

!! Postponed !!

Time & Date : Wednesday, January 12nd, 2011, PM 2:00-3:00

Place : Seminar room, 2nd floor, The Nanoscience Joint Laboratory

Language: English

PM 2:00-2:40

“Li-ion battery : a viewpoint of surfaces and interfaces“

Prof. Taro Hitosugi

*WPI Advanced Institute for Materials
Research, Tohoku University*



Li-ion battery is now an indispensable component which is widely used in lap-top computers, cellular phones, automobiles and etc. LiCoO_2 , in bulk powder form, is, at present, the most commonly used cathode material for commercial Li-ion batteries. In the battery operation process, the control of Li-ion at the surfaces and interfaces of electrodes plays an important role. Further, LiCoO_2 contains CoO_2 layer which is known to exhibit highly electron correlated behavior, e.g. superconductivity and large thermoelectric effect.

I will present our recent results on the deposition of epitaxial thin films and attempts to understand this complex material from the viewpoint of surfaces and interfaces.

PM 2:40-3:00

“Atomically Resolved Electronic Structure of SrTiO_3 Thin Film Surfaces by STM“

Dr. Katsuya Iwaya

*WPI Advanced Institute for Materials
Research, Tohoku University*



Strontium titanate SrTiO_3 is known to demonstrate disparate properties such as superconductivity, photocatalysis, and ferroelectricity. Recently, SrTiO_3 has drawn increasing attention due to the discovery of metallic and magnetic interfaces between LaAlO_3 and SrTiO_3 . It is widely accepted that oxygen vacancies play a crucial role in the electronic properties of such SrTiO_3 -based heterostructures and those of the SrTiO_3 substrate itself. It is therefore fundamentally interesting to investigate how the amount of oxygen vacancies affects the electronic states of SrTiO_3 surfaces at the atomic scale. In this talk, I will show how different the electronic states of SrTiO_3 surfaces can be from those of the bulk, using a newly developed low-temperature STM combined with pulsed laser deposition system.

！！延期になりました！！
日時：平成23年1月12日（水） 14-15時

場所：ナノサイエンス実験棟 2階 セミナー室
使用言語：英語

14:00-14:40

“Li-ion battery : a viewpoint of surfaces and interfaces“

一杉 太郎 准教授

東北大学 原子分子材料科学高等研究機構



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岩谷 克也 助教

東北大学 原子分子材料科学高等研究機構



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