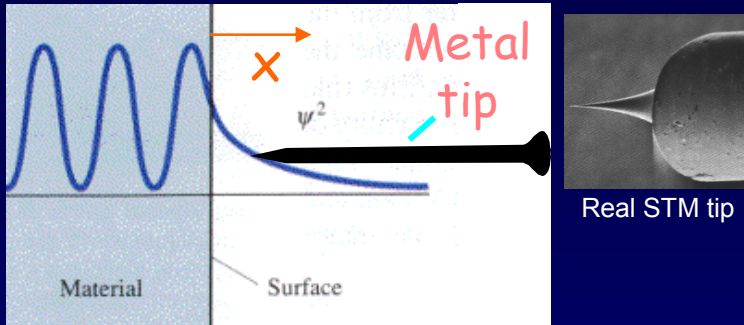


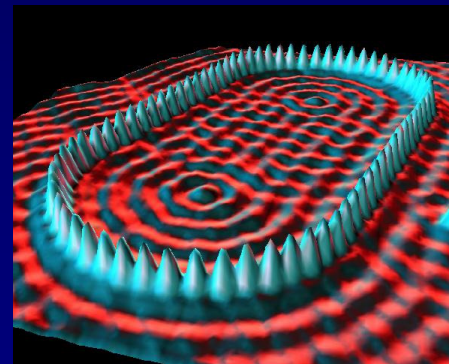
# Application: Tunneling Microscopy

One can use barrier penetration to measure the electron density on a surface.

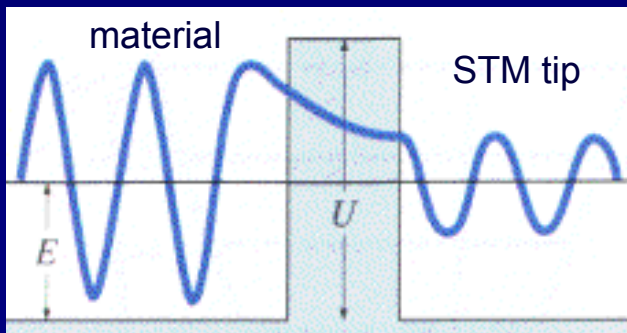
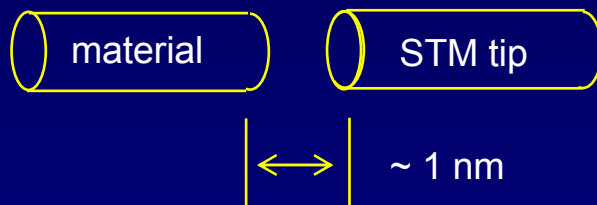
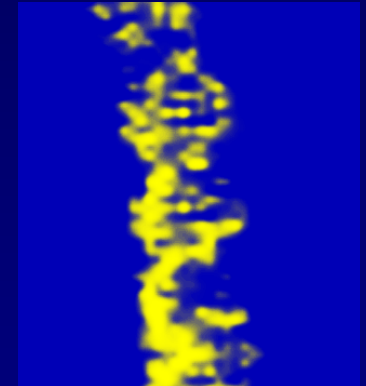


Scanning  
Tunneling  
Microscope  
images

Na atoms on metal:



DNA Double Helix:



STM demo:

<http://www.quantum-physics.polytechnique.fr/en/>

Barrier penetration is a wave phenomenon, not only QM. It is used in optical microscopes also. See:

[http://en.wikipedia.org/wiki/Total\\_internal\\_reflection\\_fluorescence\\_microscope](http://en.wikipedia.org/wiki/Total_internal_reflection_fluorescence_microscope)