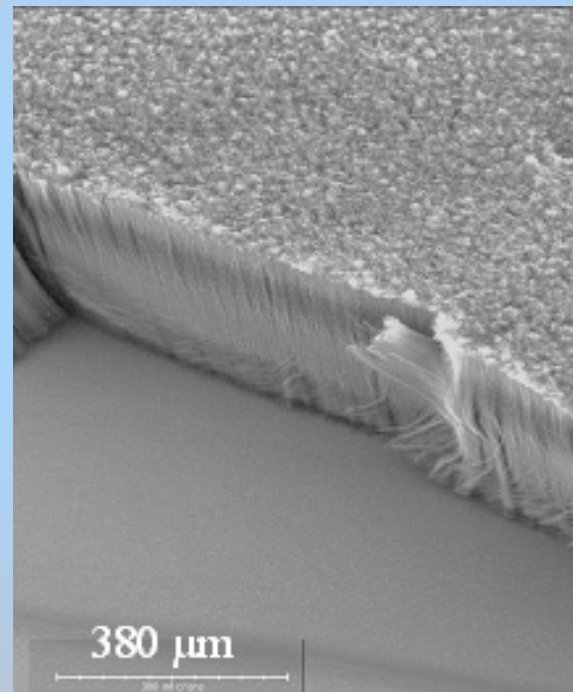
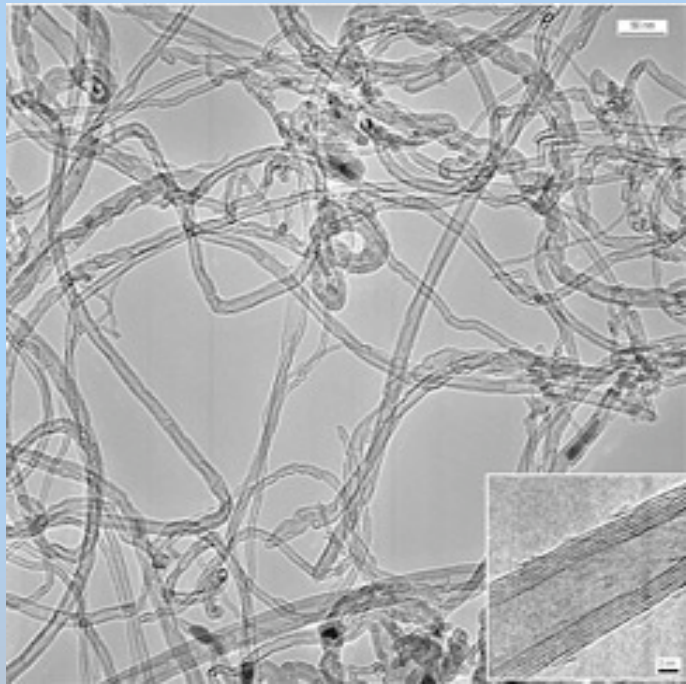


Coupe de Lycurgus

Nanotubes de carbone - 1991



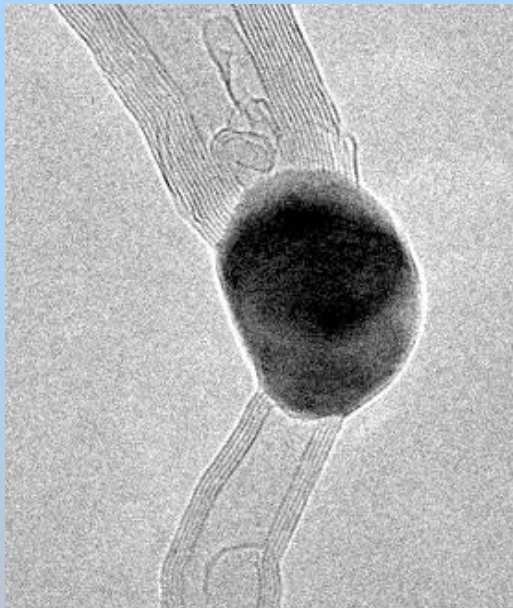
Nanotubes de carbone

- ❖ Résistance en tension : > 100 fois celle de l'acier
- ❖ Densité : 6 fois inférieure à l'acier
- ❖ Isolant ou métallique

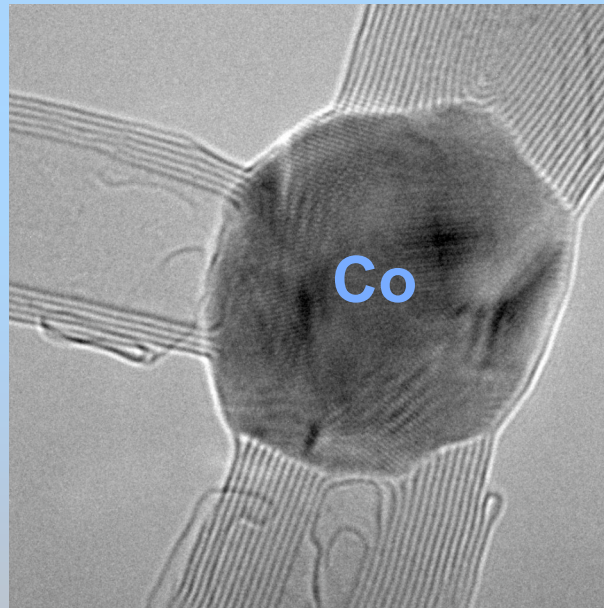


Connectique pour la nano-électronique

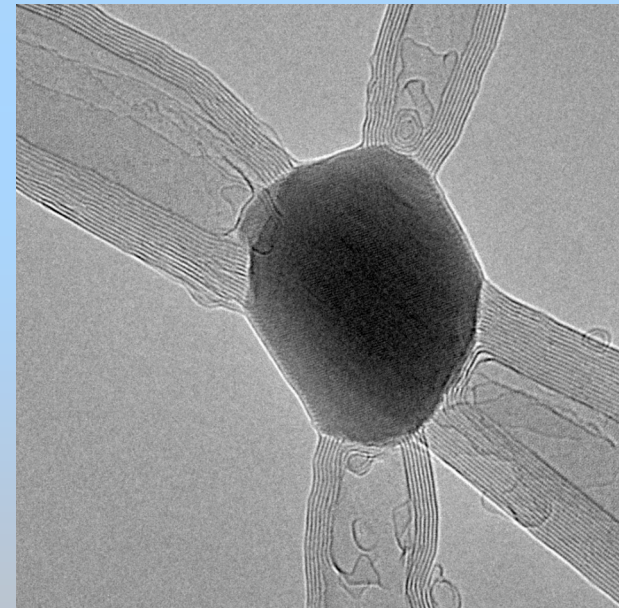
Connexion entre nanotubes de carbone et cristal de cobalt



2-terminal

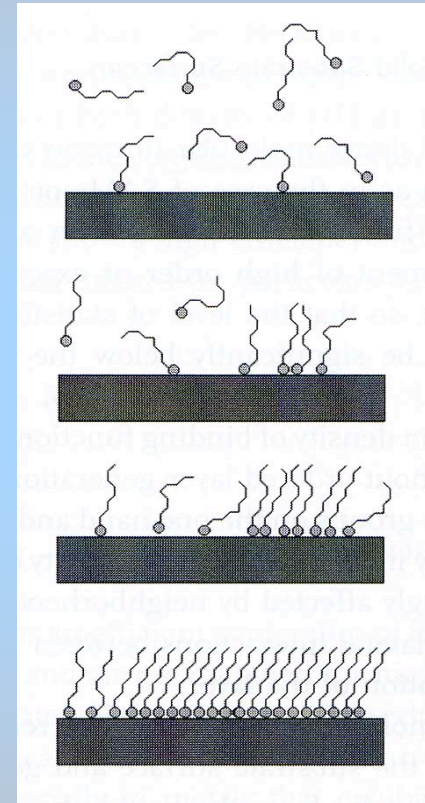


3-terminal



4-terminal

Surface autonettoyante



Matériaux hydrophobe/ hydrophile, surface antibactérienne

Nanotechnologies

Techniques pour produire, manipuler et caractériser des objets et matériaux à l'échelle nanométrique



Disque dur d'ordinateur

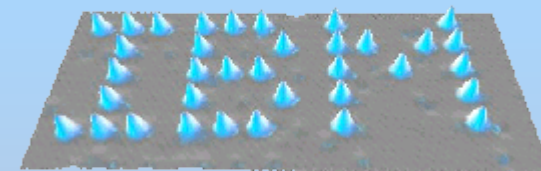
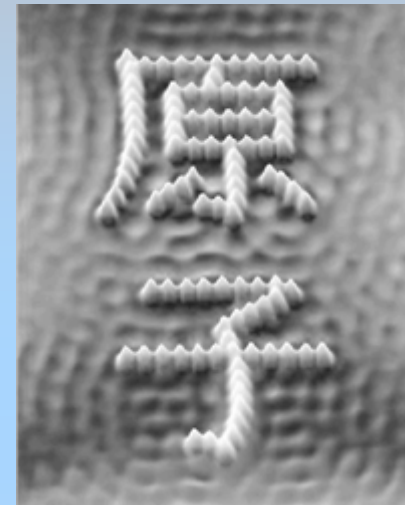
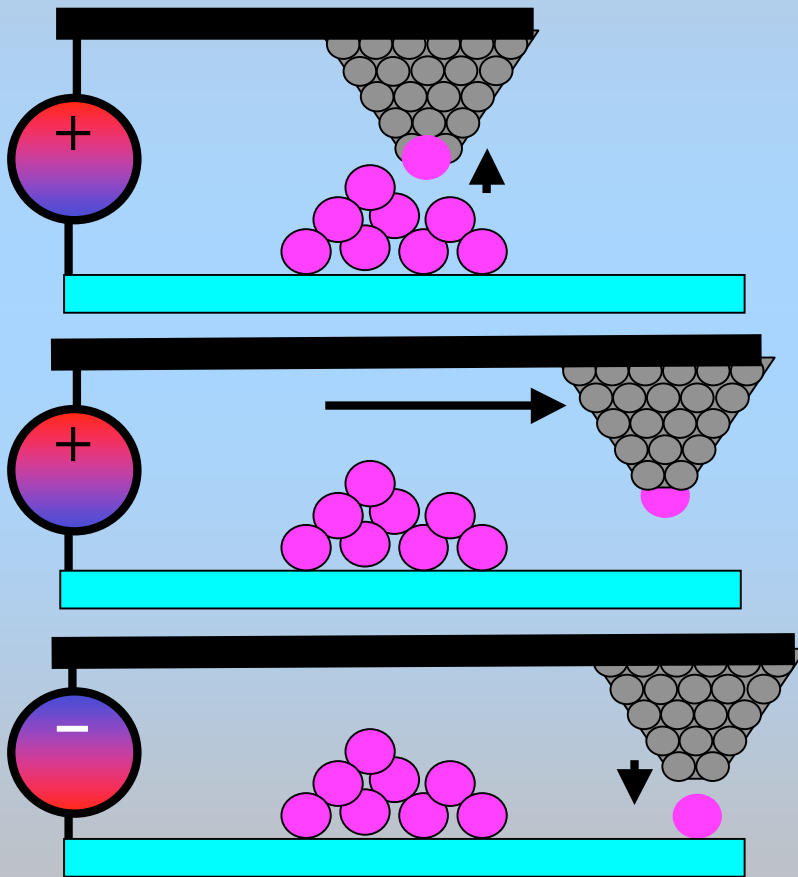


30 m/s à une distance
de 20 nm

Boeing 747 volant à moins
de 1 cm de la surface

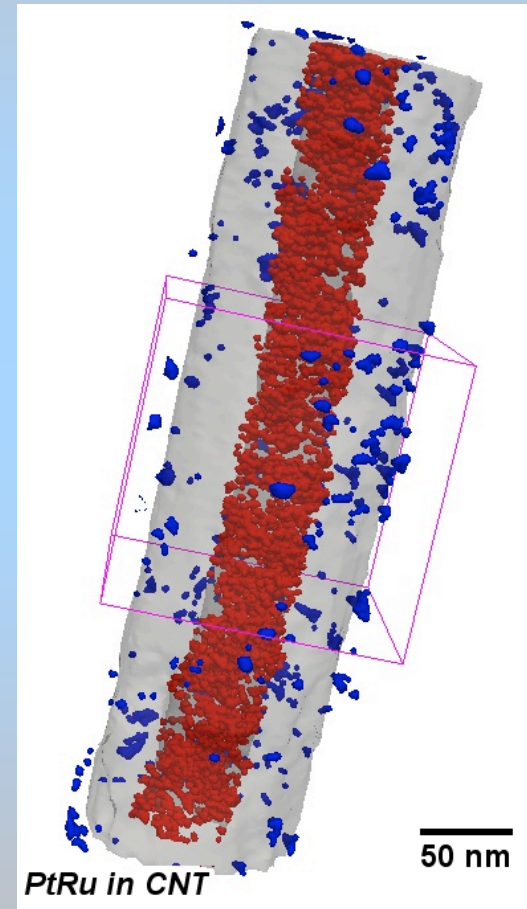
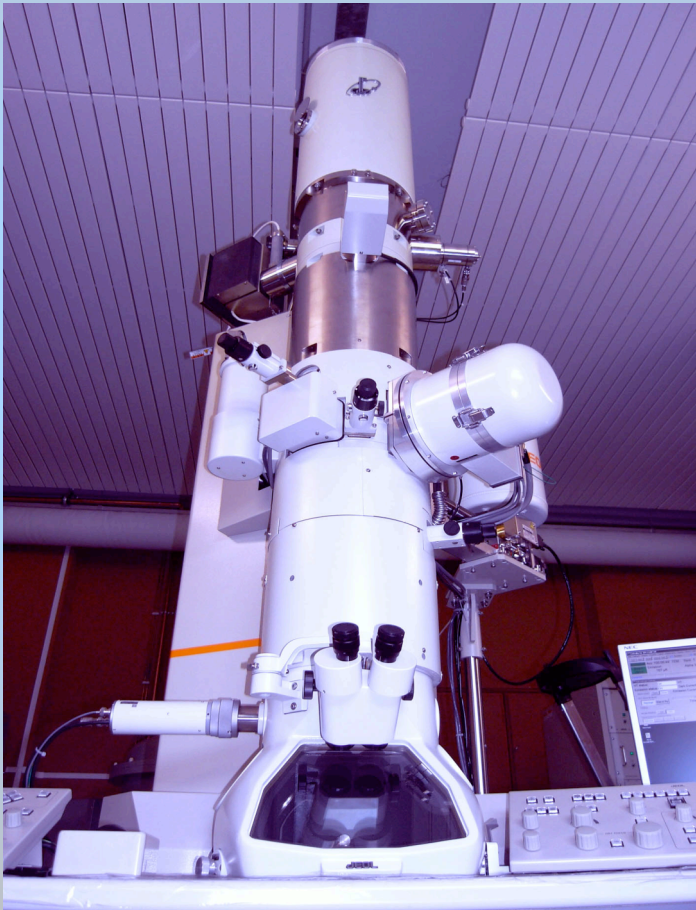


Microscopie à effet tunnel



1000 milliards
de volumes/page

Microscopie électronique



Microscopie électronique

Image 2D

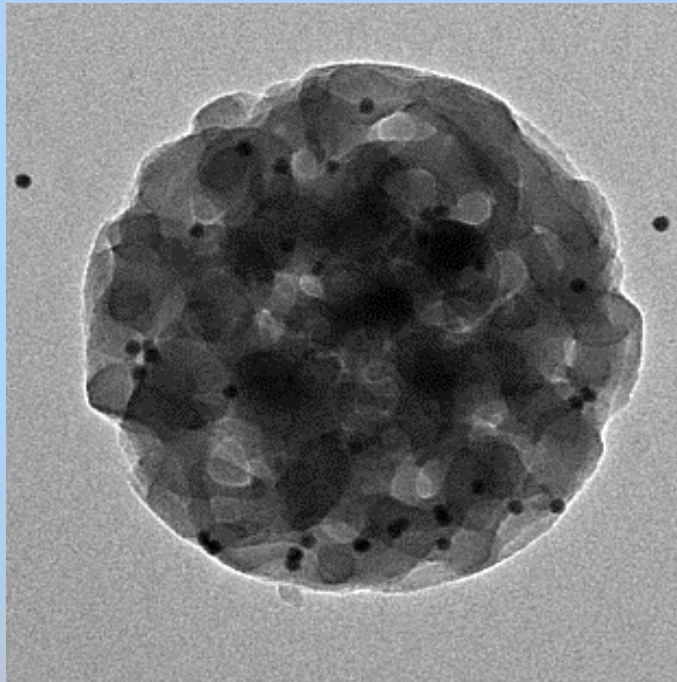
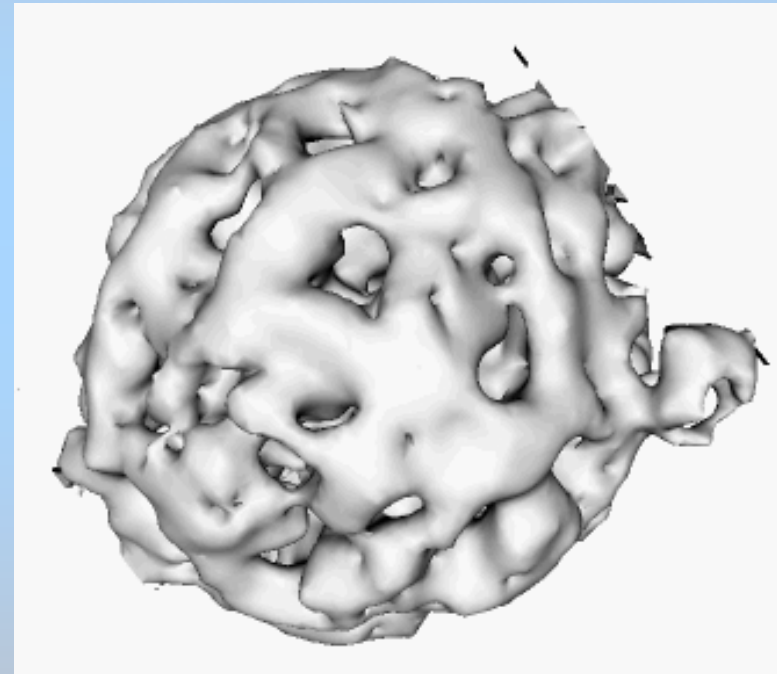


Image 3D



Particule: 220 nm
Porosité $51 \pm 5\%$