



# International Symposium at Frontier Research Base for Global Young Researchers

## Preliminary Program

Date: November 24-25, 2009

Place: Sanwa Hall, Ichō-Kaikan

Suita Campus, Osaka University

Suita, Osaka, Japan

### ■ November 24, 2009

10:00 Opening Remarks, Akio Baba, Dean

Susumu Kuwabata, Director

10:15 AFM Based Nanotechnology at Room Temperature, Yoshiaki Sugimoto

11:05 Atomic Probes – Types of Signals and Resolution Issues, Franz J. Giessibl  
(invited speaker, Universität Regensburg, Germany)

12:05 Lunch

13:30 Improvements on PGA Power Efficiency and Dynamic Element Matching, Toru Ido

14:20 Riding High on Unprecedented CMOS Revolution, Zhiping Yu (invited speaker,  
Tsinghua University, China)

15:20 Break

15:40 Development and Application of Coherent X-ray Diffraction Microscopy, Yukio  
Takahashi

16:30 Coherence and Partial Coherence in High Resolution X-ray Imaging, Keith  
Nugent (invited speaker, The University of Melbourne, Australia)

18:00 Banquet

### ■ November 25, 2009

9:30 Advances in Temperature-Resolved and Photocrystallography - Emerging  
Techniques for Direct Observation of Exotic Molecular Species, Pance Naumov

10:20 Light and Molecular Orbitals: How Molecular Orbital Theory Has Led from  
Simple Systems to Complex Proteins, Laren Tolbert (invited speaker, Georgia  
Institute of Technology, U.S.A)

11:20 Infrastructure Asset Management Focusing on Statistical Deterioration Prediction  
Model, Kiyoyuki Kaito

12:10 The Externality and Efficiency of Performance Based Maintenance Contract,  
Lei SHI (invited speaker, Dalian University of Technology, China)

13:10 Lunch

14:30 Short Presentations followed by Poster Session (See the details on the back)

17:00 Closing Remark

Date: November 25, 2009

Place: Sanwa-hall, Icho-Kaikan

14:30 Short Presentations (5 minutes each)

- Advanced Diagnostics of Laboratory-Scale Plasma Discharges, Tsuyohito Ito
- Photodynamic Therapy Induces Apoptosis Related MicroRNA Expression, Toshihiro Kushibiki
- Nano-Probe Light Source for Dielectric Constant Imaging with High Spatial Resolution, Yuika Saito
- Synthesis of  $\pi$ -Conjugated Molecules via Catalytic Transformations of Unreactive Bonds, Mamoru Tobisu
- Formation and Behavior of Soot-Like Aggregate Particles, Mariko Nakamura
- Radiation Induced Synthesis of Au/Iron-Oxide Nanoparticles for Biomedical Applications, Satoshi Seino
- TEM Observation of Plastic Deformation Process in a Carbon Nanotube, Kaori Hirahara
- Metalloprotein Engineering Toward Biomaterials and Biocatalysts: Approaches Using Hemoproteins and Multinuclear Metalloenzymes, Akira Onoda
- Soft Actuator Using Polymer-Room Temperature Ionic Liquid Composite, Tetsuya Tsuda
- Model Predictive Control of Periodic Systems, Ravi Gondhalekar
- Novel Diagnostic and Therapeutic Techniques Using Tunable Mid-Infrared Lasers, Hisanao Hazama
- Molecular Communication: A New ICT Paradigm Based on Biological Molecules, Tadashi Nakano
- Rocket-Triggered Lightning Observed by VHF Broadband Digital Interferometers, Satoru Yoshida
- The State of the Art in Computations for a Ship Advancing in Waves, Guanghua He

Place: Daikaigishitsu, Icho-Kaikan

16:00 Poster Session