

Exploring nanoworld with our developed apparatus and method

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Recent technology including scanning probe microscopy (SPM) revealed nanoworld. Nanoprobes can observe and manipulate single molecules with high special resolution. I have worked in the field of nanotechnology for more than twenty years and constructed various apparatus with the help of the collaborators, *e.g.*, scanning tunneling microscope, electron beam gun, phosphor screen, electron energy analyzer, and the electronic circuits of these controllers.

My lecture consists of two sections. In the former section, I demonstrate the know-hows and methods that realized the exploration of nanoworld, such as the analyses of SPM image¹⁾ and diffraction pattern²⁾, and halation-protect sector³⁾. In the latter section, I demonstrate how the single molecular manipulation is available in air or liquid with our SPM study⁴⁻⁶⁾, and recent my work on ion-selective nanopipette⁷⁻⁹⁾.

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