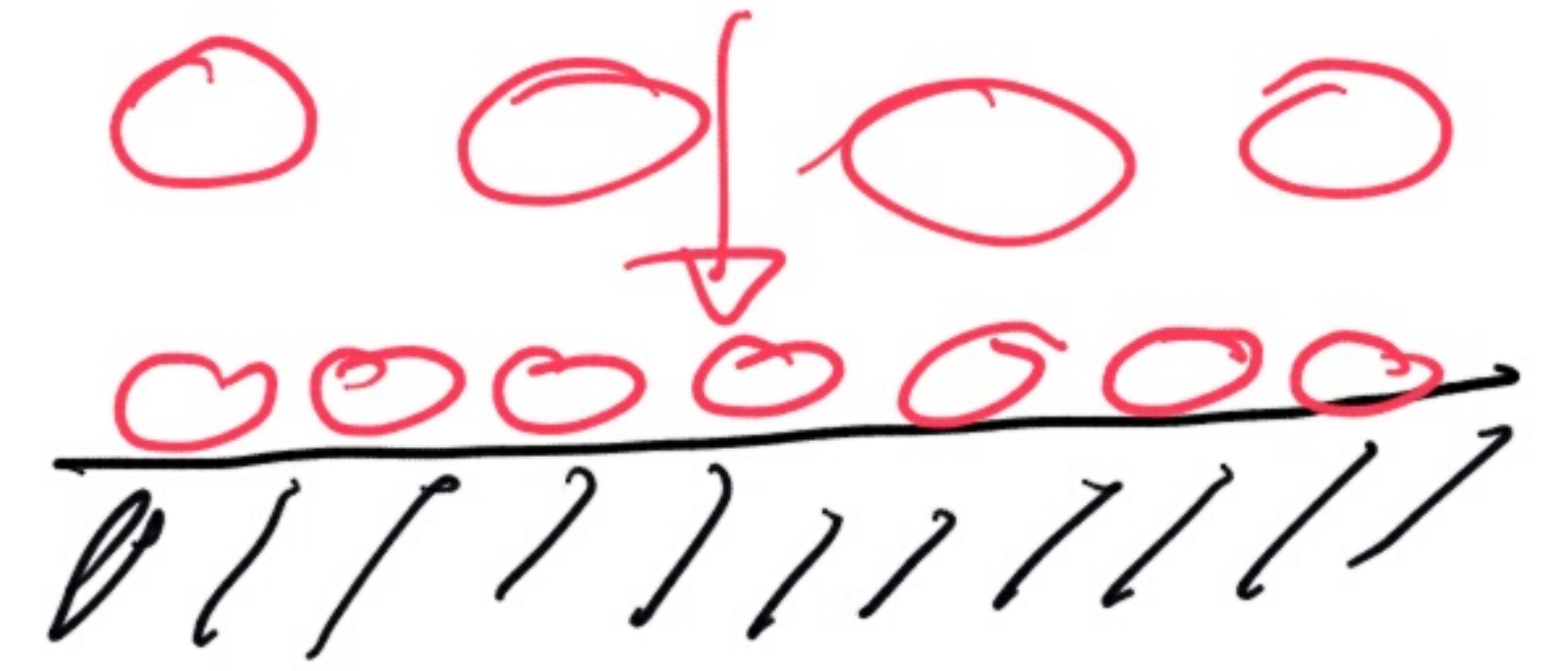
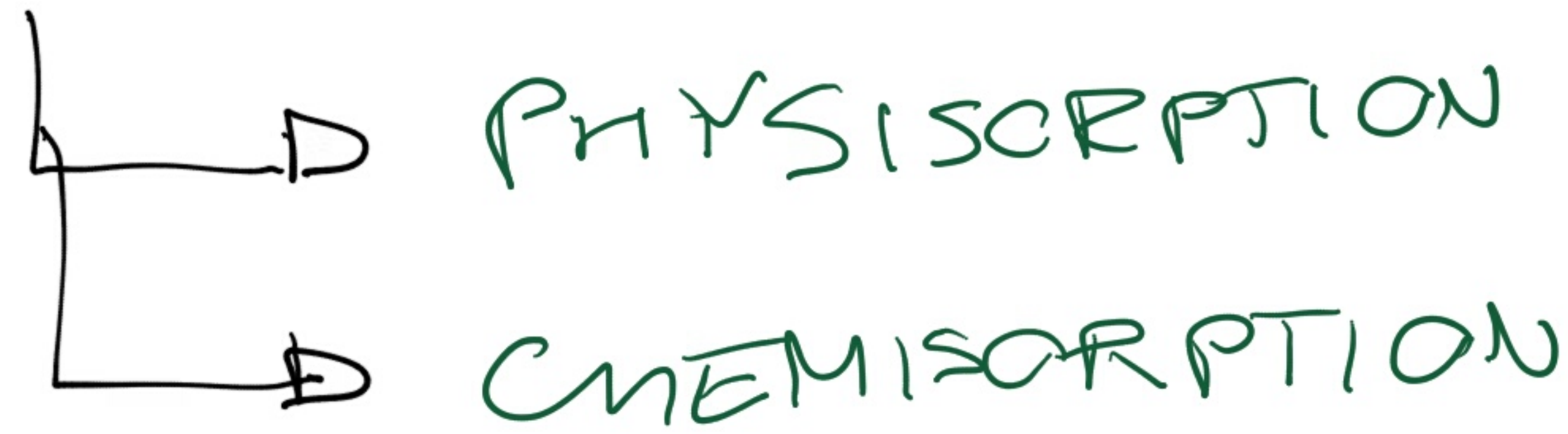


ADSORPTION

From fluid phase to solid



ADSORBENT: solid that provides the surface
ADSORBATE: gas or liquid to be adsorbed

SURFACE
COVERAGE

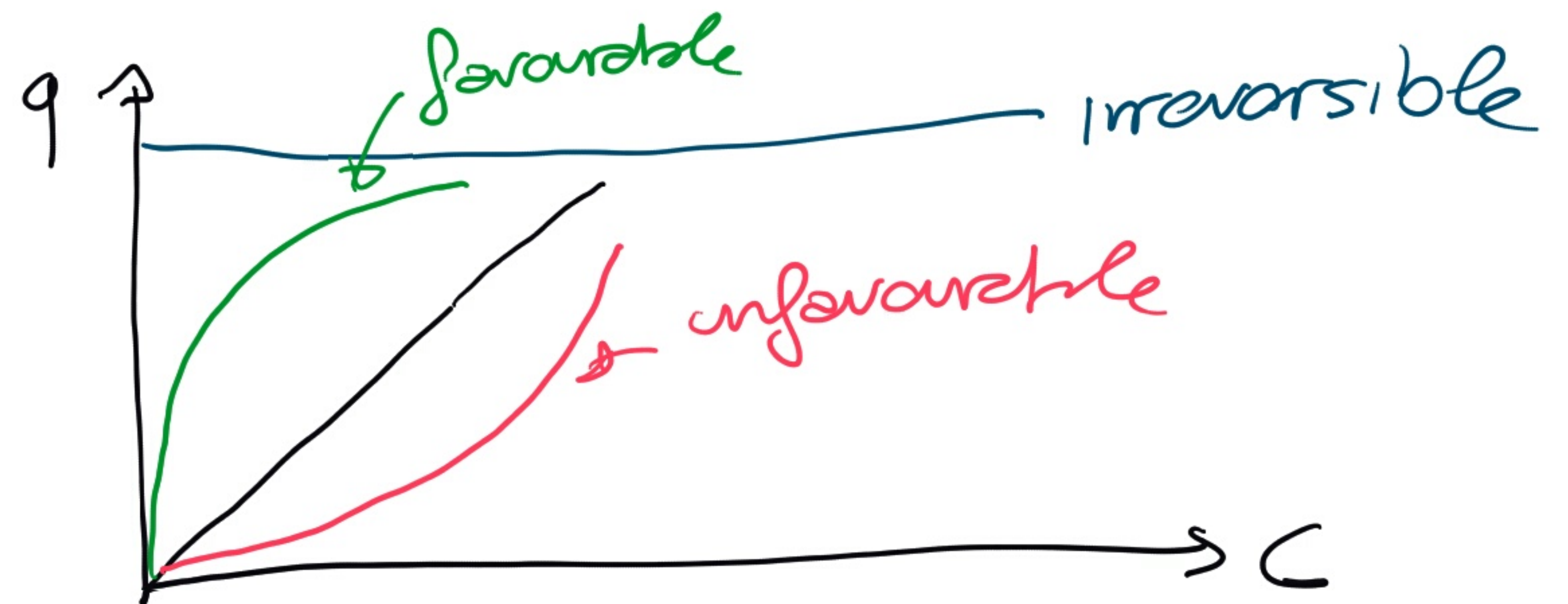
$$\theta = \frac{\# \text{ ADSORPTION SITES OCCUPIED}}{\# \text{ ADSORPTION SITES AVAILABLE}}$$

• ADSORPTION ISOTHERM

eq. relationship between the concentration in the fluid phase and the concentration in the adsorbent particles at a GIVEN T !!

C = concentration of adsorbate in the liquid

q = mass of material adsorbed per mass of adsorbent (loading)



WEAKLY
ADSORBED
GASES



$$q_e = \frac{KQ_a^0 \cdot C_e}{1 + KC_e}$$

Q_a^0 : max adsorption capacity
 K : adsorption constant
 C_e : concentration in the fluid

LIQUID



$$q_e = K_F C_e^n$$

($n > 1$: unfavourable)