

Nara Institute of Science and Technology (NAIST) presents a **One-Day Seminar** in the Santa Clara Valley:

IT and Materials Technologies: Bio Nano Process, Sound Separation, Solar-Cell Inspection and Other Technologies from Japan



Tuesday August 21, 2007

9:30 AM – 5:00 PM

**Place: UC-Santa Cruz Extension, Moffett Business
Park, 1180 Bordeaux Drive, Sunnyvale**

Morning Topics: (9:30 AM – Noon)

Development and Properties of Luminescent Chalcogenide Nanocrystals

Professor T. Kawai

CdTe nanocrystals showing high emission quantum yield with no protecting layer – act as efficient emitting and photo-sensitive material in photo-polymerization system. Potential as efficient high-density optical recording medium and solar cell.

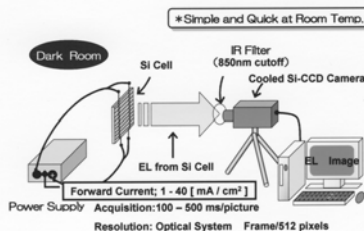


Emissive CdTe nanocrystals
Quantum Efficiency >90%

A Versatile Tool for the Diagnosis of Crystalline- Silicon Solar Cells Using Electroluminescence

Professor T. Fuyuki

Forward bias electro-luminescence intensity is related to minority carriers. Defects, grain boundaries, cracks are detected as dark spots, lines, and areas. Versatile tool to evaluate cell fabrication process and performance.



Lunch is served at Noon

Registration: **BEFORE AUGUST 7** There is **no charge** for this seminar, but we need an accurate count by August 7 in order to properly schedule conference room space.

Register today, to assure a seat. Fax/mail/email to:

UC-Santa Cruz Extension: NAIST Seminar

1101 Pacific Avenue, Suite 208

Santa Cruz, CA 95060

FAX: +1-831-427-1827

Email: ltran@ucsc-extension.edu

Name(s):

Company:

Addr:

City/ZIP:

Phone:

Email:

We will confirm by email.

(please print clearly)

After August 7, call for availability: Lena Tran, 408-861-3854

Afternoon Topics: (1:00 PM – 5:00 PM)

Pocket-Size Real-Time Blind Source Separation (BSS) Module for Hands-Free Speech Acquisition

Associate Professor H. Saruwatari

BSS estimates original sound sources using mixed signals detected by multiple microphones. This algorithm uses independent component analysis and binary masking, imitating human brain and ears. Potential for clear reception of cell-phone call amid noise. Portable, with a delay time of less than 50msec.



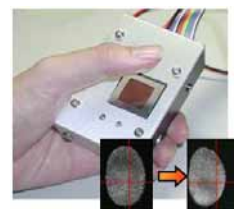
Tactile Sensors for Advanced Robotics

Assistant Professor J. Ueda

Vision-based tactile sensor and slip prediction method; Fingerprint pointing device for mobile application; Teaching playback of dextrous robot manipulation; MRI compatible force sensor.

Tactile information processing for

robotic manipulation and human-machine interfaces



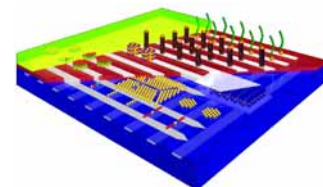
CMOS Technologies for Biological and Medical Applications Professor J. Ohta

Highly functional/versatile biomedical devices: retinal prosthesis, brain implantation, and future issues for bionic human uses of implantable CMOS technologies.

Bio Nano Process – Fabrication of Inorganic Nanostructures by Protein Supramolecules

Professors I. Yamashita and T. Fuyuki

Self-organization and biomineralization of bio-supramolecules for fabricating inorganic structures for nano-electronic devices. Memory nanodot array in a floating gate memory; a proposed biological path to nano-electronics.



Right after the seminar ...

Come meet the staff from Japan's NAIST. Discuss their new technologies, and your own technologies and potential applications.

Details: www.e-grid.net/conf/NAIST.html

More about NAIST's Seminar: www.naist.jp/index_e.html

CLICK!