

# The 170<sup>th</sup> MANA Special Seminar



## Growth Mechanism of Electrodeposited Nanowires

Chair: Dr. Yoshio Bando (MANA COO)

### Prof. Guanghai Li

*(Institute of Solid State Physics,  
Chinese Academy of Sciences, China)*

Nanowire systems have attracted a great deal of research interest because of their potential applications ranging from molecular electronics, thermoelectric devices to chemical sensors and their promise for studying the transport properties of one-dimensional systems. The template-assisted pulsed electrodeposition is one of the most efficient methods for the growth of uniform and continuous nanowires. The growth of the electrodeposited nanowires is a process governed by a competition between kinetics and thermodynamics. Precise controlling of the growth process and the properties of the electrodeposited nanowires will be possible only after a deep understanding of this competition. In this talk, I will report our research and understanding on the growth mechanisms of the electrodeposited nanowires, including the abnormal transition from nanotube to nanowires, orientation dependence of growth rate and different growth modes of superlattice nanowires.

**Venue: Seminar Room #431, MANA Bldg.**

**Date: Oct 6<sup>th</sup> Wednesday      Time: 15:30-16:15**

Contact: International Center for Materials Nanoarchitectonics (MANA), Nakata (ex. 8806)

