

Program of 20th Anniversary Joint-Symposium of School of Science,
University of Hyogo; International Symposium on
Bioimaging and Surface Sciences

Symposium on Surface Science

February 26 (Sat)

Lecture Hall

Joint Session of Bioimaging and Surface Science

13:15-13:20 Opening Remarks (S. Nakatsuji)

(Chair: K. Kimura, Univ. Hyogo)

J1. 13:20-14:00 M.P. Pileni (Univ. P & M Curie, France)

Self assembly of inorganic nanocrystals

Separate to each hall

Lecture Hall

Surface and Materials Science

(Chair: K. Makoshi, Univ. Hyogo)

S1. 14:00-14:40 G. Kaupp (Univ. Oldenbug, Germany)

SNOM on rough and natural surfaces

S2. 14:40-15:20 S. Matsui (Univ. Hyogo, Japan)

Three-dimensional nanostructure fabrication by focused-ion-beam chemical
vapor deposition

Coffee break (15:20-15:40)

(Chair: F. Mizutani)

S3. 15:40-16:20 **T. Heiser (Univ. Strasbourg, France)**

Advanced polymers for bulk heterojunction solar cells: from material properties to device performances

Surface and Biological Science

S4. 16:20-17:00 **T. Matsue (Tohoku Univ., Japan)**

Bioelectrochemical imaging with micro/nanoelectrode systems

(Chair: K. Toriumi, Univ. Hyogo)

S5. 17:00-17:40 **T. Sugawara (Univ. Tokyo, Japan)**

Real-time observation of self-reproducing dynamics of giant vesicle-based artificial cell

Banquet (18:15-20:00) at a salon of CAST

Staffs : 4000 Yen

Post Doctoral Fellows: 2000 Yen

Students: 1000 Yen

February 27 (Sun)

Multi-Purpose Room

Surface and Chemical Science

(Chair: T. Sugimura, Univ. Hyogo)

S6. 9:00-9:20 **T. Yasukawa (Univ. Hyogo, Japan)**

Rapid and separation-free immunoassay based on particle manipulation with negative dielectrophoresis

S7. 9:20-9:40 H. Yao (Univ. Hyogo, Japan)

Chiroptical responses of metal nanoclusters with protective monolayers of chiral thiols

S8. 9:40-10:10 T. Kubota (Shimane Univ., Japan)

Preparation of Pd catalysts for enantioselective hydrogenation of (E)- α -phenylcinnamic acid

Coffee break (10:10-10:20)

(Chair: K. Kimura, Univ. Hyogo)

S9. 10:20-11:00 D. Felder-Flesch (Univ. Strasbourg, France)

Dendritic radiolabeled chelates and dendronized nanoparticles as useful tools for biomedical imaging

Surface and Physical Science

(Chair: Y. Akahama, Univ. Hyogo)

S10. 11:00-11:20 T. Mii (Univ. Hyogo, Japan)

Theoretical study of single-molecule vibrational spectroscopy

S11. 11:20-11:40 H. Fukui (Univ. Hyogo, Japan)

X-ray Raman scattering on silicate glasses under pressure

(Chair: Y. Kagoshima, Univ. Hyogo)

S12. 11:40-12:00 T. Hasegawa (Univ. Hyogo, Japan)

Intense emission of terahertz electromagnetic wave originating from a surface surge current in an undoped GaAs/*n*-type GaAs epitaxial layer structure

S13. 12:00-12:20 H. Takano (Univ. Hyogo, Japan)

Recent development of hard X-ray nanofocusing techniques

Join to Lecture Hall

Lecture Hall

(Chair: Y. Takagi, Univ. Hyogo)

J2. 12:30-13:10 T. Ishikawa (RIKEN, Japan)

An X-ray free electron laser is coming soon in Harima

13:10-13:15 Closing Remarks (K. Watanabe)

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Separate to each hall (Move to Multi-Purpose Room)

Multi-Purpose Room

SPring-8 Synchrotron X-ray CT

(Chair: Y. Mineyuki, Univ. Hyogo)

B1. 14:20-14:40 K. Uesugi, M. Hoshino & N. Yagi (JASRI, Japan)

X-ray imaging for biological applications at SPring-8

B2. 14:40-15:00 T. Ikenaga, A. Nagata, Y. Murakami & K. Hatta (Univ. Hyogo,
Japan)

Analysis of three-dimensional structure of the zebrafish brain with high
resolution X-ray micro-CT imaging

B3. 15:00-15:20 D. Yamauchi & I. Karahara (Univ. Hyogo, Japan & Univ. Toyama, Japan)

3-D image analysis of plant tissues and cells using X-ray computed tomography

Coffee break (15:20-15:40)

Bioimaging at Light Microscope Level

(Chair: Y. Mineyuki & K. Hatta, Univ. Hyogo)

B4. 15:40-16:00 T. Horie & Y. Sasakura (Univ. Tsukuba, Japan)

Ependymal cells of chordate larvae are stem-like cells that form the adult nervous system

B5. 16:00-16:20 D. Tamaoki & Y. Mineyuki (Univ. Hyogo & JST SENTAN, Japan)

Development of the global-local live imaging microscope (GLIM) System

B6. 16:20-16:40 K. Furuta (NICT, Japan)

Multiple-molecule imaging of molecular motors

Bioimaging at Electron Microscope Level

(Chair: K. Hatta, Univ. Hyogo)

B7. 16:40-17:00 Y. Fukunaga (Univ. Hyogo, Japan)

Function and distribution pattern of extrasynaptic NMDA receptor

B8. 17:00-17:20 M. Takeuchi & Y. Mineyuki (Univ. Hyogo, Japan)

Electron tomographic analysis of microtubule-microfilament interactions in the preprophase band

B9. 17:20-17:40 H. Sakakibara (NICT, Japan)

Imaging of conformational changes of the protein motor, "dynein", by TEM and HS-AFM

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February 27 (Sun)

Lecture Hall

Bioimaging at micro-level

(Chair: T. Osumi, Univ. Hyogo)

B10. 9:00-9:40 M. Murata-Hori (Natl. Univ. Singapore, Singapore)

Mammalian erythroblast enucleation requires PI(3)K-dependent cell polarization

B11. 9:40-10:10 S. Nonaka (NIBB, Japan)

Live imaging of the whole mouse embryo during gastrulation

Coffee break (10:10-10:20)

B12. 10:20-11:00 Y. Hiraoka (Osaka University, Japan)

Genome-wide imaging and functional analysis of gene products in fission yeast

Bioimaging at nano-level

(Chair: K. Watanabe, Univ. Hyogo)

B13. 11:00-11:40 B. Marsh (Univ. Queensland, Australia)

Reverse-engineering mammalian cells: mapping macromolecules *in situ* in 3D at high resolution

B14. 11:40-12:20 Y. Fujiyoshi (Kyoto University, Japan)

Structure and function of water and ion channels

Break (12:20-12:30)

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