

**Collaborative Conference on Materials Research (CCMR) 2012**

**Time: June 25 – June 29, 2012**

**Venue: Seoul Palace Hotel, Seoul, Korea**

| Room   | Date   | Time        | Page         | Speaker             | Talk title  |
|--|--|-------------|--------------|---------------------|---|
| Day 1<br>Dynasty B<br>(B1F)<br>Palace<br>Hotel | <b>Material Research Session: Quantum dot (Chair: Zhiming M. Wang)</b>           |             |              |                     |   |
|  | 25-June  | 8:30-9:00   | 1            | S. Reitzenstein     | Quantum dot – microlasers with external feedback – a chaotic system close to the quantum limit                              |
|  | 25-June  | 9:00-9:30   | 3            | Erwin Bente         | InAs/InP (100) quantum dots in InP photonic integrated laser systems  |
|  | 25-June  | 9:30-10:00  | 5            | S. Bietti           | GaAs single quantum emitters by droplet epitaxy on Silicon  |
|  | 25-June  | 10:00-10:30 | <b>Break</b> |                     |   |
|  | <b>Material Research Session: Spin(Chair: Stefano Sanguinetti)</b>               |             |              |                     |   |
|  | 25-June  | 10:30-11:00 | 7            | Russell. P. Cowburn | Towards fully 3-dimensional Spintronics   |
|  | 25-June  | 11:00-11:30 | 8            | A. Tsukamoto        | Ultrafast spin manipulation of GdFeCo by thermo-magnetic stimulus with femtosecond pulsed laser                             |
|  | 25-June  | 11:30-12:00 | 10           | Sug-Bong Choe       | Spin-transfer-torques-induced domain-wall motion in ferromagnetic Pt/Co/Pt nanowires with perpendicular magnetic anisotropy |
|  | <b>Lunch Break</b>   |             |              |                     |   |
|  | <b>Material Research Session: Nano Engineering (Chair: Russell. P. Cowburn )</b> |             |              |                     |   |
|  | 25-June  | 13:30-14:00 | 11           | Kwang-Sup Lee       | Two-Photon Stereolithography for 3D Nano/Micro Objects  |
|  | 25-June  | 14:00-14:30 | 12           | Takashi Yatsui      | Nanophotonic polishing of substrate with angstrom scale   |
|  | 25-June  | 14:30-15:00 |              |                     |   |
|  | 25-June  | 15:00-15:30 | <b>Break</b> |                     |   |
|  | <b>Material Research Session: Solar Cells (Chair: Erwin Bente)</b>               |             |              |                     |   |
|  | 25-June  | 15:30-16:00 | 16           | Shuzi Hayase        | Transparent conductive oxide-less (TCO-less) back-conduct dye sensitized solar cells  |
|  | 25-June  | 16:00-16:30 | 18           | HyunJuneg Shin      | TiO <sub>2</sub> Nanotubes Based Dye-sensitized Solar Cells   |
|  | 25-June  | 16:30-17:00 | 20           | Seigo ITO           | Non-Vacuum-Processed Inorganic-Printed Full-Solid Solar Cells   |
|  | <b>Dinner</b>  |             |              |                     |   |

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| Day 2<br>Dynasty B<br>(B1F)<br>Palace<br>Hotel | <b>Material Research Session: Thin Films I (Chair: Naoki Toshima)</b>          |             |              |                         |   |
|  | 26-June  | 8:30-9:00   | 21           | Sheng-Yuan Chu          | The Application of the ZnO thin films   |
|  | 26-June  | 9:00-9:30   | 22           | S. W. Cha               | Thin Film Electrolyte for Low Temperature Solid Oxide Fuel Cells  |
|  | 26-June  | 9:30-10:00  | 24           | Toshihiro Nakamura      | Thin Film Deposition of Metal Oxides in Resistance Switching Devices  |
|  | 26-June  | 10:00-10:30 | <b>Break</b> |                         |   |
|  | <b>Material Research Session: Nano Particles I (Chair: Toshihiro Nakamura)</b> |             |              |                         |   |
|  | 26-June  | 10:30-11:00 | 26           | Atsushi Miura           | BioNanoParticles Prepared by Using Protein Template for New Functional Devices  |
|  | 26-June  | 11:00-11:30 | 28           | Naoki Toshima           | Metal Nanoparticles for Energy Saving: Dopants for Fast-Response Liquid Crystal Displays and Electrocatalysts for Fuel Cells with Less Amount of Pt |
|  | 26-June  | 11:30-12:00 | 30           | Nguyen Hoa Hong         | Magnetic Nanoparticles for Biomedical applications  |
|  | <b>Lunch Break</b>   |             |              |                         |   |
|  | <b>Material Research Session: Magnetism I (Chair: Günter Reiss)</b>            |             |              |                         |   |
|  | 26-June  | 13:30-14:00 | 32           | S. Okamoto              | Microwave assisted magnetization switching on perpendicular magnetic dots   |
|  | 26-June  | 14:00-14:30 | 34           | M. Nakano               | Nd-Fe-B Thick Film Magnets Applied for MAGNETIC MICRO-MACHINES  |
|  | 26-June  | 14:30-15:00 | 35           | Masaaki Takezawa        | Magnetic Domain Observation of Nd-Fe-B Permanent Magnets with A High-Resolution Kerr Microscope Using Ultraviolet Light                             |
|  | 26-June  | 15:00-15:30 | <b>Break</b> |                         |   |
|  | <b>Material Research Session: Magnetism II (Chair: M. Nakano)</b>              |             |              |                         |   |
|  | 26-June  | 15:30-16:00 | 37           | Juneg-Chun-Andrew Huang | Magnetic Origins of Co: ZnO diluted magnetic oxides and their applications for optospintronics  |
|  | 26-June  | 16:00-16:30 | 39           | Günter Reiss            | Functional materials for magnetic tunnel Junctions  |
|  | 26-June  | 16:30-17:00 | 41           | Y. H. Jeong             | Magnetism in quasi-one dimensional system $AV_2O_6$ (A=Co,Mn,Cu,Ni,Zn)  |
|  | <b>Dinner</b>  |             |              |                         |   |

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| Day 3<br>Dynasty B<br>(B1F)<br>Palace<br>Hotel | <b>Material Research Session: Polymer I (Chair: Wolfgang Sigmund)</b>      |             |              |                    |  |
|  | 27-June  | 8:30-9:00   | 42           | Masanobu Naito     | Polysilane; Old Polymer, New Functions   |
|  | 27-June  | 9:00-9:30   | 43           | Nobuhiro Kawatsuki | Photoinduced Reorientation of Photoreactive Liquid Crystalline Polymers Based on Photo-Fries Rearrangement           |
|  | 27-June  | 9:30-10:00  | 45           | Masahiro Ohshima   | Nanocellular Polymer Foams by Exploiting Polymer Crystallinity, Morphology and CO <sub>2</sub>                       |
|  | 27-June  | 10:00-10:30 | <b>Break</b> |                    |  |
|  | <b>Material Research Session: Nano Fabrication (Chair: Masanobu Naito)</b> |             |              |                    |  |
|  | 27-June  | 10:30-11:00 | 47           | Akihiro Kishimura  | Control of nano-architectures based on polyion complexes using block copolymers of PEG-b-poly (amino acids)          |
|  | 27-June  | 11:00-11:30 | 49           | Masaharu Oshima    | Synchrotron Radiation Nano-Spectroscopy for Green Nano Devices   |
|  | 27-June  | 11:30-12:00 | 50           | Wolfgang Sigmund   | Electrohydro dynamic synthesis of nanomaterials  |
|  | <b>Lunch Break</b>   |             |              |                    |  |
|  | <b>Material Research Session: General II (Chair: Noriaki Takagi )</b>      |             |              |                    |  |
|  | 27-June  | 13:30-14:00 | 51           | Yukikazu Takeoka   | Angle Independent Structural Colored Materials   |
|  | 27-June  | 14:00-14:30 | 52           | Yoshihiro Gohda    | Nd-Fe-B Thick Film Magnets Applied for MAGNETIC MICRO-MACHINES   |
|  | 27-June  | 14:30-15:00 | 53           | Tadashi Shibata    | F Brain Like Computing Based on the Physics of Nano Devices and Materials  |
|  | 27-June  | 15:00-15:30 | <b>Break</b> |                    |  |
|  | <b>Material Research Session: General III (Chair: Tadashi Shibata)</b>     |             |              |                    |  |
|  | 27-June  | 15:30-16:00 | 55           | Hitoshi Tabata     | Room Temperature Polaron and Ferrimagnetic Properties on Spinel Type Ferrite Thin Films and their p-n Junctions      |
|  | 27-June  | 16:00-16:30 | 56           | Noriaki Takagi     | Molecular magnetism at surface investigated by single molecule spectroscopy  |
|  | 27-June  | 16:30-17:00 | 57           | Yeon-Gil Juneg     | Microstructural Design of Thermal Barrier Coatings and Its Influence on Thermal Durability in Cyclic Thermal Fatigue |
|  | <b>Dinner</b>  |             |              |                    |  |

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| Day 4<br>Dynasty B<br>(B1F)<br>Palace<br>Hotel | <b>Material Research Session: Nanoparticles II (Chair: Dongling Ma)</b>   |             |              |                   |   |
|  | 28-June   | 8:30-9:00   | 58           | Gang Hong Lee     | Visible Dye Coated Gadolinium Oxide Nanoparticles as T1 Magnetic Resonance Imaging(MRI)-Cell Labeling(CL) Dual Agents |
|  | 28-June   | 9:00-9:30   | 60           | Yong Zhang        | Upconverting Fluorescent Nanoparticles with Tumble Color Emission   |
|  | 28-June   | 9:30-10:00  | 61           | Ming-Fong Tsai    | <b>Nanopeanuts: Synthesis, photosensitization and nonlinear biological imaging in vitro and in vivo</b>               |
|  | 28-June   | 10:00-10:30 | <b>Break</b> |                   |   |
|  | <b>Material Research Session: Nanostructures I (Chair: Yong Zhang)</b>    |             |              |                   |   |
|  | 28-June   | 10:30-11:00 | 62           | Dongling Ma       | Designing Nanostructured Materials for Efficient Catalysis and Near Infrared Photovoltaics                            |
|  | 28-June   | 11:00-11:30 | 64           | Ji-Seon Kim       | Organic Nanostructures for Optoelectronic Devices- Control and Characterisation                                       |
|  | 28-June   | 11:30-12:00 | 65           | Rainer Dick       | Inter-dimensional Effects in Nanostructures   |
|  | <b>Lunch Break</b>  |             |              |                   |   |
|  | <b>Material Research Session: General III (Chair: Daniel H. C. Chua )</b> |             |              |                   |   |
|  | 28-June   | 13:30-14:00 | 66           | Madoka TAKAI      | Ultra-Fast Immunoassay with 3D Structured Microfiber  |
|  | 28-June   | 14:00-14:30 | 68           | Jeong-Woo Choi    | Biomemory Device Composed of Recombinant Metalloprotein   |
|  | 28-June   | 14:30-15:00 | 70           | I. S. Han         | Bio-inspired neuromorphic device and system   |
|  | 28-June   | 15:00-15:30 | <b>Break</b> |                   |   |
|  | <b>Material Research Session: Nanotubes (Chair: Madoka TAKAI)</b>         |             |              |                   |   |
|  | 28-June   | 15:30-16:00 | 72           | Daniel H. C. Chua | Using Multi-functional Carbon Nanotubes as Base Template  |
|  | 28-June   | 16:00-16:30 | 75           | N. Matsushita     | <b>Nanotube Fabrication on TiNbTaZr Alloy by Anodization at High Growth Rate</b>                                      |
|  | 28-June   | 16:30-17:00 | 73           | Sivaram Arepalli  | Review of Field Emission from Carbon Nanotubes and Graphene   |
|  | <b>Dinner</b>   |             |              |                   |   |

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| Day 1<br><br>Cherry<br>(3F)<br>Palace<br>Hotel | <b>Material Research Session: General IV (Chair: Jongwook Park)</b>      |             |              |                    |  |
|  | 25-June  | 8:30-9:00   | 77           | Yasuhiko Ishikawa  | Silicon/Germanium-Based Photonics for Information Technology and Sensing   |
|  | 25-June  | 9:00-9:30   | 78           | Jong-Lam Lee       | Flexible electronics using laser lift-off method   |
|  | 25-June  | 9:30-10:00  | 80           | Yasufumi Enami     | Electro-Optic Polymer/TiO <sub>2</sub> Multilayer Slot Waveguides for Ultra-Low Voltage Operation  |
|  | 25-June  | 10:00-10:30 | <b>Break</b> |                    |  |
|  | <b>Material Research Session: Graphene I (Chair: Yasuhiko Ishikawa)</b>  |             |              |                    |  |
|  | 25-June  | 10:30-11:00 | 82           | Jongwook Park      | Novel Blue Emitting Materials Based on Core-Side Concepts for OLEDs  |
|  | 25-June  | 11:00-11:30 | 84           | Takaaki Taniguchi  | Photochemical Engineering of Graphene Oxide Nanosheets   |
|  | 25-June  | 11:30-12:00 | 230          | Balakrishnan G.    | Growth of Tetragonal Zirconia by Nanolaminate Structure by Pulsed Laser Deposition   |
|  | <b>Lunch Break</b>   |             |              |                    |  |
|  | <b>Material Research Session: General V (Chair: Chan-Yo Yang )</b>       |             |              |                    |  |
|  | 25-June  | 13:30-14:00 | 86           | N. Fujita          | Preparation of Co-Ce-O composite films by the metal-oxide co-electroless deposition method   |
|  | 25-June  | 14:00-14:30 | 88           | Takashi Mizokawa   | Novel photo-induced phase transition in transition-metal oxides and diluted magnetic semiconductors  |
|  | 25-June  | 14:30-15:00 | 90           | Karina Morgenstern | Anomalous Properties of “Nanocopper” in diffusivity, decay, and electronic structure   |
|  | 25-June  | 15:00-15:30 | <b>Break</b> |                    |  |
|  | <b>Material Research Session: General VI (Chair: Karina Morgenstern)</b> |             |              |                    |  |
|  | 25-June  | 15:30-16:00 | 92           | Chan-Yo Yang       | Visualization of n-p-Junction produced by oxygen vacancy migration   |
|  | 25-June  | 16:00-16:30 | 93           | Franco Cacialli    | Threaded molecular wires as model conjugated polymers with controlled interstrand interactions   |
|  | 25-June  | 16:30-17:00 | 96           | Jhinhwan Lee       | Green function based zero-temperature quasiparticle interference simulation of cuprate with consideration of tunneling matrix elements effect, higher harmonics of the gap function, and the quasiparticle self energy |
|  | <b>Dinner</b>  |             |              |                    |  |

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| Day 2<br>Cherry<br>(3F)<br>Palace<br>Hotel | <b>Material Research Session: General VII (Chair: Giovanni Mattia Lazzerin)</b>  |             |              |                           |   |
|  | 26-June  | 8:30-9:00   | 97           | Hirofumi Takikawa         | Super hard DLC Coating for Glass Lens Mold and Cutting tools  |
|  | 26-June  | 9:00-9:30   | 99           | Juneho Choi               | Nanoscale 3-Dimensional DLC coating as anti-sticking layer for nanoimprint lithography  |
|  | 26-June  | 9:30-10:00  | 101          | Yasuhiro F. Miura         | Structural Control of Dye LB Films by Hydrothermal Treatment  |
|  | 26-June  | 10:00-10:30 | <b>Break</b> |                           |   |
|  | <b>Material Research Session: Light Emitting (Chair: Juneho Choi)</b>            |             |              |                           |   |
|  | 26-June  | 10:30-11:00 | 103          | Naoto Shirahata           | Efficiently Light Emitting Silicon Nanocrystals   |
|  | 26-June  | 11:00-11:30 | 105          | Giovanni Mattia Lazzerini | Control of hole injection for polyfluorene-based organic light emitting diodes via low temperature processing                         |
|  | 26-June  | 11:30-12:00 | 107          | Tom Wu                    | Uncovering Band-Edge Ultraviolet Light Emission in Oxide Nanomaterials with Forbidden Band Gaps                                       |
|  | <b>Lunch Break</b>   |             |              |                           |   |
|  | <b>Material Research Session: Polymer II (Chair: Riad Nechache)</b>              |             |              |                           |   |
|  | 26-June  | 13:30-14:00 | 108          | Takashi Uemura            | Polymer Chemistry in Coordination Nanospaces  |
|  | 26-June  | 14:00-14:30 | 110          | Yoshinori Takashima       | Stimuli Responsive Supramolecular Materials Formed from Host and Guest Polymers   |
|  | 26-June  | 14:30-15:00 | 112          | Ching-I Huang             | Exploring the Correlation between Molecular Conformation and UV Absorption Spectra of Conducting Polymers with Conjugated Side-Chains |
|  | 26-June  | 15:00-15:30 | <b>Break</b> |                           |   |
|  | <b>Material Research Session: Nanostructures II (Chair: Yoshinori Takashima)</b> |             |              |                           |   |
|  | 26-June  | 15:30-16:00 | 114          | Shiki Yagai               | Supramolecular Engineering of Nanostructured Functional $\pi$ -Assemblies   |
|  | 26-June  | 16:00-16:30 | 116          | Noritaka Mizuno           | Design of Functionalized Polyoxometalate-based Nano-structured Catalysts  |
|  | 26-June  | 16:30-17:00 | 118          | Riad Nechache             | Nanostructured multiferroic oxides as active layer in photovoltaic devices  |
|  | <b>Dinner</b>  |             |              |                           |   |

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| Day 3<br>Cherry<br>(3F)<br>Palace<br>Hotel | <b>Material Research Session: Organic Materials (Chair: Chih-Yi Liu)</b>        |             |              |                         |   |
|  | 27-June   | 8:30-9:00   | 120          | Takashi Nakanishi       | Luminescen, Solvent-Free, Low-Viscosity, Room Temperature Organic Liquids   |
|  | 27-June   | 9:00-9:30   | 122          | O. Albrecht             | Some Possible Mistakes and Problems with Measurements on Conductive Organic Materials   |
|  | 27-June   | 9:30-10:00  | 123          | Yutaka Matsuo           | Functional Fullerene Derivatives for Organic Thin-film Solar Cells  |
|  | 27-June   | 10:00-10:30 | <b>Break</b> |                         |   |
|  | <b>Material Research Session: Thin Film II (Chair: Takashi Nakanishi)</b>       |             |              |                         |   |
|  | 27-June   | 10:30-11:00 | 125          | Osamu Sakai             | Formation of Self-Organized Thin Film Structure in Cold Atmospheric-Pressure Plasmas  |
|  | 27-June   | 11:00-11:30 | 127          | Shigeki Nakagawa        | Evaluation of anisotropic residual stress in FeCoB thin films with high magnetic anisotropy field                             |
|  | 27-June   | 11:30-12:00 | 129          | Chih-Yi Liu             | Surface-Enhanced Raman Scattering Based on Ag-Nanostructures Covered by Thin Films  |
|  | <b>Lunch Break</b>  |             |              |                         |   |
|  | <b>Material Research Session: General VIII (Chair: Hsiang-Chen Chui)</b>        |             |              |                         |   |
|  | 27-June   | 13:30-14:00 | 131          | Jingsheng CHEN          | Development of High Anisotropy FePt films for heating assisted magnetic recording   |
|  | 27-June   | 14:00-14:30 | 133          | Hironaga Uchida         | Enhancement of Magneto-Optical Effects in Au Nanoparticles and Magnetic Garnet System   |
|  | 27-June   | 14:30-15:00 | 135          | Takahiro Sagawa         | Second Law of Thermodynamics for Quantum Information-Heat Engines   |
|  | 27-June   | 15:00-15:30 | <b>Break</b> |                         |   |
|  | <b>Material Research Session: Carbon Nanostructures (Chair: Jingsheng CHEN)</b> |             |              |                         |   |
|  | 27-June   | 15:30-16:00 | 232          | <b>Hsiang-Chen Chui</b> | <b>Observation of Strain Effect on the Suspended Graphene by Polarized Raman Spectroscopy</b>                                 |
|  | 27-June   | 16:00-16:30 | 138          | S. YIN                  | Hydrothermal Synthesis of Transition Metal Ions Contained TiO <sub>2</sub> -xN <sub>y</sub> and their Photocatalytic Activity |
|  | 27-June   | 16:30-17:00 | 140          | JeongO Lee              | Functional devices fabricated with nanocarbons  |
|  | <b>Dinner</b>   |             |              |                         |   |

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| Day 4<br>Cherry<br>(3F)<br>Palace<br>Hotel | <b>Material Research Session: Plasmon (Chair: Mao-Kuen Kuo)</b>               |             |              |                              |  |
|  | 28-June   | 8:30-9:00   | 142          | H. Misawa                    | Plasmon-Assisted Photocurrent Generation and Water Oxidation   |
|  | 28-June   | 9:00-9:30   | 144          | Tadaaki NAGAO                | Infrared Plasmonic antennas for ppt-level biosensing and environmental monitoring                                    |
|  | 28-June   | 9:30-10:00  | 145          | Byungwoo Park                | Semiconductor Nanocrystals with Surface Passivation and Surface Plasmon for Luminescence and Solar-Cell Applications |
|  | 28-June   | 10:00-10:30 | <b>Break</b> |                              |  |
|  | <b>Material Research Session: General IX (Chair: H. Misawa)</b>               |             |              |                              |  |
|  | 28-June   | 10:30-11:00 | 146          | Cheol Eui Lee                | Magnetic and electrical properties of carbon nanostructures  |
|  | 28-June   | 11:00-11:30 | 147          | H.C Park                     | Modified Strain Gradient Plasticity theory   |
|  | 28-June   | 11:30-12:00 | 148          | Mao-Kuen Kuo                 | Longitudinal Plasmon Modes of Gold Nanorod   |
|  | <b>Lunch Break</b>  |             |              |                              |  |
|  | <b>Material Research Session: General X (Chair: Prof. My Ali El Khakani )</b> |             |              |                              |  |
|  | 28-June   | 13:30-14:00 | 150          | Shigeki Tokita1              | Single-Shot Sub-Picosecond Electron Diffraction Using Laser-Plasma Electron Sources                                  |
|  | 28-June   | 14:00-14:30 | 152          | Yuji Oki                     | Solid stat dye laser system as surface integratable active waveguide   |
|  | 28-June   | 14:30-15:00 | 154          | Mikyoung Lim                 | Enhancement of near-cloaking   |
|  | 28-June   | 15:00-15:30 | <b>Break</b> |                              |  |
|  | <b>Material Research Session: General XI (Chair: Yuji Oki)</b>                |             |              |                              |  |
|  | 28-June   | 15:30-16:00 | 155          | My Ali El Khakani            | Laser Ablation Synthesis of Nanomaterials and their Integration into Photoactive Devices                             |
|  | 28-June   | 16:00-16:30 | 157          | Kyung Min Lee                | Photomechanical Response of Azobenzene Functionalized Polyimides   |
|  | 28-June   | 16:30-17:00 | 158          | E.Shalaan*,<br>A.A.Al-Ghamdi | Spectroscopic Ellipsometry Study of Ga2O3 Quantum-dot in Thin Solid Film Form  |
|  | <b>Dinner</b>   |             |              |                              |  |



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| Day 1<br><br>Rose<br>(3F)<br>Palace<br>Hotel | <b>Material Research Session: General XII (Chair: June-ichi Shimoyama)</b> |             |              |                     |  |
|  | 25-June  | 8:30-9:00   | 160          | W. Prellier         | Magnetic Oxide Superlattices Grown by Laser Ablation   |
|  | 25-June  | 9:00-9:30   | 161          | Sheng-Kwang Hwang   | Physics and Applications of Period-One Nonlinear Dynamics in Semiconductor Lasers  |
|  | 25-June  | 9:30-10:00  | 163          | Shizuo Fujita       | Solution-based Vapor Deposition of Novel Functional Oxide Semiconductors   |
|  | 25-June  | 10:00-10:30 | <b>Break</b> |                     |  |
|  | <b>Material Research Session: General XIII (Chair: W. Prellier)</b>        |             |              |                     |  |
|  | 25-June  | 10:30-11:00 | 165          | Takuya Matsumoto    | Noise-Induced Stochastic Enhancement for a Device Based on Cytochrome c and DNA Network                                      |
|  | 25-June  | 11:00-11:30 | 167          | Taisun Kim          | 9G Technology for Generalized Positioning System on the Surface  |
|  | 25-June  | 11:30-12:00 | 168          | June-ichi Shimoyama | Current Status of High-Tc Superconducting Materials and Various Science and Technologies behind Their Development            |
|  | <b>Lunch Break</b>   |             |              |                     |  |
|  | <b>Material Research Session: Hybrids (Chair: Toshihiro Okamoto)</b>       |             |              |                     |  |
|  | 25-June  | 13:30-14:00 | 170          | Min Ji Seo          | Analysis of the Therapeutic Effects on Skin Rejuvenation according to the Different Treatment Conditions of 1064 nm IR Laser |
|  | 25-June  | 14:00-14:30 | 172          | Atsunori MATSUDA    | Sol-Gel-Derived Hybrids for Micro-optics and Nano-photonics  |
|  | 25-June  | 14:30-15:00 | 174          | Dong Ha Kim         | Hybrid Plasmonic and Carbonaceous Nanostructures for Versatile Applications  |
|  | 25-June  | 15:00-15:30 | <b>Break</b> |                     |  |
|  | <b>Material Research Session: General XIV (Chair: Atsunori MATSUDA)</b>    |             |              |                     |  |
|  | 25-June  | 15:30-16:00 | 176          | Toshihiro Okamoto   | Effect of the Chalcogen Atoms on Charge Transport Properties of Dinaphtho [1,2-b:2',1'-d] chalcogenophenes                   |
|  | 25-June  | 16:00-16:30 | 178          | Kazunari Shinbo     | Detectious of Organic Dye Film Deposition and Gas Adsorption Using Surface Plasmon Resonance Waveguide Sensor                |
|  | 25-June  | 16:30-17:00 | 180          | Tohru Tsuruoka      | Resistive Switching Memory Based on Nanoscale Cation Transport In Oxide Films  |
|  | <b>Dinner</b>  |             |              |                     |  |

**Collaborative Conference on Materials Research (CCMR) 2012**

**Time: June 25 – June 29, 2012**

**Venue: Seoul Palace Hotel, Seoul, Korea**

| Room   | Date  | Time        | Page         | Speaker           | Talk title  |
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| Day 2<br><br>Rose<br>(3F)<br>Palace<br>Hotel | <b>Material Research Session: General XV (Chair: Bong Jae Lee)</b>    |             |              |                   |   |
|  | 26-June   | 8:30-9:00   | 182          | Xiaoding Qi       | Magnetic and ferroelectric properties of Ti <sup>4+</sup> and Mg <sup>2+</sup> co-doped BiFeO <sub>3</sub>  |
|  | 26-June   | 9:00-9:30   | 183          | Takeshi Kato      | Magnetization Dynamics in Magnetic Multilayers with Perpendicular Anisotropy                                |
|  | 26-June   | 9:30-10:00  | 185          | A. Kassiba        | Structural , Electronic and Photoactivated processes in Titanium Oxide based Mesostructures and Active Gels |
|  | 26-June   | 10:00-10:30 | <b>Break</b> |                   |   |
|  | <b>Material Research Session: Graphene II (Chair: Takeshi Kato)</b>   |             |              |                   |   |
|  | 26-June   | 10:30-11:00 | 186          | Bumki Min         | Tunable Graphene Metamaterials at Terahertz Frequencies   |
|  | 26-June   | 11:00-11:30 | 188          | Changyong Hwang   | Growth of Graphene Sandwich with h-Bn   |
|  | 26-June   | 11:30-12:00 | 189          | Bong Jae Lee      | Application of Gold Nanoshell for Biosensing and Direct Solar Thermal Absorption                            |
|  | <b>Lunch Break</b>  |             |              |                   |   |
|  | <b>Material Research Session: Graphene III (Chair: Akira Kakugo )</b> |             |              |                   |   |
|  | 26-June   | 13:30-14:00 | 190          | Jinhee Kim        | Unusual Superconductivity of LaAlO <sub>3</sub> /SrTiO <sub>3</sub> Heterostructure                         |
|  | 26-June   | 14:00-14:30 | 192          | Akira Tsuchiya    | Loss Modeling of On-Chip Transmission-Line for Millimeter-Wave and Terahertz Applications                   |
|  | 26-June   | 14:30-15:00 |              |                   |   |
|  | 26-June   | 15:00-15:30 | <b>Break</b> |                   |   |
|  | <b>Material Research Session: General XVI (Chair: Jinhee Kim)</b>     |             |              |                   |   |
|  | 26-June   | 15:30-16:00 | 194          | Masayoshi Higuchi | Electrochromic Displays Using Organic-Metallic Hybrid Polymers  |
|  | 26-June   | 16:00-16:30 | 196          | Akira Kakugo      | Organization of Molecular motors through an Energy Dissipative Process                                      |
|  |   |             |              |                   |   |
|  | <b>Dinner</b>   |             |              |                   |   |

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| Day 3<br><br>Rose<br>(3F)<br>Palace<br>Hotel | <b>Material Research Session: General XVII (Chair: K. R. Chen)</b>          |             |              |                    |  |
|  | 27-June   | 8:30-9:00   | 197          | Claus M. Schneider | New Developments in Photoelectron Spectroscopy   |
|  | 27-June   | 9:00-9:30   | 200          | Tetsuya Aruga      | Spin-polarized surface states induced by spin-orbit interaction on semiconductor surfaces                                  |
|  | 27-June   | 9:30-10:00  |              |                    |  |
|  | 27-June   | 10:00-10:30 | <b>Break</b> |                    |  |
|  | <b>Material Research Session: General XVIII (Chair: Claus M. Schneider)</b> |             |              |                    |  |
|  | 27-June   | 10:30-11:00 | 202          | K. R. Chen         | Beyond-limit light focusing with a plasmonic nanstructure  |
|  | 27-June   | 11:00-11:30 | 204          | Abdou Hassani      | Atomically resolved properties and scaling effects in mesoscopic conductors  |
|  | 27-June   | 11:30-12:00 | 206          | Hee-Woo Rhee       | Nanoporous Ultra-low Dielectric Materials for the Next Generation Semiconductors   |
|  | <b>Lunch Break</b>  |             |              |                    |  |
|  | <b>Material Research Session: General XIX (Chair: T. Shibauchi )</b>        |             |              |                    |  |
|  | 27-June   | 13:30-14:00 | 207          | Ki Hoon Lee        | Application of Silk Sericin in Materials Field   |
|  | 27-June   | 14:00-14:30 | 209          | M.Zhou             | Coupled Mechano-Diffusional Driving Forces for Fracture in Electrode Materials   |
|  | 27-June   | 14:30-15:00 | 210          | Shin-ichi Ohkoshi  | Novel optical functionalities on cyano-bridged bimetal assemblies and metal oxide nanomaterials                            |
|  | 27-June   | 15:00-15:30 | <b>Break</b> |                    |  |
|  | <b>Material Research Session: General XX (Chair: Shin-ichi Ohkoshi)</b>     |             |              |                    |  |
|  | 27-June   | 15:30-16:00 | 212          | T. Shibauchi       | Exotic superconductivity of heavy electrons in artificial two-dimensional Kondo lattices                                   |
|  | 27-June   | 16:00-16:30 | 213          | J.W. Chung         | Origin for the split surface bands from 1 D interacting electrons of Au/Si systems   |
|  | 27-June   | 16:30-17:00 | 214          | YoungPak Lee       | Advanced properties of metamaterials, comprising plasmonic electromagnetically-induced transparency and perfect absorption |
|  | <b>Dinner</b>   |             |              |                    |  |

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| Day 1<br>Topaz(2F)<br>Palace<br>Hotel | <b>3DR Session I (Chair: Eun-Soo Kim)</b>           |             |              |                      |  |
|                                       | 25-June   | 8:30-9:00   | 1            | Jae-Hyeung Park      | Comparative analysis of multi-view display and integral imaging display  |
|                                       | 25-June   | 9:00-9:30   | 2            | Jens F. Jensen       | 3D Social Virtual Worlds—new concepts, new methods and new theories  |
|                                       | 25-June   | 9:30-10:00  | 4            | Jhinhwan Lee         | Green function based zero-temperature quasiparticle interference simulation of cuprate with consideration of tunneling matrix elements effect, higher harmonics of the gap function, and the quasiparticle self energy |
|                                       | 25-June   | 10:00-10:30 | <b>Break</b> |                      |  |
|                                       | <b>3DR Session II ( Chair: Jens F. Jensen)</b>      |             |              |                      |  |
|                                       | 25-June   | 10:30-11:00 | 6            | Qigang Gao           | 3D Gesture Recognition for HCI using Spatiotemporal Shape Features and Perceptual Saliency Map   |
|                                       | 25-June   | 11:00-11:30 | 8            | Philip Azariadis     | Energy-minimizing techniques for assessing the realizability of a wireframe or natural sketch  |
|                                       | 25-June   | 11:30-12:00 | 10           | ByoungHo Lee         | Image screens using lens-array holographic optical elements for two-dimensional and three-dimensional see-through display  |
|                                       | <b>Lunch Break</b>                                  |             |              |                      |  |
|                                       | <b>3DR Session III (Chair: Philip Azariadis )</b>   |             |              |                      |  |
|                                       | 25-June   | 13:30-14:00 | 12           | Yoshio Hayasaki      | Holographic femtosecond laser processing system with wavelength dispersion compensation  |
|                                       | 25-June   | 14:00-14:30 | 14           | G. Bora Esmer        | Performance Assessment of a Fast and Accurate Scalar Optical Diffraction Field Computation Algorithm   |
|                                       | 25-June   | 14:30-15:00 | 16           | Masayuki K. YAMAMOTO | Wind and Turbulence Measurement by Clear-Air Doppler radars  |
|                                       | 25-June   | 15:00-15:30 | <b>Break</b> |                      |  |
|                                       | <b>3DR Session IV (Chair: Masayuki K. YAMAMOTO)</b> |             |              |                      |  |
|                                       | 25-June   | 15:30-16:00 | 18           | Yong Seok Hwang      | VHOE-based time-multiplexed auto-stereoscopic three-dimensional display system   |
|                                       | 25-June   | 16:00-16:30 | 20           | Ju Liu               | Semi-Automatic 2D-to-3D Conversion Using Optimization  |
|                                       | 25-June   | 16:30-17:00 | 22           | YongKeun Park        | Digital holographic microscopy for the study of human disease  |
|                                       | <b>Dinner</b>                                       |             |              |                      |  |

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| Day 2<br>Topaz(2F)<br>Palace<br>Hotel | <b>3DR Session V (Chair: George Barbastathis)</b> |             |              |                            |   |
|                                       | 26-June   | 8:30-9:00   | 23           | Yo-Sung Ho                 | 3D Video Content Generation using Multiple Color and Time-of-Flight Depth Cameras                       |
|                                       | 26-June   | 9:00-9:30   | 26           | Naoki Takada               | Fast Computation of 20 Mega Pixel Computer-Generated Hologram Using Multi-GPU Cluster System            |
|                                       | 26-June   | 9:30-10:00  | 27           | Julien Flack               | Techniques for High Performance Stereoscopic 3D Game Rendering  |
|                                       | 26-June   | 10:00-10:30 | <b>Break</b> |                            |   |
|                                       | <b>3DR Session VI (Chair: Yo-Sung Ho)</b>         |             |              |                            |   |
|                                       | 26-June   | 10:30-11:00 | 29           | Yi-Pai Huang               | Time-Multiplexed Auto-stereoscopic 3D Display by Using Scanning LC-lens and Fine-stripe Backlight       |
|                                       | 26-June   | 11:00-11:30 | 30           | Min-Chul Park              | Performance difference in task performance between a 2D and 3D display system                           |
|                                       | 26-June   | 11:30-12:00 | 31           | George Barbastathis        | Imaging through volumes   |
|                                       | <b>Lunch Break</b>                                |             |              |                            |   |
|                                       | <b>3DR Session VII (Chair: Min-Chul Park)</b>     |             |              |                            |   |
|                                       | 26-June   | 13:30-14:00 | 33           | Gerard J. Kim              | 3D Object Selection for Hand-held Auto-stereoscopic Display   |
|                                       | 26-June   | 14:00-14:30 | 34           | Ádám Csapó, Péter Galambos | New Directions in Immersive 3D Virtual Reality Research from the Aspect of CogInfoCom                   |
|                                       | 26-June   | 14:30-15:00 | 36           | Jeha Ryu                   | Haptic Interaction with 3D object   |
|                                       | 26-June   | 15:00-15:30 | <b>Break</b> |                            |   |
|                                       | <b>3DR Session VIII (Chair: G. Bora Esmer)</b>    |             |              |                            |   |
|                                       | 26-June   | 15:30-16:00 | 37           | Tomoyoshi Shimobaba        | Nonuniform-sampling based computer holography   |
|                                       | 26-June   | 16:00-16:30 | 40           | Seung-Cheol Kim            | Efficient computation of computer-generated holograms with $N \times N$ -point PFPs in the N-LUT method |
|                                       | 26-June   | 16:30-17:00 | 44           | Javier San Juan            | Overlapping Range Images Using Genetic Algorithms   |
|                                       | <b>Dinner</b>                                     |             |              |                            |   |

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| Topaz(2F)<br>Palace<br>Hotel | <b>3DR Session IX (Chair: Yuzuru Takashima)</b>  |             |              |                           |  |  |
|                              | 27-June  | 8:30-9:00   | 43           | Seunghoon Han             | Active Nanostructured Materials and Diffractive Optical Elements   |  |
|                              | 27-June  | 9:00-9:30   | 46           | Sung-Wook Min             | Depth cube 3D display  |  |
|                              | 27-June  | 9:30-10:00  | 86           | <b>Vladimir V. Petrov</b> | <b>Scanning Acoustooptical Holography. 3D Image Capturing and Electronic Hologram Recording</b>            |  |
|                              | 27-June  | 10:00-10:30 | <b>Break</b> |                           |  |  |
|                              | <b>3DR Session X(Chair: Wen-Liang Hwang)</b>     |             |              |                           |  |  |
|                              | 27-June  | 10:30-11:00 | 48           | Elena Stoykova            | Pattern projection profilometry with sinusoidal gratings under coherent illumination                       |  |
|                              | 27-June  | 11:00-11:30 | 50           | Vladimir Saveljev         | Distance-based Reference Functions for Integral/ Multi-view Imaging  |  |
|                              | Day 3  | 27-June     | 11:30-12:00  | 52                        | Roberto Mugavero   | The Multisensory Integrated Modules for Training |
|                              | <b>Lunch Break</b>                               |             |              |                           |  |  |
|                              | <b>3DR Session XI (Chair: Diogo Caetano)</b>     |             |              |                           |  |  |
|                              | 27-June  | 13:30-14:00 | 53           | P.W.M. Tsang              | A comparison of several methods for generation of binary holograms of three dimensional (3D) scenes        |  |
|                              | 27-June  | 14:00-14:30 | 56           | Toyohiko Yatagai          | A rigorous diffraction theory for full view-angle computer-generated hologram                              |  |
|                              | 27-June  | 14:30-15:00 | 58           | Osamu Matoba              | Adaptive Parallel Phase-shifting Digital Holography  |  |
|                              | 27-June  | 15:00-15:30 | <b>Break</b> |                           |  |  |
|                              | <b>3DR Session XII (Chair: Toyohiko Yatagai)</b> |             |              |                           |  |  |
|                              | 27-June  | 15:30-16:00 | 60           | Diogo Gará Caetano        | A Real Time QoS monitoring system for Broadcast Digital TV over 3D Maps                                    |  |
|                              | 27-June  | 16:00-16:30 | 191          | <b>Wen-Liang Hwang</b>    | <b>Scene and depth from multiple images with the same camera frame</b>                                     |  |
|                              | 27-June  | 16:30-17:00 | 63           | Inkyu Moon                | Statistical Analysis of Clinical Parameters of Multiple Red Blood Cells via Digital Holographic Microscopy |  |
|                              | <b>Dinner</b>                                    |             |              |                           |  |  |

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| Day 4<br>Topaz(2F)<br>Palace<br>Hotel | <b>3DR Session XIII Chair: Péter Inzelt</b>    |             |              |                            |   |
|                                       | 28-June  | 8:30-9:00   | 65           | Takashi Kawai              | 3D Ergonomics Research - Recent Issues on Stereoscopic Imaging                                |
|                                       | 28-June  | 9:00-9:30   | 69           | Hoi-June Yoo               | Neural Network and Multicore Processor for Fast Object Recognition                            |
|                                       | 28-June  | 9:30-10:00  |              |                            |   |
|                                       | 28-June  | 10:00-10:30 | <b>Break</b> |                            |   |
|                                       | <b>3DR Session XIV Chair: Jae-Hyeung Park</b>  |             |              |                            |   |
|                                       | 28-June  | 10:30-11:00 | 71           | Hong-Seok Lee              | High Resolution Spatial Light Modulators for Wide Viewing Angle Holographic 3D Display        |
|                                       | 28-June  | 11:00-11:30 | 73           | Péter Inzelt               | Immersive 3D Technology in Service of Cooperative Research: The VirCA Concept                 |
|                                       | 28-June  | 11:30-12:00 | 72           | Hartmut Mueller            | 3D Models in the Workflow of Archaeological Processing Chains                                 |
|                                       | <b>Lunch Break</b>                             |             |              |                            |   |
|                                       | <b>3DR Session XV Chair: Hartmut Mueller</b>   |             |              |                            |   |
|                                       | 28-June  | 13:30-14:00 | 77           | Hyeong-Seok Ko             | Digital Clothing: a New Paradigm for Fashion  |
|                                       | 28-June  | 14:00-14:30 | 79           | Myung K. Kim               | Adaptive Optics by Incoherent Digital Holography  |
|                                       | 28-June  | 14:30-15:00 | 81           | Yuzuru Takashima           | Design and Implementation of Wearable Head-up Display for Mobile Phone Applications           |
|                                       | 28-June  | 15:00-15:30 | <b>Break</b> |                            |   |
|                                       | <b>3DR Session XVI Chair: Yuzuru Takashima</b> |             |              |                            |   |
|                                       | 28-June  | 15:30-16:00 | 82           | Michiharu Yamamoto         | Rewritable Photorefractive Large Area Color Display Material                                  |
|                                       | 28-June  | 16:00-16:30 | 84           | Osamu Ikeda                | Improving Shape Reconstruction in Photometric Stereo Using Inter-reflections Compensation and |
|                                       | 28-June  | 16:30-17:00 | <b>67</b>    | <b>Sung-Kyu Kim</b>        | <b>Crosstalk minimization by eye tracking and viewing zone mixing</b>                         |
|                                       | Day5   | 29-June     | 10:00-04:00  | <b>Tour and Networking</b> |   |