

Poster Program

January 17 (Tuesday) 14:10-16:10

Presentation core time for posters with **odd** poster numbers

January 18 (Wednesday) 14:10-16:10

Presentation core time for posters with **even** poster numbers

A. Photoreaction Mechanism

- A-01 **Magnetic Field Effects on the Photoinduced Electrontransfer Reaction of Artificial Photosynthesis System**
Masao Gohdo and Masanobu Wakasa
Department of Chemistry, Faculty of Science, Saitama University
- A-02 **Synthesis of Efficient Organic Photocurrent Generators with Porphyrin Nano-System**
Takashi Arimura¹, Youichi Tsuchiya¹, and Masanori Tachiya²
1 Nanotechnology Research Institute, AIST
2 Fellow, AIST
- A-03 **Controlled Assembly of Molecular Redox Systems Based on a Porphyrin Dimer Bearing Calix[4]arene**
Takashi Arimura¹, Satoshi Kumamoto¹, Youichi Tsuchiya¹, Tomohiko Yamaguchi¹, and Masanori Tachiya²
1 Nanotechnology Research Institute, AIST
2 Fellow, AIST
- A-04 **Sampling Volume Controlled Fluorescence Correlation Spectroscopy as a Tool for the Investigation of Anomalous Diffusions**
Akiko Masuda, Kiminori Ushida, and Takayuki Okamoto
Eco-Soft Materials Research Unit, RIKEN (The Institute of Physical and Chemical Research)
- A-05 **Long-Distance Electron Transfer and Exciplex Formation in Fluorescence Quenching Studied with a 3-Dimensional Free Energy Diagram**
Shigeo Murata¹ and Masanori Tachiya²
1 Research Institute of Instrumentation Frontier (RIIF), AIST
2 Fellow, AIST
- A-06 **Computational Studies on the Structure-Function Relationships of Photosensory Receptors**
Takakazu Ishikura¹, Hiroshi Watanabe¹, Kazutomo Kawaguchi¹, and Takahisa Yamato^{1,2}
1 Graduate School of Science, Nagoya University
2 CREST, JST
- A-07 **Relaxation Processes of Excited Aromatic 1,3-Dicarbonyl Compounds in Solution**
Toshitada Yoshihara, Atsushi Kobayashi, and Seiji Tobita
Department of Chemistry, Gunma University
- A-08 **Crystalline-State Z,E-Photoisomerization of a Series of (Z,E,Z)- 1,6-Diphenylhexa-1,3,5-Triene 4,4'-Dicarboxylic Acid Dialkyl Esters. Chain Length Effects on the Crystal Structure and Photoreactivity**
Yoriko Sonoda¹, Yuji Kawanishi¹, Seiji Tsuzuki², and Midori Goto³
1 Nanotechnology Research Institute, AIST
2 Research Institute of Computational Sciences, AIST
3 Technical Center, AIST

- A-09 **Excited States of Dye-Attached Diarylethene**
Satoshi Yokojima¹, Koutaro Ryo², Yasutaka Fujii², Masanori Tachikawa², Kuni Shin¹, Takao Kobayashi¹, Akinori Murakami¹, Mitsuru Yoneyama¹, Katsuya Kanda¹, Shinichiro Nakamura¹, Tuyoshi Fukaminato³, and Masahiro Irie³
1 Mitsubishi Chemical Group Science and Technology Research Center, INC., CREST, JST
2 Quantum Chemistry Division, Graduate School of Science, Yokohama-City University
3 Department of Chemistry and Biochemistry, Graduate School of Engineering, Kyushu University
- A-10 **Carrier Dynamics of Anatase and Rutile TiO₂ Nanostructured Electrodes and the Effect of CdSe Quantum Dot Deposition**
Qing Shen^{1,2}, Kenji Katayama³, Masahiro Yamaguchi⁴, Tsuguo Sawada⁵, and Taro Toyoda^{1,2}
1,2 Department Applied Physics and Chemistry, Course of Coherent Optical Science, The University of Electro-Communications
3 Micro Chemistry Group, Kanagawa Academy of Science and Technology
4 Deptment of Chemical System Engineering, Tokyo University of Agriculture and Technology
5 Graduate School of Frontier Sciences, The University of Tokyo
- A-11 **Transient Absorption Measurement with Femtosecond Laser Scanning Microscopes**
Akihiro Furube, Yoshiaki Tamaki, and Ryuzi Katoh
Research Institute of Instrumentation Frontier (RIIF), AIST
- A-12 **Development of Transient Absorption Microscope for Time/Space-Resolved Spectroscopy**
Ryuzi Katoh, Yoshiaki Tamaki, and Akihiro Furube
Research Institute of Instrumentation Frontier (RIIF), AIST
- A-13 **Coherent Control of Disocciative Ionization Process by Using Phase-Controlled Two-Color Laser Fields**
Hideki Ohmura
Research Institute of Instrumentation Frontier (RIIF), AIST
- A-14 **Multi-Photon Ionization of CH₃I and the Effect of the Molecular Alignment by Nanosecond Nd:YAG Laser**
Taisuke Nakanaga and Hidekazu Nagai
Research Institute of Instrumentation Frontier (RIIF), AIST
- A-15 **Relation Between Photoluminescence and Dispersive Transport in Amorphous Semiconductors**
Kazuhiko Seki¹, Mariusz Wojcik², and Masanori Tachiya³
1 Nanotechnology Research Institute, AIST
2 Institute of Applied Radiation Chemistry, Technical University of Lodz, Poland,
3 Fellow, AIST
- A-16 **Photoinduced Electron-Ion Dynamics by Real-Time Propagation Time-Dependent Density Functional Theory**
Yoshitaka Tateyama¹, Norihisa Oyama¹, Takahisa Ohno¹, and Yoshiyuki Miyamoto²
1 National Institute for Materials Science
2 Fundamental and Environmental Research Labs., NEC
- A-17 **Anomalous Kinetics of Subdiffusion-Assisted Photochemical Reactions**
Anatoly I. Shushin
Institute of Chemical Physics, Russian Academy of Sciences, Russia
- A-18 **On Concentration Dependence of Fluorescence Quenching**
Sergey Traytak¹ and Masanori Tachiya²
1 Institute of Applied Mechanics, Russian Academy of Sciences, Russia
2 Fellow, AIST

B. Light Energy Conversion

- B-01 **Time-Resolved EPR Study on the Electronic Structure of the Primary Donor in Plant Photosystem I: Observation of the Photochemically Induced Spin Coherences**
Tomoaki Yago, Jacques Lalevee, Michael Bechtold, Gerhard Link, Joerg-Urlich Weidner, and Gerd Kothe
Department of Physical Chemistry, University of Freiburg, Germany
- B-02 **Theoretical Treatments of Ultrafast Electron Transfer from Adsorbed Dye Molecule to Semiconductor Nanocrystalline Surface**
Kuo Kan Liang¹ and Sheng Hsien Lin²
1 Division of Mechanics, Research Center for Applied Sciences, Academia Sinica, Taiwan
2 Institute of Atomic and Molecular Sciences, Academia Sinica, Taiwan
- B-03 **The Effects of Organic Surface Treatment by Methacryloxypropyltrimethoxysilane on the Photostability of TiO₂**
Iqbal Ahmed Siddiquey¹, Emi Ukaji¹, Takeshi Furusawa², Masahide Sato², and Noboru Suzuki¹
1 Department of Information and Control Systems Science, Graduate School of Engineering, Utsunomiya University
2 Department of Applied Chemistry, Faculty of Engineering, Utsunomiya University
- B-04 **Photoacoustic and Photoelectrochemical Characterization of TiO₂ Photonic Crystal Sensitized with CdSe Quantum Dots**
Lina Jaya Diguna¹, Akira Sato¹, Motonobu Murakami¹, Yuki Kumagai¹, Taishi Ishihara¹, Naoki Kobayashi¹, Qing Shen^{1,2}, and Taro Toyoda^{1,2}
1 Department of Applied Physics and Chemistry, The University of Electro-Communications
2 Course of Coherent Optical Science, The University of Electro-Communications
- B-05 **Effect of Rutile-Type Content on Optical Absorption and Photoelectrochemical Properties of Nanostructured Anatase-Type TiO₂ Electrodes Sensitized with CdSe Quantum Dots**
Hiromi Otsuka¹, Qing Shen^{1,2}, and Taro Toyoda^{1,2}
1 Department of Applied Physics and Chemistry, The University of Electro-Communication
2 Course of Coherent Optical Science, The University of Electro-Communication
- B-06 **Direct Observation of a Sequence of Photochemical Events in TiO₂ by Vis/NIR Transient Absorption Spectroscopy**
Yoshiaki Tamaki^{1,2}, Akihiro Furube¹, Ryuzi Katoh¹, Kohjiro Hara³, Miki Murai¹, and Masanori Tachiya⁴
1 Research Institute of Instrumentation Frontier (RIIF), AIST
2 NEDO Fellow,
3 Research Center for Photovoltaics, AIST
4 Fellow, AIST
- B-07 **Near-IR Transient Absorption Spectra of N3 Dye as a Probe of Aggregation on Nanocrystalline Semiconductor Films**
Miki Murai¹, Akihiro Furube¹, Masatoshi Yanagida², Kohjiro Hara³, and Ryuzi Katoh¹
1 Research Institute of Instrumentation Frontier (RIIF), AIST
2 Energy Technology Research Institute (ETRI), AIST
3 Research Center for Photovoltaics, AIST
- B-08 **Electron Transport in Organic-Dye-Sensitized Nanocrystalline TiO₂ Electrodes**
Kohjiro Hara¹, Koji Miyamoto², Yoshimoto Abe², and Masatoshi Yanagida³
1 Research Center for Photovoltaics, AIST
2 Faculty of Science and Technology, Tokyo University of Science
3 Energy Technology Research Institute (ETRI), AIST

- B-09 **ESR Study on the Injected Electron in TiO₂ Particles by Dye Sensitization**
Yoshinari Konishi¹, Ryu Abe², and Hideki Sugihara¹
1 Energy Technology Research Institute (ETRI), AIST
2 Energy Technology Research Institute (ETRI), AIST, (Present address: Hokkaido University)
- B-10 **Dye-Sensitized TiO₂ Nanotube Solar Cells : Fabrication and Electronic Characterization**
Naruhiko Masaki¹, Yoshinori Ohsaki², Takayuki Kitamura², Yuji Wada², Takumi Okamoto³, Toru Sekino³, Kohichi Niihara³, and Shozo Yanagida¹
1 Center for Advanced Science and Innovation, Osaka University
2 Graduate School of Engineering, Osaka University
3 The Institute of Science and Industrial Research, Osaka University
- B-11 **Confirmed High Efficiency of Dye-Sensitized Solar Cells**
Ashraful Islam, Yasuo Chiba, Ryoichi Komiya, Naoki Koide, Atsushi Fukui, Ryohsuke Yamanaka, and Liyuan Han
Ecological Technology Development Center, SHARP CORPORATION
- B-12 **High-Efficiency Dye-Sensitized Solar Cell Based on N-Doped Titania Electrode**
Tingli Ma¹, Takeshi Hori¹, and Eiichi Abe²
1 Department of Chemistry, Faculty of Science, Kyushu University
2 National Institute of Advanced Industrial Science and Technology (AIST), AIST Kyushu
- B-13 **Charge Transport and Transfer in Solar Cells Using Nano-Porous NiO Electrode Immersed in Electrolytes**
Yoshihiro Takeda, Shogo Mori, Hisanao Usami, and Eiji Suzuki
Department of Fine Materials Engineering, Faculty of Textile Science and Technology, Shinshu University
- B-14 **Dependence of the Efficiency of Dye-Sensitized Solar Cells Using p-Type NiO Electrode on HOMO Potential of Dyes**
Shunya Fukuda¹, Shogo Mori¹, Hisanao Usami¹, Takao Abe², Eiji Suzuki¹
1 Department of Fine Materials Engineering, Faculty of Textile Science and Technology, Shinshu University
2 Department of Kansei Engineering, Faculty of Textile Science and Technology, Shinshu University
- B-15 **Br⁻/Br₃⁻ Redox Couple Based Dye-Sensitized Solar Cells**
Zhong-Sheng Wang, Kazuhiro Sayama, and Hideki Sugihara
Energy Technology Research Institute (ETRI), AIST
- B-16 **Development of p-Type Dye Sensitized Solar Cells Using CuO Nano Particles**
Seiichi Sumikura, Shogo Mori, Hisanao Usami, and Eiji Suzuki
Department of Fine Materials Engineering, Faculty of Textile Science and Technology, Shinshu University.
- B-17 **Dye-Sensitized Solar Cells Using Nitrogen-Containing Heterocyclic Additives**
Hitoshi Kusama and Hideki Sugihara
Energy Technology Research Institute (ETRI), AIST
- B-18 **Dye-Sensitized Solar Cells with Ionic Gel Electrolytes Composed of Imidazolium Salts and Agarose**
Kazuharu Suzuki¹, Makoto Yamaguchi¹, Mikio Kumagai¹, Nobuo Tanabe², and Shozo Yanagida³
1 Photonics and Materials Research Department, Institute of Research and Innovation
2 Electronics Material Department, Material Technology Laboratory, Fujikura Ltd,
3 Center for Advanced Science and Innovation, Osaka University
- B-19 **Absorption Spectra of [Ru(4,4'-COOH-2,2'-bpy)₂(NCS)₂] by SAC-CI Method**
Osamu Kitao
Energy Technology Research Institute (ETRI), AIST

- B-20 **Synthesis and Properties of Novel Ruthenium Dyes Containing Tetradentate Polypyridine Ligands**
Kazuyuki Kasuga, Masatoshi Yanagida, Nobuko Onozawa-Komatsuzaki, Yuichiro Himeda, and Hideki Sugihara
Energy Technology Research Institute (ETRI), AIST
- B-21 **Dye-Sensitized Solar Cell Using Novel Ruthenium(II) Complex Having Dipyrido[3,2-a:2',3'-c]-Phenazine as a Photosensitizer**
Nobuko Onozawa-Komatsuzaki, Osamu Kitao, Masatoshi Yanagida, Yuichiro Himeda, Hideki Sugihara, and Kazuyuki Kasuga
Energy Technology Research Institute (ETRI), AIST
- B-22 **n-TiO₂/Dye/p-CuI Solid-State Solar Cells Sensitized with Metal-Free Organic Dyes**
Akinori Konno¹, G. R. Asoka Kumara¹, Takuya Kawaguchi¹, Yusuke Kato¹, and Kirthi Tennakone²
1 Department of Material Science and Technology, Shizuoka University
2 Institute of Fundamental Studies, Sri Lanka
- B-23 **Investigation of Optimum Conditions for High-Efficiency Organic Thin-Film Solar Cells Based on Polymer Blends**
Toshihiro Yamanari, Tetsuya Taima, Kohjiro Hara, and Kazuhiro Saito
Research Center for Photovoltaics, AIST
- B-24 **Fabrication of PPV Ultrathin Films by Layer-by-Layer Deposition Technique and Their Application to Organic Solar Cells**
Hiroaki Benten¹, Michihiro Ogawa², Hideo Ohkita², and Shinzaburo Ito²
1 International Innovation Center, Kyoto University
2 Department of Polymer Chemistry, Graduate School of Engineering, Kyoto University
- B-25 **Photochemical CO₂ Reduction Mediated by Ruthenium and Cobalt Polypyridine Complexes in Compressed CO₂**
Makoto Hirose, Atsushi Fushimi, Yoshihito Maeno, and Takuji Hirose
Department of Applied Chemistry, Saitama University
- B-26 **Optical Absorption, Photoelectrochemical, and Carrier Dynamic Properties of TiO₂ Electrodes Composed of Different Size Mixture of Nanoparticles Sensitized with CdSe Quantum Dots**
Yuki Kumagai¹, Masahiro Yamaguchi², Tsuguo Sawada³, Kenji Katayama⁴, Diguna Lina Jaya¹, Qing Shen¹, and Taro Toyoda¹
1 The University of Electro-Communications
2 The University of Tokyo
3 Tokyo University of Agriculture and Technology
4 Kanagawa Academy of Science and Technology
- B-27 **Stoichiometric Water Splitting Through Two-Step Photoexcitation Mediated with an Iodate/Iodide Shuttle Redox Couple**
Ryu Abe¹, Kazuhiro Sayama², Hideki Sugihara², Kazunari Domen³, and Bunsho Ohtani¹
1 Catalysis Research Center, Hokkaido University
2 Energy Technology Research Institute (ETRI), AIST
3 Faculty of Engineering, The University of Tokyo
- B-28 **Photoelectrochemical Cell of Nano-Porous p-Type Co₃O₄ Electrode with I⁻/I₃⁻ Redox Couple**
Shigeki Arai, Shogo Mori, Hisanao Usami, and Eiji Suzuki
Department of Fine Materials Engineering, Faculty of Textile Science and Technology, Shinshu University
- B-29 **Effect of Fe³⁺ Ions on Photocatalytic Degradation of Organic Substance Using WO₃ Under Visible-Light**
Takeo Arai, Kazuhiro Sayama, Yoshinari Konishi, and Hideki Sugihara
Energy Technology Research Institute (ETRI), AIST

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- B-30 **Properties of Porous Titanium Metal Sheet with High Surface Area as Basal Plate for Semiconductor Photoelectrodes**
Kazuhiro Sayama¹, Masatoshi Yanagida¹, Ryu Abe¹, Takashi Oi², Hideki Sugihara¹, and Yasukazu Iwasaki²
1 Energy Technology Research Institute (ETRI), AIST
2 Technology Research Laboratory No.3, Nissan Research Center, Nissan Motor Co., LTD.
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- B-31 **Influence of Glass Substrate on Photocatalytic Activity of TiO₂ Thin Film Prepared by the Sol-Gel Method**
Hyun-Jeong Nam¹, Takeshi Sasaki¹, Naoto Koshizaki¹, Takashi Amemiya², Masayuki Murabayashi², and Kiminori Itoh²
1 Nanoarchitectonics Research Center (NARC), AIST
2 Graduate School of Environment and Information Sciences, Yokohama National University
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- B-32 **A Novel Method for Improving Photocatalytic Activity of TiO₂ Film: The Combination of Ag Deposition with Application of External Electric Field**
Chun He^{1,2}, Ya Xiong¹, Xihai Zhu¹, and Xiangzhong Li²
1 School of Chemistry and Chemical Engineering, Sun Yat-sen University, China
2 Department of Civil and Structural Engineering, The Hong Kong Polytechnic University, China

C. Laser-Induced Reaction

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- C-01 **Silica Nanomachining Using Pulsed Laser Plasma Soft X-Rays**
Satoshi Uchida¹, Tetsuya Makimura¹, Hisao Miyamoto¹, Hiroyuki Niino², and Kouichi Murakami¹
1 Institute of Applied Physics, University of Tsukuba
2 Photonics Research Institute, AIST
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- C-02 **Practical Application of UV Transparent Polymer for Microchip Electrophoresis System by F₂ Laser Ablation**
Kotaro Obata, Koji Sugioka, and Katsumi Midorikawa
Midorikawa Laser Technology Laboratory, RIKEN
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- C-03 **Surface Micro-Structuring of Silica Glass by LIBWE Using ns-Pulsed UV Laser at a High Repetition Rate**
Hiroyuki Niino, Yoshizo Kawaguchi, Tadatake Sato, Aiko Narazaki, and Ryozi Kurosaki
Photonics Research Institute, AIST
-
- C-04 **Ablation of Inorganic Materials Using Laser Plasma Soft X-Rays**
Hisao Miyamoto¹, Tetsuya Makimura¹, Satoshi Uchida¹, Hiroyuki Niino², and Kouichi Murakami¹
1 Institute of Applied Physics, University of Tsukuba
2 Photonics Research Institute, AIST
-
- C-05 **Photonics Nanostructures Fabrication Using Ultrafast Pulse Laser**
Yasuhiko Shimotsuma¹, Kiyotaka Miura², Jiarong Qiu³, Peter G. Kazansky⁴, and Kazuyuki Hirao²
1 Fukui Institute for Fundamental Chemistry, Kyoto University
2 Department of Material Chemistry, Kyoto University
3 Zhejiang University, China
4 Optoelectronics Research Centre, University of Southampton, United Kingdom
-
- C-06 **Silica Ablation Using Pulsed Laser Plasma Soft X-Rays in Various Gases**
Takashige Fujimori¹, Tetsuya Makimura¹, Satoshi Uchida¹, Hisao Miyamoto¹, Hiroyuki Niino², and Kouichi Murakami¹
1 Institute of Applied Physics, University of Tsukuba
2 Photonics Research Institute, AIST

- C-07 **F₂-Laser Direct Fabrication of Silica Optical Waveguides in Silicone Rubber**
Masayuki Okoshi¹, Jianzhao Li², Peter R. Herman², and Narumi Inoue¹
1 Department of Electrical and Electronic Engineering, National Defense Academy
2 Department of Electrical and Computer Engineering, University of Toronto, Canada
- C-08 **Fabrication of a Novel Microfluidic Device Incorporating 2-D Array of Microbeads by Using LIBWE Microstructures**
Tadatake Sato, Thomas Gumpenberger, Ryoza Kurosaki, Aiko Narazaki, Yoshizo Kawaguchi, and Hiroyuki Niino
Photonics Research Institute, AIST
- C-09 **Tailoring the Size and Shape of Nanoparticles with Laser Pulses**
Hassan Ouacha¹, Christian Hendrich², David Blasquez Sanchez², Frank Hubenthal², Frank Traeger², and Naoto Koshizaki¹
1 Nanoarchitectonics Research Center (NARC), AIST
2 Institut für Physik, Center for Interdisciplinary Nanostructure Science and Technology (CINaT), Kassel University, Germany.
- C-10 **Attempts at Generation of Novel Aryne Species in Low Temperature Matrixes by Laser-Induced Reaction**
Tadatake Sato, Aiko Narazaki, Yoshizo Kawaguchi, and Hiroyuki Niino
Photonics Research Institute, AIST
- C-11 **Nanocrystalline PbWO₄ Thin Films Deposition by Using Pulsed Laser Ablation Under Various Ar Pressures**
Jeong Ho Ryu¹, Jong-Won Yoon¹, Kwang Bo Shim¹, Takeshi Sasaki², and Naoto Koshizaki²
1 Department of Ceramic Engineering, Ceramic Processing Research Center (CPRC), Hanyang University, South Korea
2 Nanoarchitectonics Research Center (NARC), AIST
- C-12 **FePt Nanoparticles Prepared by a PLA Method**
Kenji Kawaguchi, Run Wu, Yoshie Ishikawa, Takeshi Sasaki, and Naoto Koshizaki
Nanoarchitectonics Research Center (NARC), AIST
- C-13 **Photoluminescence of beta-FeSi₂ Microprecipitate-Containing Films Prepared by Pulsed Laser Deposition and Annealing**
Aiko Narazaki, Tadatake Sato, Yoshizo Kawaguchi, and Hiroyuki Niino
Photonics Research Institute, AIST
- C-14 **Sensing Property of Optical Gas Sensor Using Cobalt Oxide Thin Film Prepared by Pulsed Laser Ablation**
Hyun-Jeong Nam, Takeshi Sasaki, and Naoto Koshizaki
Nanoarchitectonics Research Center (NARC), AIST
- C-15 **Site-Selective Growth of TiO₂ Micro-Networks on a UV-Absorbing SiO₂-Based Glass Surface by KrF Excimer Laser Irradiation**
Aiko Narazaki¹, Yoshizo Kawaguchi¹, Hiroyuki Niino¹, Masanori Shojiya², Hirotaka Koyo², and Keiji Tsunetomo²
1 Photonics Research Institute, AIST
2 Technical Research Laboratory, Kansai Research Center, Nippon Sheet Glass Co., Ltd.
- C-16 **Preparation of Epitaxial Manganite Films by Excimer-Laser MOD Process at Low Temperature for Infrared Sensors Applications**
Kais Daoudi, Tetsuo Tsuchiya, Iwao Yamaguchi, Takaaki Manabe, Susumu Mizuta, and Toshiya Kumagai
Advanced Manufacturing Research Institute, AIST

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- C-17 **Preparation of Epitaxial Pb(ZrTi)O₃ Film by an Excimer Laser Assisted Metal Organic Deposition at Low Temperature**
Tetsuo Tsuchiya, Kais Daoudi, Akio Watanabe, Takaaki Manabe, Iwao Yamaguchi, Toshiya Kumagai, and Susumu Mizuta
Advanced Manufacturing Research Institute, AIST
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- C-18 **Efficient Narrow Line Emission from Liquid-Phase Laser Ablation Plume by a Long Nanosecond Ablation Pulse**
Tetsuo Sakka, Hisayuki Oguchi, and Yukio H. Ogata
Institute of Advanced Energy, Kyoto University
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- C-19 **Preparation of CdS Semiconductor Nanocrystals Using Pulsed Laser Ablation in Aqueous Surfactant Solutions**
Takeshi Sasaki¹, Hiroyuki Usui¹, Yoshiki Shimizu¹, Naoto Koshizaki¹, and Sang-Hyun Choi²
1 Nanoarchitectonics Research Center (NARC), AIST
2 School of Chemical Engineering, Seoul National University, Korea
-
- C-20 **Preparation of Magnetic Alloy Particles Using Pulsed Laser Ablation in Liquid Media**
Yoshie Ishikawa, Kenji Kawaguchi, Takeshi Sasaki, and Naoto Koshizaki
Nanoarchitectonics Research Center (NARC), AIST
-
- C-21 **Zeolite LTA Nanoparticles Prepared by Laser-Induced Fracture of Zeolite Microcrystals**
William T. Nichols¹, Tetsuya Kodaira², Yukichi Sasaki³, Yoshiki Shimizu², Takeshi Sasaki², and Naoto Koshizaki²
1 Nanomaterials Laboratory, NIMS
2 Nanoarchitectonics Research Center (NARC), AIST
3 Japan Fine Ceramics Center
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- C-22 **Preparation of CaMoO₄ Nanoparticles by Pulsed Laser Ablation in DI-Water and Their Optical Properties**
Jong-Won Yoon¹, Jeong Ho Ryu¹, Bong Geun Choi¹, Kwang Bo Shim¹, Kinuyo Machi², Sanshiro Nagare², and Kenji Hamada²
1 Department of Ceramic Engineering, Ceramic Processing Research Center (CPRC), Hanyang University, South Korea
2 Technical Development Division, NARA Machinery Co., LTD.
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- C-23 **Effects of Laser Wavelength and Fluence on Platinum Nanoparticles Synthesized by Laser Ablation in Water**
William T. Nichols, Takeshi Sasaki, and Naoto Koshizaki
Nanoarchitectonics Research Center (NARC), AIST
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D. Photofunctional Materials

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- D-01 **Optical Property of Arrayed CuI Clusters in Zeolites LTA and FAU**
Tetsuya Kodaira and Naoto Koshizaki
Nanoarchitectonics Research Center (NARC), AIST
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- D-02 **Effects of Surface Passivation on Optical Absorption and Thermal Properties of Nanocrystalline Silicon**
Masashi Inoguchi¹, Qing Shen^{1,2}, and Taro Toyoda^{1,2}
1 Department of Applied Physics and Chemistry, The University of Electro-Communications
2 Course of Coherent Optical Science, The University of Electro-Communications

- D-03 **Preparation of Strontium Aluminate Phosphor by Reverse Micelle Process**
Chengzhou Li, Yoshio Adachi, Yusuke Imai, Keiko Nishikubo, Hiroshi Yamada, and Chao-Nan Xu
On-Site Sensing and Diagnosis Research Laboratory, AIST
- D-04 **Silicon Nanocrystals Prepared by Electrochemical Etching and Introduced in Spin on Glass Solutions**
Vladimir Svrcek, Takeshi Sasaki, and Naoto Koshizaki
Nanoarchitectonics Research Center (NARC), AIST
- D-05 **Fabrication of ZnO Nanoparticles Using Pulsed Laser Ablation in Aqueous Media and Their Green Photoluminescence Properties**
Chun He, Takeshi Sasaki, Hiroyuki Usui, Yoshiki Shimizu, and Naoto Koshizaki
Nanoarchitectonics Research Center (NARC), AIST
- D-06 **Photogenerator Organized on Gold Nanoparticles**
Takatsugu Endo, Nobukazu Miyagawa, and Shigeru Takahara
Faculty of Engineering, Chiba University
- D-07 **Exciton Effects in Moebius Conjugated Polymers and Magnetic Properties of Moebius Nanographite**
Kikuo Harigaya
Nanotechnology Research Institute, AIST
Synthetic Nano-Function Materials Project, AIST
- D-08 **Threshold Voltage Shift by Contact Resistance of Source-Drain Electrode in Organic Thin Film Transistors**
Kouji Suemori, Sei Uemura, Manabu Yoshida, Satoshi Hoshino, Takehito Kozasa, and Toshihide Kamata
Photonics Research Institute, AIST
- D-09 **Performance of Solution-Processed n-Type Organic Thin-Film Transistors Based on Dodecyl Substituted C₆₀ Derivatives**
Masayuki Chikamatsu¹, Atsushi Itakura¹, Yuji Yoshida¹, Reiko Azumi¹, Koichi Kikuchi², and Kiyoshi Yase¹
1 Photonics Research Institute, AIST
2 Department of Chemistry, Tokyo Metropolitan University
- D-10 **Syntheses and Single-Crystal Structures of alpha,beta-Linked Unsubstituted Oligothiophenes**
Ming Lu¹, Midori Goto², Reiko Azumi¹, Yuji Yoshida¹, Masayuki Chikamatsu¹, and Kiyoshi Yase¹
1 Photonics Research Institute, AIST
2 Research Facilities Department, Technical Service Center, AIST
- D-11 **Chiral Photonic Band-Gap Liquid Crystals for Laser Applications**
Seiichi Furumi¹, Yoshio Sakka¹, Shiyoshi Yokoyama², Akira Otomo², and Shinro Mashiko²
1 Materials Engineering Laboratory (MEL), National Institute for Materials Science (NIMS)
2 Kansai Advanced Research Center (KARC), National Institute of Information and Communications Technology (NICT)
- D-12 **New Fluorinated Polyimides for Low Loss and High Heat-Resistance Optical Waveguides**
Yoko Matsui¹, Kozo Tajiri¹, Tomomi Makino¹, Shinichi Goto¹, Yoshinobu Asako¹, Fumio Yamamoto², Naomi Kawakami², Tohru Matsuura³, and Takashi Kurihara³
1 E & I Materials Research Laboratory, Nippon Shokubai Co., Ltd.
2 NTT Advanced Technology Corporation
3 NTT Photonics Laboratories, Nippon Telegraph and Telephone Corp.

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- D-13 **Photo-Induced Cell Capturing by Alkylacrylamide Polymers Functionalized with Spirobenzopyrans**
Jun-ichi Eda, Yuichi Tada, Kimio Sumaru, Shinji Sugiura, Toshiyuki Takagi, Toshiyuki Kanamori, and Toshio Shinbo
Research Center of Advanced Bionics, AIST
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- D-14 **Photo-Control of Phase Transition, Proton Dissociation and Gel Shrinking Based on Characteristics of Spirobenzopyran Polymers**
Kimio Sumaru, Mitsuyoshi Kameda, Katsuhide Ohi, Toshiyuki Takagi, Toshiyuki Kanamori, and Toshio Shinbo
Research Center of Advanced Bionics, AIST
-
- D-15 **Molecular Design and Synthesis for Large Photoinduced Birefringent Copolymers**
Takashi Fukuda¹, Jun Young Kim¹, Daisuke Barada^{1,2}, and Kiyoshi Yase¹
1 Photonics Research Institute, AIST,
2 Institute of Applied Physics, Tsukuba University
-
- D-16 **Recording Bit Pattern on a Surface of Crystallized Bisphenol-A Polycarbonate by Laser Irradiation**
Hiroyuki Mochizuki, Toshiko Mizokuro, Nobutaka Tanigaki, Ichiro Ueno, and Takashi Hiraga
Photonics Research Institute, AIST
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- D-17 **An Ultrasensitive Spectrophotometer in the Visible and Near-Infrared Spectral Region**
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- D-18 **Transient Absorption Study on Photo-Functional Organic Materials**
Sadayuki Watanabe, Miki Murai, Yoshiaki Tamaki, Akihiro Furube, and Ryuzi Katoh
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- D-19 **Estimation of Optical Constants of a Polymer Layer in a Polymer Light Emitting Diode**
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- D-20 **Tiptop-Type Optical Fiber Sensor with Mechanoluminescent Coating**
Yoshio Adachi, Yusuke Imai, Hiroshi Yamada, Keiko Nishikubo, and Chao-Nan Xu
On-Site Sensing and Diagnosis Research Laboratory, AIST
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- D-21 **Photoaddition Behavior of Amines to Diphenyl-2H-Benzopyran**
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- D-22 **Enhancement of Singlet Oxygen Sensitization Efficiency by Silylation of Tetraphenylporphyrin**
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- D-23 **Preparation and Reactions of Chromenyl Photopolymers for Surface Photografting**
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- D-24 **Strong Correlation Between the Volume of Hyper-Mobile Water and the Riboflavin-Fluorescence Spectra in Sodium Polyacrylate Solution**
George Mogami, Jun Sato, Takashi Miyazaki, and Makoto Suzuki
Graduate School of Engineering, Tohoku University
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- D-25 **Emission of Platinum(II) Complexes at Room Temperature - Synthesis and Properties of Bis(2, 2'-Bipyridine)Platinum(II) with Phenylene-Ethynylene Moieties**
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Takashi Funaki, Tetsuo Yatabe, Yasuzo Suzuki, Yukihiro Shimoi, Shuji Abe, and Yuji Kawanishi
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- D-26 **Optical Response and Ligand Replacement Reactions in Pt(II) Complexes: DFT Calculations and Experiments**
Yukihiro Shimoi, Yuji Kawanishi, Takashi Funaki, and Shuji Abe
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- D-27 **Synthesis, Structural Change upon Heating, and Electronic Structure of the Ramsdellite-Type TiO₂**
Yasuhiko Takahashi, Norihito Kijima, Junji Akimoto
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