

**[Nano device]**  
**Study of the Materials at Nanoscale using Scanning  
Tunneling Microscopy**

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Understanding the materials at nanoscale is drawing wide interests, not only due to the ever growing industrial needs but also the fundamental scientific interests and challenges that comes with the new territory. In this talk, we will give an overview of the research activities using the Scanning Tunneling Microscopy (STM) at Atomic-scale Surface Science Research Center (ASSRC) related to the materials science. Topics covered will be from the metallic surface alloys such Nb ultra thin films on noble metals, growth of metallic overlayers on Si surface, to the carbon nanotubes, particularly their capped ends. Fundamental aspects of electronic and structural properties of the materials will be discussed.