
Electronic properties of molecular ultra-thin films: high-resolution UPS study

Speaker: Professor Satoshi Kera
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Venue: Blk S13-02-14, Physics Resource Room,
Department of Physics
Faculty of Science, NUS

Date: 16 April 2009 (Thursday)
Time: 11.00am – 12.00pm

Abstract:

The energy position, width and spectral profile of the highest occupied states in high-resolution ultraviolet photoelectron spectra of organic nanoaggregates and organic/metal interfaces contain in principle a variety of information that is directly related to the charge carrier dynamics and therefore to transport properties in molecular-based devices. Particular observations discussed relate to intrinsic effects due to a tiny density of states within the band gap, to the electron-vibration coupling in the context of hopping transport, and to the interorbital interaction to access the transfer integral.

About speaker:



Job Status

Associate Professor of Nanomaterial Science Course,
Graduate School of Advanced Integration Science, Chiba University

Education

- 1992 – 1996 Department of Material Science, Faculty of Engineering, Chiba University, Japan; B. Eng., (Prof. Harada and Ueno)
- 1996 – 1998 Department of Material Technology, Graduate School of Science and Technology, Chiba University, Japan; M. Eng., (Prof. Harada and Ueno)
(M. Eng. Thesis; Preparation and characterization of highly-ordered organic thin films)
- 1998 – 2001 Department of Diversity and Fractal Science, Graduate School of Science and Technology, Chiba University, Japan; Dr. Sc., (Prof. Harada and Ueno)
(Dr. Sc. Thesis; Electronic Structure of organic ultra-thin films by the outermost surface electron spectroscopy using metastable atom beam)

Activity

- 4/1998 – 3/2001 JSPS fellow
- 4/2001 – 3/2003 Research Associate at Chiba University
- 4/2003 – 3/2004 Research Associate at Institute for Molecular Science
- 9/2003 – 8/2004 Guest Research Position at the Wuerzburg University (Germany).
Group leader: Prof. E. Umbach.
- 4/2004 – 3/2007 Research Associate at Chiba University
- 4/2007 – 9/2007 Assistant Professor at Chiba University
- 10/2007 – Associate Professor at Chiba University

Host by: Assistant Professor CHEN Wei