

Graduate School of Engineering, Division of Electrical, Electronic and Information Engineering Manipulating and Assembling Atoms and Molecules Area

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<Research subject>

Everything is made of atoms and various properties of materials can be attributed to elements and their arrangement in nano-meter scale. Now, the techniques to investigate various materials with atomic scale are required. In our group, we are doing research using Scanning probe microscope, a tool for imaging individual atoms as follows.

1. The spatial resolution of scanning probe microscope is improved to evaluate the atomic properties with higher resolution.
2. The methods to identify atomic species and measure various physical/chemical quantities, such as chemical reactivity and electronic states, are developed.
3. Single atoms on surfaces are manipulated to assemble man-designed nano-structures and characterize them (so called Nanotechnology).

We are exploring new materials and devices based on new working principles.

