

Scanning Tunneling Microscopy Images of Nickel Atoms

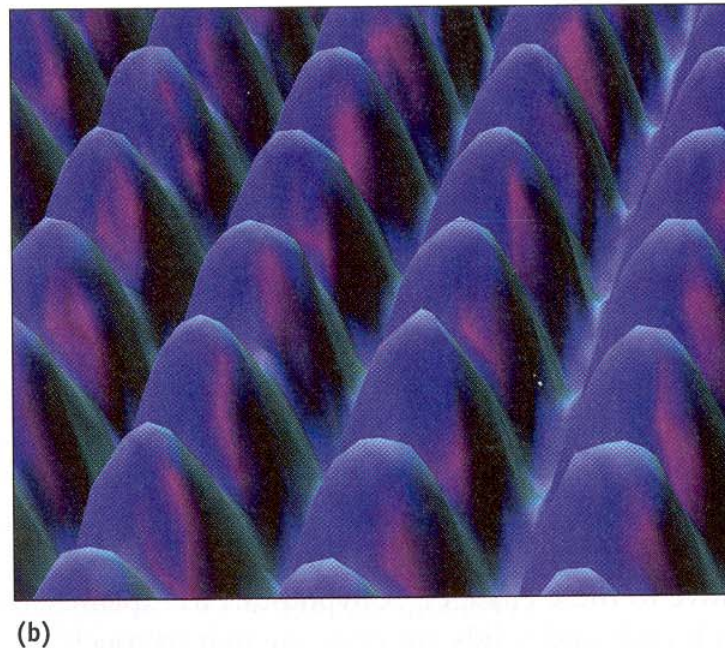
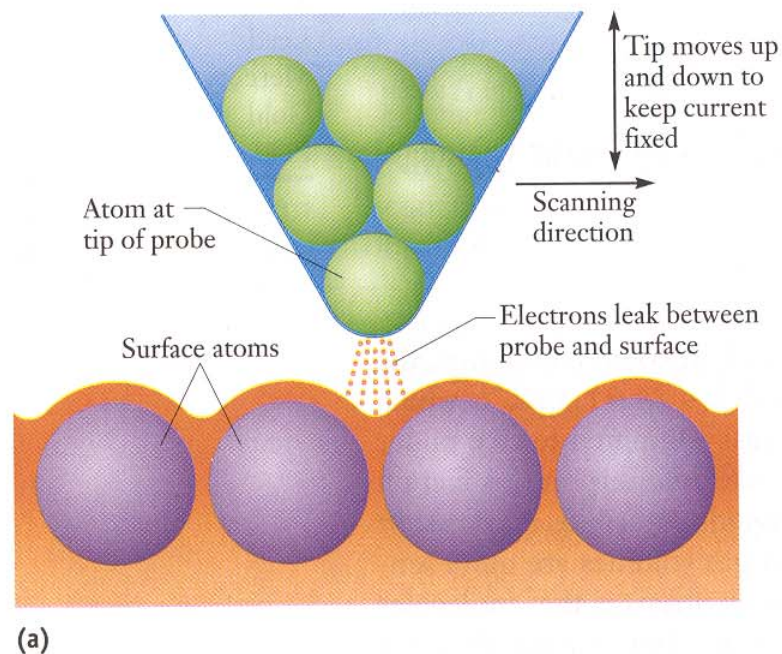


FIGURE 1.14 (a) In a scanning tunneling microscope (STM), an electric current passes through a single atom or a small group of atoms in the probe tip and then into the surface of the sample being examined. As the probe moves over the surface, its distance is adjusted to keep the current constant, allowing a tracing out of the shapes of the atoms or molecules on the surface. (b) The STM image of the surface of a nickel crystal illustrates the corrugated nature of the surface produced by the troughs between rows of Ni atoms. (b courtesy of Dr. Don Eigler/IBM Almaden Research Center, San Jose, CA)

Taken from David W. Oxtoby, H. P. Gillis, Norman H. Nachtrieb,
Principles of Modern Chemistry, 4th Edition, Fort Worth: Saunders, 1999.