Development of novel nano-probing technologies
and nano-scale characterization of nano-materials
for future device application

We aim at investigating electronic and optical properties in various nano-materials by means of nano-probe methods such as scanning tunneling microscopy (STM), atomic force microscopy (AFM), and related ones.

◆ Characterization of Solar Cell Materials
  - Photovoltaic properties and minority carrier dynamics investigated by photo-assisted KFM
  - Non-radiative recombination property of photo-carriers investigated by photothermal mode AFM

◆ Development of Novel SPM Methods
  - Fast imaging in AFM
  - Novel operation methods for high performance SPMs

◆ Characterization of Carbon Nanotube FETs
  - Current detection by magnetic force microscopy (MFM)

TAKAHASHI LAB.
Nano-probing Technologies
Department of Informatics and Electronics
Centre for Interdisciplinary Research on Micro-Nano Methods

Nano-electronics
Department of Electrical Engineering and Information Systems, Graduate School of Engineering
http://www.spm.iis.u-tokyo.ac.jp

Characterization of Local Material Properties by Nano-probes

[Images of various experiments and equipment, including images of topography, photothermal signals, and current detection in CNT FETs.]