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New York, have obtained the world's first pictures of both the atoms and the bonds that hold them in place, opening the way to a new range of possibilities in the study of electronics and biology. Shown magnified some 30 million times is the atomic structure of a surface of silicon. The top atoms of the silicon crystal appear as large balls, with successively smaller balls representing atoms more deeply imbedded in the crystal. This theoretical model was originally confirmed by IBM scientists using an IBM invention, the Scanning Tunneling Microscope (STM). The diamond shape outlines the basic "unit cell" of silicon: it is repeated to form the face of the crystal.

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