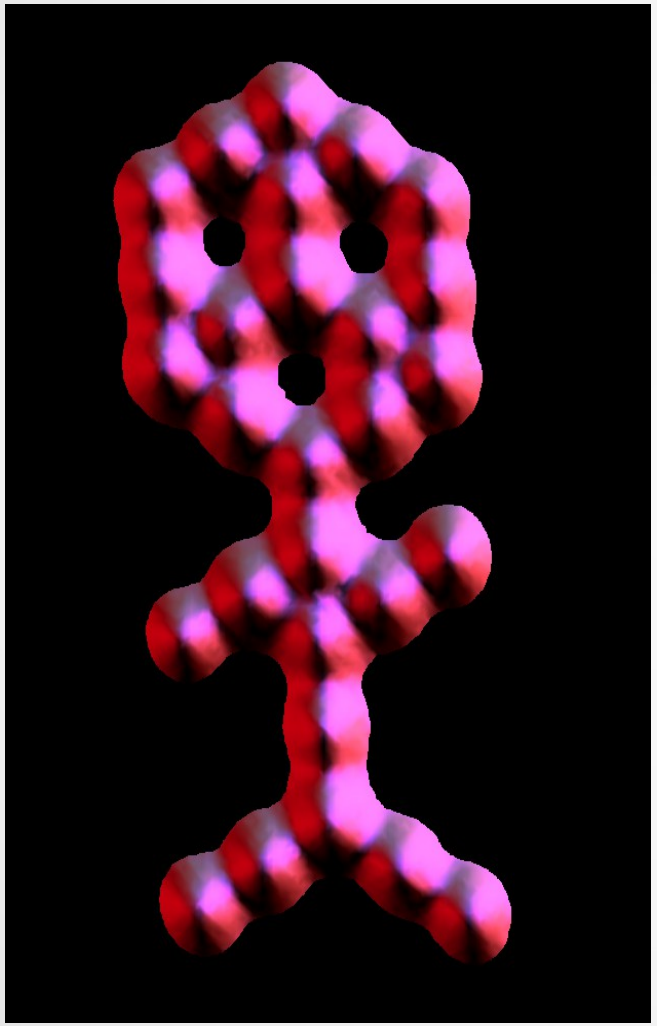
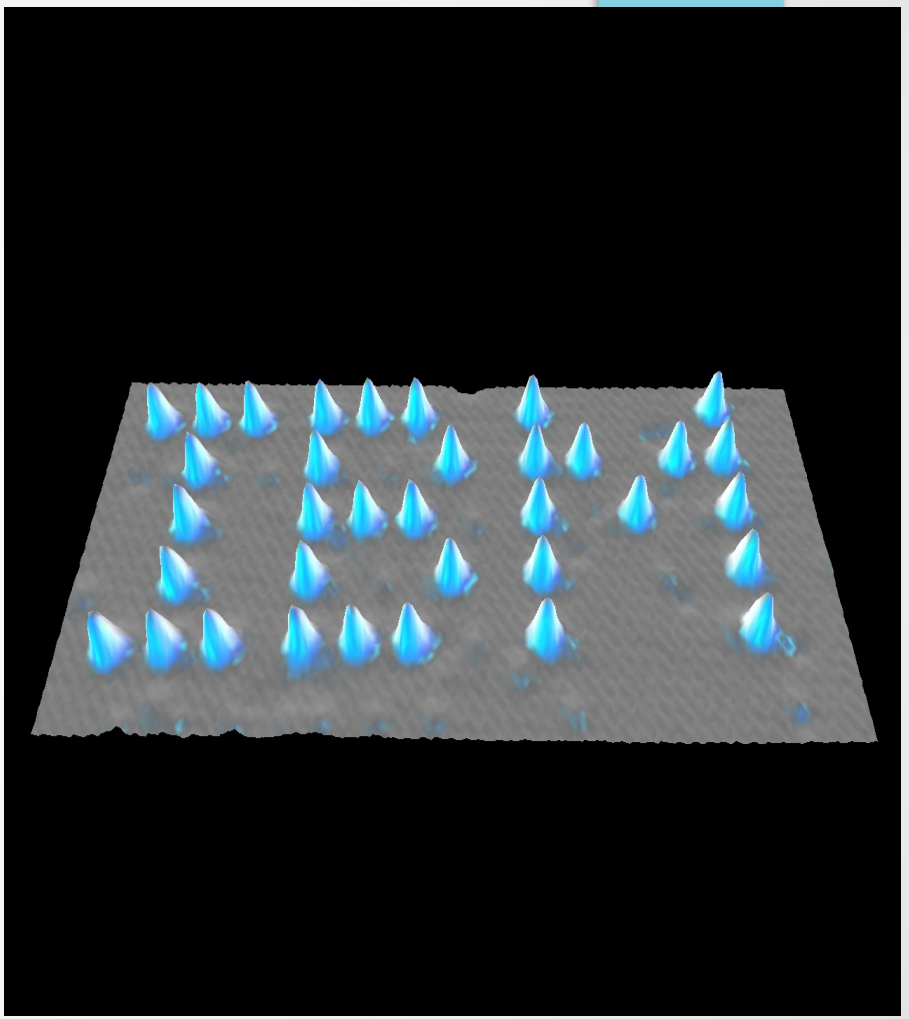
Electron Microscope

Rearrangement of Atoms with Electron Microscopes



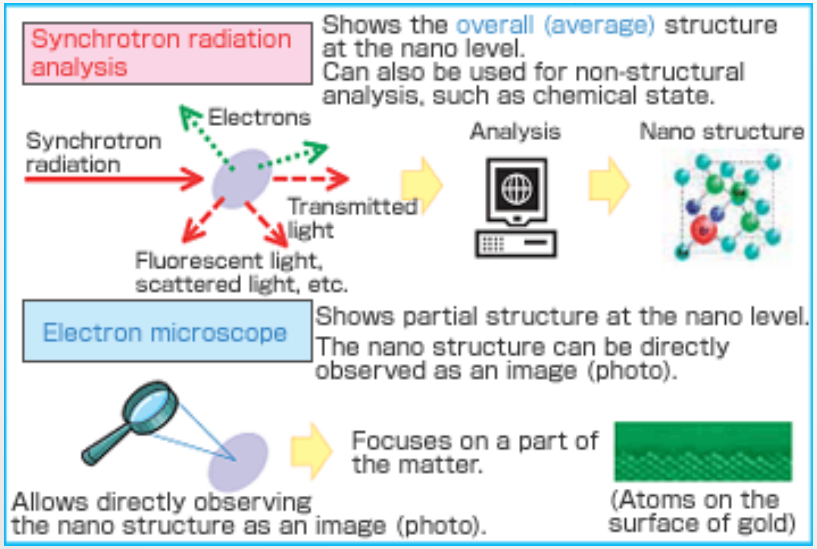


Principles of Light Microscopes

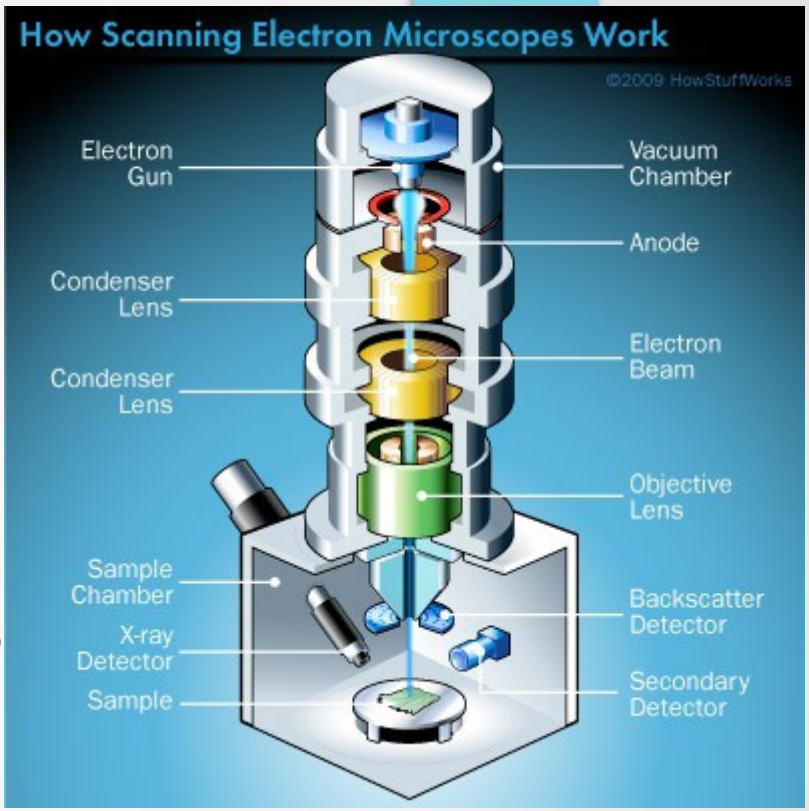
- *The most known microscopes can be called “magnifying glass” and “”glass” (which people wear to see)*
- *These devices use normal light to magnify objects like our eyes.*
- *Light microscopes work like glasses,too.*
- *Human eye can see lights which have between 400-700 nm.*

Principles of Electron Microscope

- *As you know,particles behave like waves.*
- *Electrons have waves much smaller than visible light.*
- *When we want to see object which is under of visible light wavelenght,we should use electron microscopes.*



- *Electrons are emitted by an device which is called as electron gun.*
- *The electrons are concentrated by magnetic lenses.*
- *The electrons pass through hit the surface of structure which is observed.*



Difference Between Light Microscope and Electron Microscope

Light Microscope	Electron Microscope
1. The radiation source (source of illumination) is light, wavelength 400-700 nm. 2. Lens is made of glass. 3. Not affected by magnetic field. 4. Maximum magnification 1500-2000 times. 5. Resolving power 0.1-0.2 nm. 6. Image is coloured (natural colour of object is seen).	1. Radiation source is electrons, wavelength about 0.005nm. 2. Lens is electromagnetic. 3. Affected by magnetic field. 4. Maximum magnification 1, 60,000 to 2, 50,000 times. 5. Resolving power 200-300 nm. 6. Image is black and white.

Resources

- *http://en.wikipedia.org/wiki/Electron_microscope*
- *http://www.preservearticles.com/201101102998/difference-between-light-microscope-and-electron-microscope.html*
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