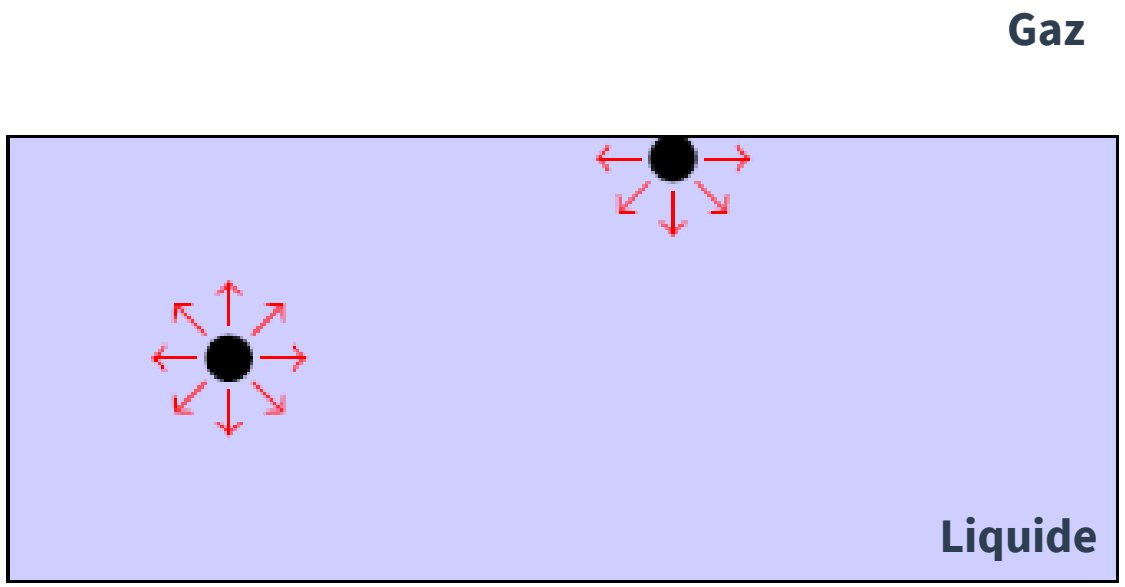
Phénomènes interfaciaux

Niveau : L3

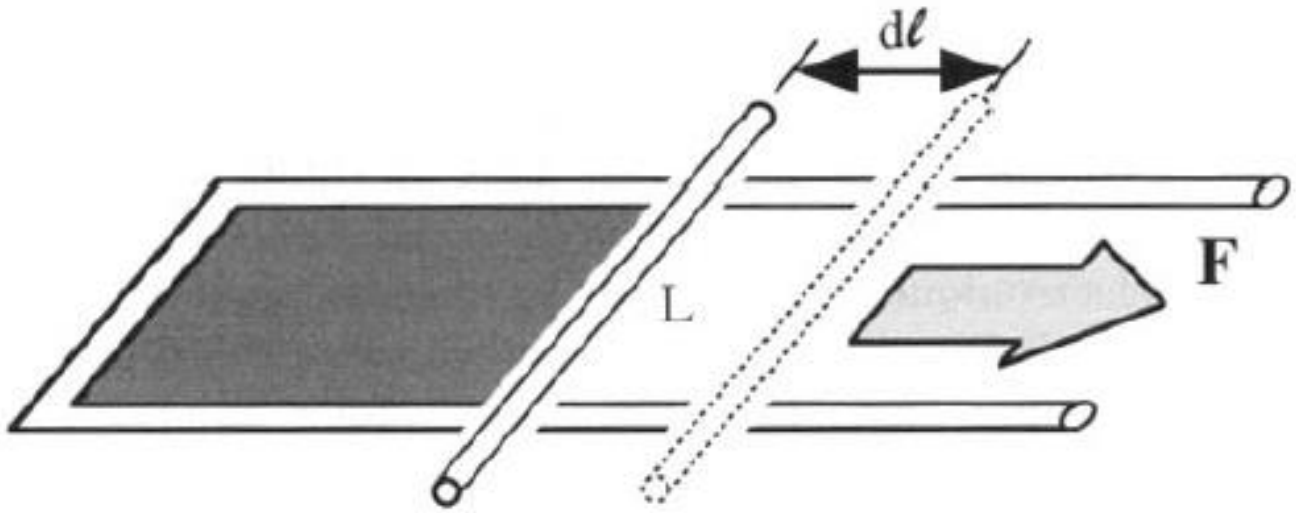
Prérequis :

- utilisation des potentiels thermodynamiques
- diffusion thermique

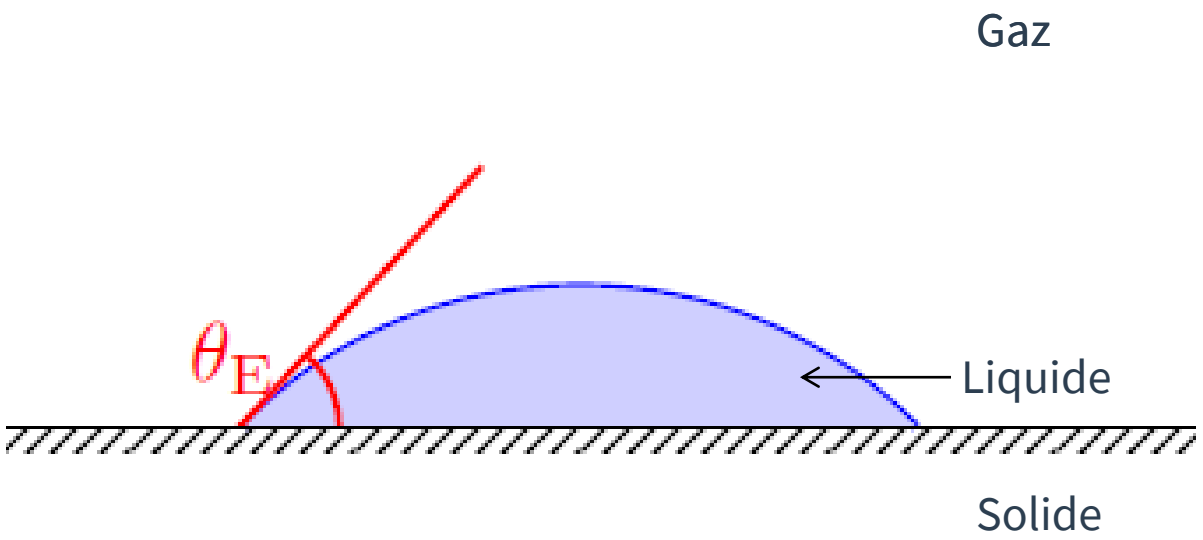
Origine microscopique



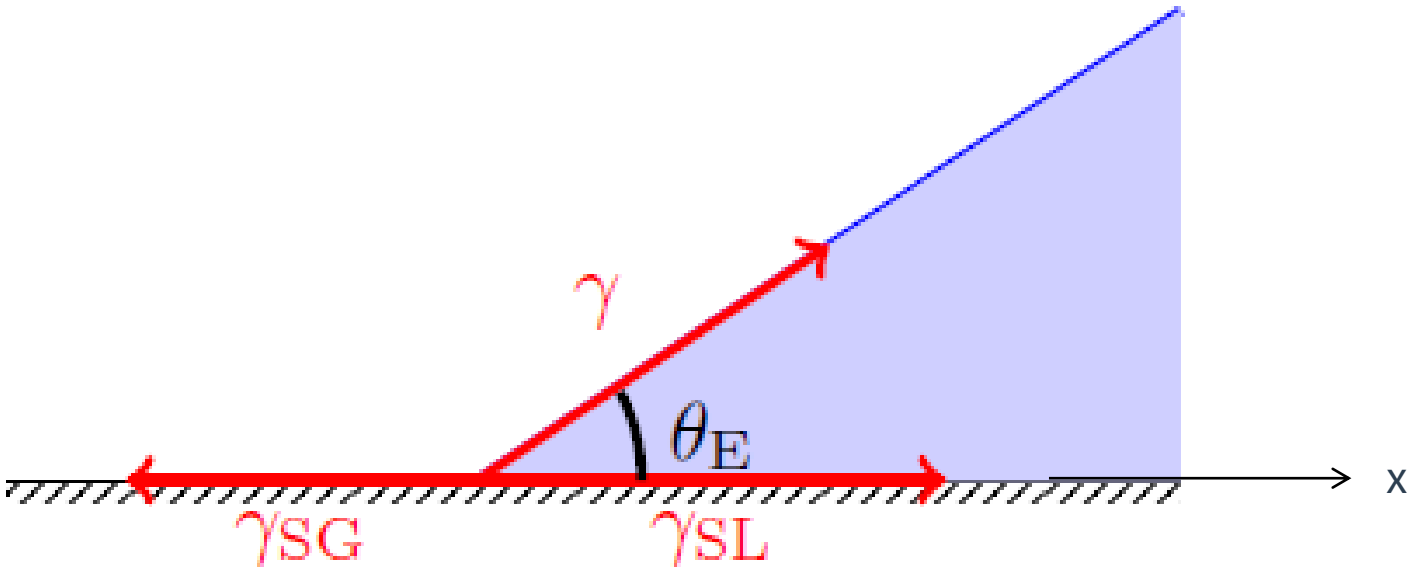
La tension de surface



Influence sur la forme de l'interface



Influence sur la forme de l'interface

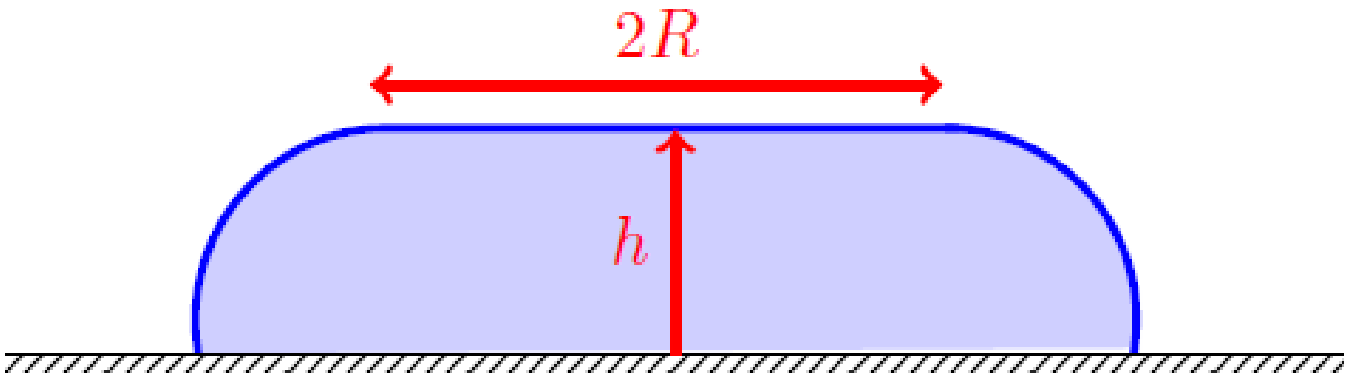


Influence sur la forme de l’interface

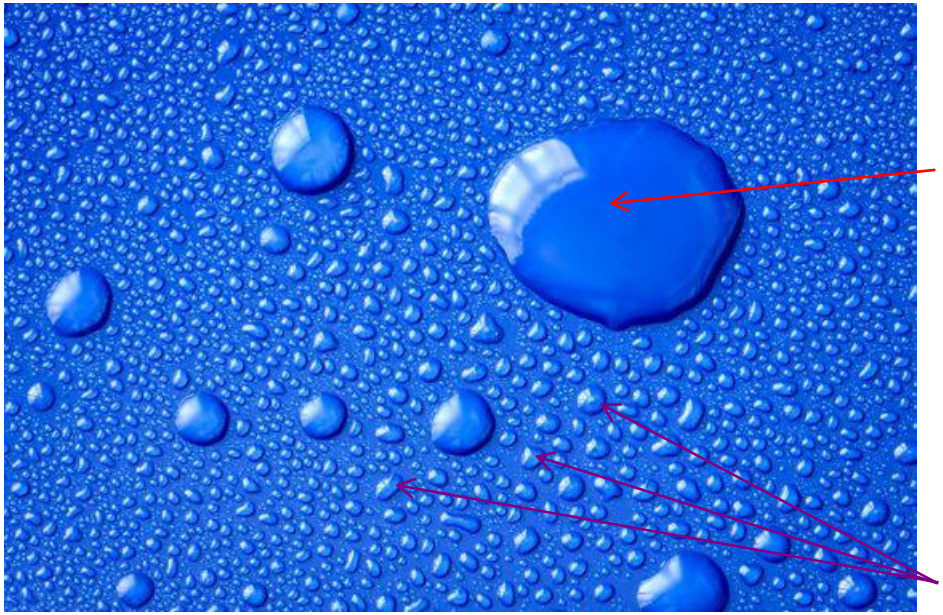
Gouttes d’eau

Gouttes de mercure

Compétition avec la gravité

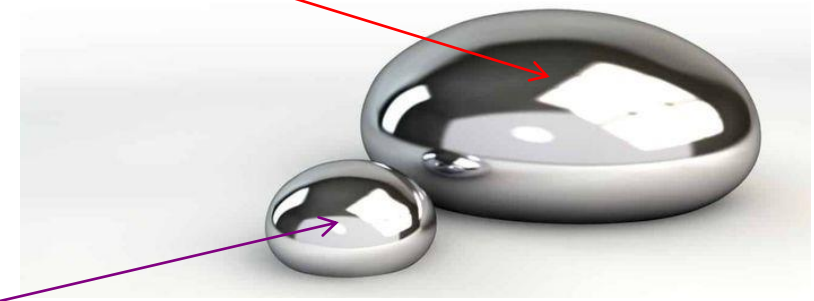


Bilan



$l > l_c$

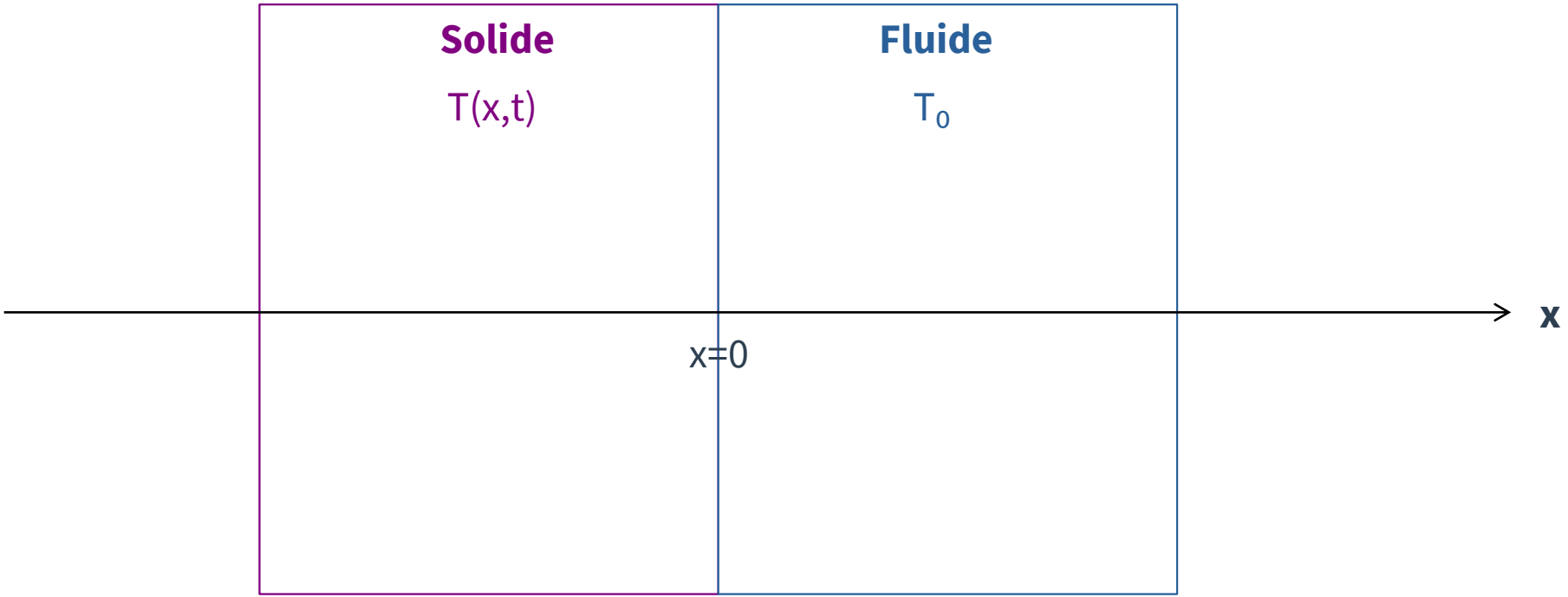
$l < l_c$



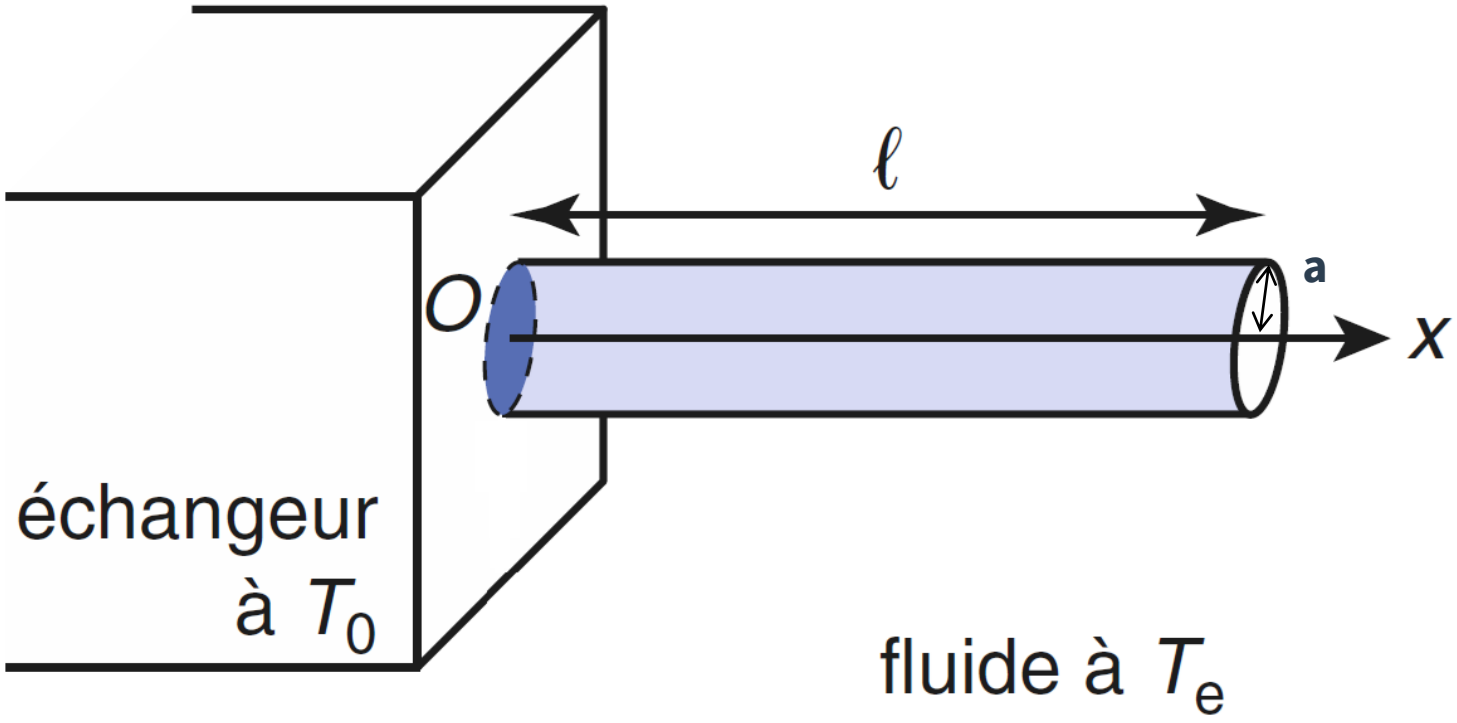
Gouttes d'eau

Gouttes de mercure

Conducto-convection



L’ailette de refroidissement



L’ailette de refroidissement

$$T(x) = (T_0 - T_e)\left[\cosh\left(\frac{x}{x_0}\right) - \frac{th\left(\frac{l}{x_0}\right) + \frac{hx_0}{\lambda}}{1 + \frac{hx_0}{\lambda} th\left(\frac{l}{x_0}\right)} sh\left(\frac{x}{x_0}\right)\right] + T_e$$