Original Papers
A03 Group (2012)

Hrioaki Imai (Principal Investigator),
Professor, Department of Applied Chemistry, Faculty of Science and Technology, Keio Universit
Eiji Hosono (Co-Investigator; Renkei-Kenkyusha)
Yuya Oaki (Co-Investigator; Renkei-Kenkyusha)

1. Koichi Ukigaya, Yuya Oaki, and *Hiroaki Imai, "Versatile Modification for Highly Dispersive and Functionalized Mesoporous Silica Nanoparticles", *Chem. Lett.*, **41**, 507-509 (2012).
2. Yuya Oaki, Ryota Adachi, and *Hiroaki Imai, "Self-Organization of Hollow-Coned Carbonate Crystals through Molecular Control by Using an Acid Organic Polymer", *Polym. J.*, **44**, 612-619 (2012).
3. Misako Kijima, *Yuya Oaki, Yurika Munekawa, and *Hiroaki Imai, "Synthesis and Morphogenesis of Organic and Inorganic Polymers by Means of Biominerals and Biomimetic Materials", *Chem. Eur. J.*, **19**, 2284-2293 (2012). [Selected as Back Cover]
4. ††Arihiro Kanazawa, ††Shokyoku Kanaoka, Naoki Yagita, Yuya Oaki, *Hiroaki Imai, Mayumi Oda, †*Atsushi Arakaki, Tadashi Matsunaga, and †*Sadahito Aoshima, "Biologically Synthesized or Bioinspired Process-Derived Iron Oxides as Catalysts for Living Cationic Polymerization of Vinyl Ether", *Chem. Comm.*, **48**, 10904-10906 (2012). **†A02 Group, Collaborative research.**
5. *Yuya Oaki, Takahiro Oki, and *Hiroaki Imai, "Enhanced Photoconductive Properties on a Simple Composite Coaxial Nanostructure of Zinc Oxide and Polypyrrole", *J. Mater. Chem.*, **22**, 21195-21200 (2012).
6. *Yuya Oaki, Soichiro Kaneko, and *Hiroaki Imai, "Morphology and Orientation Control of Guanine Crystals: A Biogenic Architecture and Its Structure Mimetics", *J. Mater. Chem.*, **22**, 22686-22691 (2012).
7. Eiji Hosono, Takashi Tokunaga, Shintaro Ueno, Yuya Oaki, Hiroaki Imai, *Haoshen Zhou, and *Sinobu Fujihara, "ZnO Nano-Rectangular Framework-Like Structure from Zinc Hydroxide Acetate Plates", *J. Ceram. Soc. Japan*, **120**, 171-174 (2012).
8. Eiji Hosono, Takashi Tokunaga, Shintaro Ueno, Yuya Oaki, Hiroaki Imai, *Haoshen Zhou, and *Sinobu Fujihara, "Crystal-Growth Process of Single-Crystal-Like Mesoporous ZnO through a Competitive Reaction in Solution", *Cryst. Growth Des.*, **12**, 2923-2931 (2012).
9. Ryuta Ise, Yuya Oaki, and *Hiroaki Imai, "Spontaneous Formation of Sinuous and

Wavy Micropatterns with Helical Growth of $CuSO_4 \cdot 5H_2O$ in Polymer Matrix", *Cryst. Growth Des.*, **12**, 4397-4402 (2012).

10. Soichiro Ibe, Ryuta Ise, Yuya Oaki, and *Hiroaki Imai, "Twisted Growth of Organic Crystal in a Polymer Matrix: Sigmoidal and Helical Morphologies of Pyrene", *CrystEngComm*, **14**, 7444-7449 (2012)
11. Shohei Ono, Toru Tsuji, Yuya Oaki, and *Hiroaki Imai, "Artificial Peptides Binding to the C Face of Hydroxyapatite Obtained by Molecular Display", *RSC Advances*, **3**, 1885-1889 (2013).
12. Keisuke Nakamura, *Yuya Oaki, and *Hiroaki Imai, "Monolayered Nanodots of Transition Metal Oxides", *J. Am. Chem. Soc.*, in press.
13. Feng Dang, Tatsuhiko Hoshino, Yuya Oaki, *Eiji Hosono, *Haoshen Zhou, and *Hiroaki Imai, "Synthesis of Li-Mn-O Mesocrystals with Controlled Crystal Phases through Topotactic Transformation of $MnCO_3$", *Nanoscale*, in press.
14. Feng Dang, Yuya Oaki, Takao Kokubu, *Eiji Hosono, *Haoshen Zhou, and *Hiroaki Imai, "Formation of Nanostructured MnO/Co/Solid-Electrolyte Interphase Ternary Composites as a Durable Anode Material for Lithium-Ion Batteries", *Chem. Asian J.*, in press.
15. Naoki Yagita, *Yuya Oaki, and *Hiroaki Imai, "A Microbial-Mineralization Approach for Syntheses of Iron Oxides with a High Specific Surface Area", *Chem. Eur. J.*, in press.
16. Hiroyuki Kageyama, Yuya Oaki, Yoko Takezawa, Toshimasa Suzuki and *Hiroaki Imai, "Low-Temperature Syntheses of Cubic $Batio_3$ Nanoparticles in Highly Basic Aqueous Solution", *J. Ceram. Soc. Japan*, in press.

Kiyofumi Katagiri (Principal Investigator)
Koji Tomita (Co-Investigators; Kenkyu-Buntansha)
Associate Professor, Graduate School of Engineering, Hiroshima University

1. *Kiyofumi Katagiri, Hitoshi Inami, Kunihito Koumoto, Kei Inumaru, Koji Tomita, †Makoto Kobayashi, and ††Masato Kakihana, "Preparation of Hollow TiO_2 Spheres of the Desired Polymorphs by Layer-by-Layer Assembly of a Water-Soluble Titanium Complex and Hydrothermal Treatment", *Eur. J. Inorg. Chem.*, **2012**, 3267-3272 (2012). †A01 Group, Collaborative research.
2. *Kiyofumi Katagiri, Jumpei Kamiya, Kunihito Koumoto, and Kei Inumaru, "Preparation of Hollow Titania and Strontium Titanate Spheres Using Sol-Gel Derived Silica Gel Particles as Templates", *J. Sol-Gel Sci. Technol.*, **63**, 366-372 (2012).
3. Yoshie Gotoh, Hiromasa Suzuki, Naomi Kumano, Takahiro Seki, Kiyofumi Katagiri,

and †*Yukikazu Takeoka, "An Amorphous Array of Poly(N-isopropylacrylamide) Brush-Coated Silica Particles for Thermally Tunable Angle-Independent Photonic Band Gap Materials", *New J. Chem.,* **36**, 2171-2175 (2012).
†A03 Group, Collaborative research.

4. Masataka Yasui, Kiyofumi Katagiri, Shoji Yamanaka, and *Kei Inumaru, "Molecular Selective Photocatalytic Decomposition of Alkylanilines by Crystalline TiO_2 Particles and Their Nanocomposites with Mesoporous Silica", *RSC Adv*., **2**, 11132-11137 (2012).
5. *Kiyofumi Katagiri, Keiko Ohta, Kunihito Koumoto, Kei Kurosu, †Yoshihiro Sasaki, and *Kazunari Akiyoshi, "Templated Nucleation of Hybrid Iron Oxide Nanoparticles on Polysaccharide Nanogels", *Colloid Polym. Sci.*, in press (DOI : 10.1007/s00396-012-2868-7).
†A03 Group, Collaborative research.

Yukikazu Takeoka (Principal Investigator)
Associate Professor, Department of Molecular Design & Engineering, Nagoya University

1. Yoshie Gotoh, Hiromasa Suzuki, Naomi Kumano, Takahiro Seki, †Kiyofumi Katagiri, *Yukikazu Takeoka, "Amorphous Array of Poly(N-isopropylacrylamide) Brush-Coated Silica Particles for Thermally Tunable Angle-Independent Photonic Band Gap Materials", *New J. Chem*., **36**, 2171-2175 (2012). [published as a cover picture, and selected as a *NJC* hot article]
†A03 Group, Collaborative research.
2. Yuki Hayata, Shusaku Nagano, Yukikau Takeoka, Takahiro Seki, "Photoinduced Volume Transition in Liquid Crystalline Polymer Gels Swollen by a Nematic Solvent", *ACS Macro lett*., **1**, 1357-1361 (2012).

Takayoshi Nakamura (Principal Investigator),
Professor, Research Institute for Electronic Science, Hokkaido University

1. Subbalakshmi Jayanty, *Tomoyuki Akutagawa and *Takayoshi Nakamura, "Hydrogen-Bonded Maleate Counter Anions in Tetrathiafulvalene Crystals", *Cryst. Eng. Commun*., **14**, 3875-3881 (2012).
2. Daigoro Endo, Tomoyuki Akutagawa, Kazuya Kubo, Shin-ichiro Noro, Leroy Cronin and Takayoshi Nakamura, "Molecular Motions and Hydrogen-Bonding Networks in (*o*-Aminoanilinium)-(Crown Ethers)-$[PMo_{12}O_{40}]^{4-}$ Crystals", *Bull. Chem. Soc. Japan*, **85**, 305-315 (2012).

3. Qiong Ye, Ping-Ping Shi, Zi-Qi Chen, *Tomoyuki Akutagawa, Shin-ichiro Noro, and *Takayoshi Nakamura, "[Ni(dmit)$_2$]$^-$ Salt with Flexible Supramolecular Cation Rotator", *Inorg. Chem. Commun.*, **20**, 219-224 (2012).
4. Norihisa Hoshino, Kazuya Kubo, *Takayoshi Nakamura, and *Tomoyuki Akutagawa, "Crystal Structures and Magnetic Properties of (4,4'-Phenylazophenyl)-Diammonium(Crown Ethers)[Ni(dmit)$_2$]$_2$ Crystals", *Dalton Trans.*, **41**, 9297-9303 (2012).
5. Kiyonori Takahashi, Norihisa Hoshino, Kazuya Kubo, *Takayoshi Nakamura, and *Tomoyuki Akutagawa, "Cation-Anion Packing and Molecular Motion in (*m*-Fluoroanilinium)(Dibenzo[18]crown-6)[Ni(mnt)$_2$]$^-$(CH$_3$CN)$_{0.25}$ Crystals", *Cryst. Eng. Commun.*, **14**, 5235-5241 (2012).
6. *Ryo Tsunashima, Takumi Matsumoto, Norihisa Hoshino, Wataru Niiho, Mizuki Kimura, Kei Kondo, Yoshihiko Suyama, Yukihiro Nishioka, Jun Kawamata, Shin-ichiro Noro, Takayoshi Nakamura, Tomoyuki Akutagawa and Katsuya Ishiguro "Incorporation of Cationic Electron Donor of Ni-Pyridyltetrathiafulvalene with Anionic Electron Acceptor of Polyoxometalate", *Dalton Trans.*, **41**, 10060-10064 (2012).
7. *Shin-ichiro Noro, Kazuya Kubo and *Takayoshi Nakamura, "Synthesis and Crystal Structure of a One-Dimensional Cu(II) Coordination Polymer Bridged by Inorganic CH$_3$SO$_3^-$ Anions Using Werner-Type Cu(II) Complexes as Building Blocks", *Chem. Lett.*, **41**, 772-773 (2012).

Hirotomo Nishihara (Principal Investigator)
Associate Professor, Institute of Multidisciplinary Research for Advanced Materials, Tohoku University

1. *Tetsuji Itoh, Yasuto Hoshikawa, Matsuura Shun-ichi, Junko Mizuguchi,a Hiroyuki, Arafune, Taka-aki Hanaoka, Fujio Mizukami, Akari Hayashi, Hirotomo Nishihara, *Takashi Kyotani, "Production of L-Theanine using Glutaminase Encapsulated in Carbon-Coated Mesoporous Silica with High pH Stability", *Biochem. Eng. J*, **68**, 207-214 (2012).
2. *Kazuyuki Takai, Tsuyoshi Suzuki, Hirotomo Nishihara, Takashi Kyotani, Toshiaki Enoki, "Magnetic Properties of Host–Guest Material using Network of Curved Nanocarbon Sheet", *J. Phys. Chem. Sol.*, **73**, 1436-1439 (2012).
3. Seung Jae Yang, Ji Hyuk Im, Hirotomo Nishihara, Haesol Jung, Kunsil Lee, Takashi Kyotani, and *Chong Rae Park, "General Relationship between Hydrogen Adsorption Capacities at 77 and 298 K and Pore Characteristics of the Porous Adsorbents", *J. Phys. Chem. C*, **116**, 10529-10540 (2012).

4. Shinichiroh Iwamura, *Hirotomo Nishihara, Takashi Kyotani, "Effect of Buffer Size around Nanosilicon Anode Particles for Lithium-Ion Batteries", *J. Phys. Chem. C*, **116**, 6004-6011 (2012).
5. Shinichiroh Iwamura, *Hirotomo Nishihara, Takashi Kyotani, "Fast and Reversible Lithium Storage in a Wrinkled Structure Formed from Si Nanoparticles during Lithiation/Delithiation Cycling", *J. Power Sources*, **222**, 400-409 (2013).

Hideki Sakai (Principal Investigator)
Professor, Faculty of Science and Technology, Tokyo University of Science

1. *Hideki Sakai, Shohei Aikawa, Wataru Matsuda, Takashi Ohmori, Yuko Fukukita, Yoji Tezuka, Atsutoshi Matsumura, Kanjiro Torigoe, Koji Tsuchiya, Koji Arimitsu, Kazutami Sakamoto, Kenichi Sakai, Masahik, "A Cinnamic Acid-Type Photo-Cleavable Surfactant", *J. Colloid. Interf. Sci.*, **376**, 160-164 (2012).
2. *Kenichi Sakai, Ryosuke Yamazaki, Yuki Imaizumi, Takeshi Endo, Hideki Sakai, Masahiko Abe, "Adsolubilization by a Photo-Responsive Surfactant", *Colloids Surf. A*, **410**, 119-124 (2012).
3. Tokuma Fukuoka, Shintaro Ikeda, Hiroshi Habe, Shun Sato, Hideki Sakai, Masahiko Abe, *Dai Kitamoto, "Synthesis and Interfacial Properties of Monoacyl Glyceric Acids as a New Class of Green Surfactants", *J. Oleo Sci.*, **61**, 343-348 (2012).
4. *Kenichi Sakai, Kazuyuki. Nomura, Rekha. G. Shrestha, Takeshi. Endo, Kazutami Sakamoto, Hideki Sakai, Masahiko Abe, "Wormlike Micelle Formation by Acylglutamic Acid with Alkylamines", *Langumuir*, **28**, 17617-17622 (2012).
5. *Kazutami Sakamoto, Kenichi Aburai, Taku Morishita, Kenichi Sakai, Hideki Sakai, Masahiko Abe, Shiro Futaki, "Bioinspired Mechanism for the Translocation of Peptide through the Cell Membrane", *Chem. Lett.*, **41**, 1078-1080 (2012).
6. Hironori Nishiyama, Yuichiro Takamatsu, Kenichi Sakai, Hideki Sakai, *Masahiko Abe, "Effects of Hydroxyl Groups Covalently Bound to The Vicinity of The Headgroups in Cationic Gemini Surfactants on Their Aqueous Solution Properties", *Mater. Technol.*, **30**, 71-79 (2012).
7. Rekha G. Shrestha, Suraj C. Sharma, Kenichi. Sakai, Hideki Sakai, Masahiko Abe, "Polyoxyethylene Cholesterol Ether-Based Aqueous Wormlike Micelles",*Colloid Polym. Sci.*, **290**, 339-348 (2012).
8. Akira Sato, Masamitsu Nagahama, Hideki Sakai, *Masahiko Abe, "Preparation and Characteristics of Polyamide Containing Superfine Particles", *J. Jpn. Soc. Colour Materi.*, **86**, 3-7 (2013).

Other articles in Japanese: 4

Yoshihiro Sasaki (Principal Investigator)

Associate Professor, Department of Polymer Chemistry, Graduate School of Engineering, Kyoto University

1. Yurina Sekine, Keita Abe, Akitaka Shimizu, *Yoshihiro Sasaki, Shin-ichi Sawada, *Kazunari Akiyoshi, "Shear Flow-Induced Nanotubulation of Surface-Immobilized Liposomes", *RSC advances*, **2**(7), 2682-2684 (2012).
2. Masaru Mukai, Kohei Maruo, Yoshihiro Sasaki, *Jun-ichi Kikuchi, "Intermolecular Communication on a Liposomal Membrane: Enzymatic Amplification of a Photonic Signal with a Gemini Peptide Lipid as a Membrane-Bound Artificial Receptor", *Chem. Eur. J.*, **18**(11), 3258-3263 (2012). [Selected as Inside cover, also of interest]
3. Yoshihiro Sasaki, Setsuko Yamane, Kei Kurosu, Shinichi Sawada, *Kazunari Akiyoshi, "Templated Formation of Hydroxyapatite Nanoparticles from Self-Assembled Nanogels Containing Tricarboxylate Groups", *Polymers*, **4**, 1056-1064 (2012).
4. Masaru Mukai, Yoshihiro Sasaki, *Jun-ichi Kikuchi, "Fusion-Triggered Switching of Enzymatic Activity on an Artificial Cell Membrane", *Sensors*, **12**, 5966-5977 (2012).
5. Yurina Sekine, Yuki Moritani, Tomoko Ikeda-Fukazawa, Yoshihiro Sasaki, *Kazunari Akiyoshi, "Hybrid Hydrogels toward Artificial Extracellular Matrix: The Bottom-Up Design with Both Nanogel and Liposome Building Blocks for Multi-Drug Delivery System", *Adv. Healthcare Mater.*, **1**(6), 722-728 (2012)
6. †*Kiyofumi Katagiri, Keiko Ohta, Kunihito Koumoto, Kei Kurosu, Yoshihiro Sasaki, *Kazunari Akiyoshi, "Templated Nucleation of Hybrid Iron Oxide Nanoparticles on Polysaccharide Nanogels", *Colloid Polym. Sci.,* DOI 10.1007/s00396-012-2868-7 (2012). †A03 Group, Collaborative research.

Teruyuki Nakato (Principal Investigator)

Professor, Department of Applied Chemistry, Graduate School of Engineering, Kyushu Institute of Technology

1. Teruyuki Nakato, Shoko Watanabe, Yasuhiro Kamijo, and Yoshihiro Nono, "Photoinduced Electron Transfer between Ruthenium-Bipyridyl Complex and Methylviologen in Suspensions of Smectite Clays", *J. Phys. Chem. C*, **116**, 8562-8570 (2012).
2. *Teruyuki Nakato, Hiroaki Ueda, Sachika Hashimoto, Ryosuke Terao, Miyuki Kameyama, and Emiko Mouri, "Pickering Emulsions Prepared by Layered Niobate

$K_4Nb_6O_{17}$ Intercalated with Organic Cations and Photocatalytic Dye Decomposition in the Emulsions", *ACS Appl. Mater. Interfaces*, **4**, 4338-4347 (2012).

Miki Hasegawa (Principal Investigator)
Professor, Department of Chemistry and Biological Science, Aoyama Gakuin University

1. Kana Tanabe, Yuko Suzui, Miki Hasegawa and *†Takashi Kato, "Full-Color Tunable Photoluminescent Ionic Liquid Crystals Based on Tripodal Pyridinium, Pyrimidinium, and Quinolinium Salts", *J. Am. Chem. Soc.*, **134**, 5652-5661 (2012). †A01 Group, Collaborative research.
2. Alexey N. Gusev, *Victor F. Shul'gin, Svetlana B Meshkova, Pavel G Doga, Miki Hasegawa, Grygory G. Aleksandrov, Igor L. Eremenko, Wolfgang Linert*, "Structural and Photophysical Studies of Europium Complexes Containing Triazole Ligands", *Inorg. Chim. Acta* 2012, **387**, 321-326 (2012).
3. Alexey N. Gusev, Victor F. Shul'gin, Galina Nishimenko, Miki Hasegawa, Wolfgang Linert, "Photo-and Electroluminescent Properties Europium Complexes Using Bistriazole Ligands", *Synthetic Metals* **164**, 17-21 (2013).
4. *Alexey N. Gusev, Miki Hasegawa, Galyna A. Nishchymenko,Victor F. Shul'gin, Svetlana B. Meshkova, Pavel Doga, *Wolfgang Linert, "Ln(III) Complexes of a Bis(5-(pyridine-2-yl)-1,2,4-triazol-3-yl)Methane Ligand: Synthesis, Structure Andfluorescent Properties", *Dalton Trans*., *online published* on 8th of March, 2013, DOI**:** 10.1039/C3DT50297J.

Masanori Ozaki (Principal Investigator)
Professor, Department of Electrical, Electronic and Information Engineering, Osaka University

1. Hiroyuki Yoshida, Takayuki Matsui, Atsushi Miura, Naoki Ikeda, Masayuki Ochiai, Yoshimasa Sugimoto, Hisayoshi Fujikawa and *Masanori Ozaki, "Uniform Liquid Crystal Alignment on Metallic Nanohole Arrays by Vapor-Phase Deposition of Silane Coupling Agent", *Opt*. *Mater*. *Express*, **2**, 893-899 (2012).
   doi: 10.1364/OME.2.000893
2. Hiroyuki Yoshida, Yo Inoue, Yusuke Shiozaki, Masaya Takahashi, Hitoshi Kubo, Akihiko Fujii, and *Masanori Ozaki, "Fast and Continuous Tunable Lasing from a Nano-Pore Embedded Cholesteric Liquid Crystal Film", *Mol*. *Cryst*. *Liq*. *Cryst*., **560**, 101-107 (2012).
   doi: 10.1080/15421406.2012.663183

3. Jaeki Kim, Hiroyuki Yoshida, Hiroshi Moritake, and *Masanori Ozaki, "Unidirectional Homogenous Alignment of Smectic Liquid Crystal under Shear Stress", *Ferroelectrics*, **431**, 74-80 (2012).
doi: 10.1080/00150193.2012.684634
4. Hiroyuki Yoshida, Genki Nakazawa, Kenji Tagashira, and *Masanori Ozaki, "Self-Alignment Behaviour of Photopolymerized Liquid Crystal Microparticles in a Nematic Liquid Crystal", *Soft Matter*, **8**, 11323-11327 (2012).
doi:10.1039/C2SM26228B
5. Kenji Tagashira, Keita Asakura, Genki Nakazawa, Hiroyuki Yoshida, and *Masanori Ozaki, "Increase in Interparticle Distance of Colloidal Dipolar Chain in Nematic Liquid Crystal by Trapping It on Splay-Bend Wall", *AIP Advances*, **2**, 042156 (7 pages) (2012).
doi: 10.1063/1.4769088
6. Kenji Tagashira, Keita Asakura, Hiroyuki Yoshida and *Masanori Ozaki, "Directed Transformation from Quadrupolar to Dipolar Nematic Colloids by an In-Plane Electric Field", *Appl. Phys. Express*, **6**, 021702-1-3 (2013).
doi:10.7567/APEX.6.021702
7. Yo Inoue, Hiroyuki Yoshida, Hitoshi Kubo and *Masanori Ozaki, "Deformation-Free, Microsecond Electro-Optic Tuning of Liquid Crystals", *Adv. Opt. Mater.*, **1**, 256-263 (2013).
doi:10.1002/adom.201200028

Tetsuya Tsuda (Principal Investigator)
Assistant Professor, Department of Applied Chemistry, Osaka University

1. Kazuki Yoshii, *Tetsuya Tsuda, Takashi Arimura, Akihito Imanishi, Tsukasa Torimoto and *Susumu Kuwabata, "Platinum Nanoparticle Immobilization onto Carbon Nanotubes Using Pt-Sputtered Room-Temperature Ionic Liquid", *RSC Adv.*, **2**, 8262-8264 (2012).
2. *Tetsuya Tsuda, Taiki Sakamoto, Yoshitomo Nishimura, Satoshi Seino, Akihito Imanishi, Kazuhiko Matsumoto, Rika Hagiwara, Taro Uematsu and *Susumu Kuwabata, "Preparation of gold Nanoparticle Using Reactive Species Produced in Room-Temperature Ionic Liquid by Accelerated Electron Beam Irradiation", *RSC Adv.*, **2**, 11801-11807 (2012).
3. Chakkooth Vijayakumar, Bijitha Balan, Akinori Saeki, Tetsuya Tsuda, Susumu Kuwabata and *Shu Seki, "Gold Nanoparticle Assisted Self-Assembly and Enhancement of Charge Carrier Mobilities of a Conjugated Polymer", *J. Phys. Chem. C*, **116**, 17343-17350 (2012).

4. Taro Uematsu, Jun-Tae Han, Tetsuya Tsuda and *Susumu Kuwabata, "Metal-Ion Diffusion in Ionic Liquid Studied by Electrochemical Scanning Electron Microscopy with X-Ray Fluorescence Spectrometry", *J. Phys. Chem. C*, **116**, 20902-20907 (2012).
5. Kouji Segawa, Zhi Ren, Satoshi Sasaki, Tetsuya Tsuda, Susumu Kuwabata and *Yoichi Ando, "Ambipolar Transport in Bulk Crystals of a Topological Insulator by Gating with Ionic Liquid", *Phys. Rev. B*, **86**, 075306/1-7 (2012).
6. *Tetsuya Tsuda, Eiko Mochizuki, Shoko Kishida, Hiroki Sakagami, Shigeaki Tachibana, Masaharu Ebisawa, Noriko Nemoto, Yoshitomo Nishimura and *Susumu Kuwabata, "Observation of Electrochemical Reaction and Biological Specimen by Novel Analytical Technique Combined with Room-Temperature Ionic Liquid and Scanning Electron Microscope", *Electrochemistry*, **80**, 308-311 (2012).
7. *Susumu Kuwabata, Tsukasa Torimoto, Akihito Imanishi and Tetsuya Tsuda, "Introduction of Ionic Liquid to Vacuum Conditions for Development of Material Productions and Analyses", *Electrochemistry*, **80**, 498-503 (2012).
8. Fumiaki Shima, Koshi Kawakami, Takami Akagi, Eiko Mochizuki, Tetsuya Tsuda, Susumu Kuwabata and *Mitsuru Akashi, "Simple Observation of the Interaction between Nanoparticles and Cells by Scanning Electron Microscopy Employing Ionic Liquid", *Bull Chem. Soc. Jpn.*, **86**, 153-158 (2013).
9. Tetsuya Tsuda, Susumu Kuwabata, Gery R. Stafford and *Charles L. Hussey, "Electrodeposition of Aluminum-Hafnium Alloy from the Lewis Acidic Aluminum Chloride-1-Ethyl-3-Methylimidazolium Chloride Molten Salt", *J. Solid State Electrochem.*, **17**, 409-417 (2013).
10. *Kouji Yasuda, Toshiyuki Nohira, Katsutoshi Kobayashi, Naoya Kani, Tetsuya Tsuda and Rika Hagiwara, "Improving Purity and Process Volume during Direct Electrolytic Reduction of Solid SiO_2 in Molten $CaCl_2$ toward Production of Solar-Grade Silicon", *Energy Technol.*, in press (2013).
11. *Tetsuya Tsuda, Koshiro Kondo, Masahiro Baba, Shotaro Suwa, Yuichi Ikeda, Taiki Sakamoto, Satoshi Seino, Hiroyuki Yoshida, †Masanori Ozaki, Akihito Imanishi and *Susumu Kuwabata, "Physicochemical Properties of 1-Alkyl-3-Methylimidazolium Chloride-Urea Melts", *Electrochim. Acta*, in press (2013).
†A03 Group, Collaborative research.
12. *Tetsuya Tsuda, Yuichi Ikeda, Takashi Arimura, Akihito Imanishi, Susumu Kuwabata, Charles L. Hussey and Gery R. Stafford, "Al-W Alloy Deposition from Lewis Acidic Room-Temperature Chloroaluminate Ionic Liquid", *ECS Trans.*, in press (2013).

Takashi Miyata (Principal Investigator)
Professor, Department of Chemistry and Materials Engineering, Faculty of Chemistry, Materials and Bioengineering, Kansai University

1. Yoshiaki Kuriu, Michiko Ishikawa, Akifumi Kawamura, Tadashi Uragami and *Takashi Miyata, "SPR Signals of Three-Dimensional Antibody-Immobilized Gel Layers Formation Sensor Chips by Atom Transfer Radical Polymerization", *Chem. Lett.*, **41**, 1660-1662 (2012).
2. Akifumi Kawamura, Yuta Hata, *Takashi Miyata and Tadashi Uragami, "Synthesis of Glucose-Responsive Bioconjugated Gel Particles Using Surfactant-Free Emulsion Polymerization", *Colloids Surf. B: Biointerfaces*, **99**, 74-81 (2012).
3. *Takashi Miyata, Akifumi Kawamura, Terumi Meotoiwa, Moritoshi Matsumoto and Tadashi Uragami, "Synthesis of Novel Nucleobase-Terminated Organosilane and Its Self-Assembly on Substrate", *Polym. J.*, **44**, 625-631 (2012).
4. *Takashi Miyata, Takeshi Hayashi, Yoshiaki Kuriu and Tadashi Uragami, "Responsive Behavior of Tumor-Marker-Imprinted Hydrogels Using Macromolecular Cross-Linkers", *J. Mol. Recognit.*, **25**, 336-343 (2012).
5. *Tadashi Uragami, Junji Kishimoto and Takashi Miyata, "Membrane Reactor for Acceleration of Esterification Using a Special Ionic Liquid with Reaction and Separation and Microwave Heating", *Catalysis Today*, **193**, 57-63 (2012).

Takeshi Nagasaki (Principal Investigator)
Professor, Department of Applied Chemistry and Bioengineering, Graduate School of Engineering, Osaka City University

1. Takeshi Kawazu, Hiroyuki Kanzaki, Atsushi Uno, Hideki Azuma, and *Takeshi Nagasaki, "HVJ-E/importin-β Hybrid Vector for Overcoming Cytoplasmic and Nuclear Membranes as Double Barrier for Non-Viral Gene Delivery", *Biomed. Biopharmacother.*, **66**, 619-524 (2012).
2. Tomoko Hashimoto, Takeshi Kawazu, *Takeshi Nagasaki, Akira, Murakami, and Tetsuji Yamaoka, "Quantitative Comparison between Poly(L-Arginine) and Poly(L-Lysine) at Each Step of Polyplex-Based Gene Transfection Using a Microinjection Technique", *Sci. Technol. Adv. Mater.*, **13**, 015009 (2012).

Yutaka Takaguchi (Principal Investigator)
Associate Professor, Graduate School of Environmental Science, Okayama University

1. Tomoyuki Tajima, Akira Tsutsui, Tatsuo Fujii, Jun Takada, *Yutaka Takaguchi,

"Fabrication of Novel Core-Shell Microspheres Consisting of Single-Walled Carbon Nanotubes and $CaCO_3$ through Biomimetic Mineralization", *Polym. J.*, **44**, 620-624 (2012).

2. Takeshi Kimura, Nobuhiro Takahashi, Tomoyuki Tajima, Yutaka Takaguchi, "Preparation and Optical And Electrochemical Properties of Nsymmetrical Phthalocyanines with One or Two the TTF Units", *Phosphorous, Sulfur, and Silicon,* in press (2013).
3. Tomoyuki Tajima, Akio Yamakawa, Keitaro Fukuda, Yuuki Hayashi, Masahiko Nakano, *Yutaka Takaguchi, "Synthesis and Characterization of 2,3,9,10-Tetradendronized Pentacene", *Chem. Lett.*, **41**, 1622-1624 (2012).

Reviews and Account Articles
A03 Group (2012)

Hrioaki Imai (Principal Investigator)
Eiji Hosono (Co-Investigator; Renkei-Kenkyusha)
Yuya Oaki (Co-Investigator; Renkei-Kenkyusha)
Professor, Department of Applied Chemistry, Faculty of Science and Technology, Keio University
Articles in Japanese: 2

Kiyofumi Katagiri (Principal Investigator)
Koji Tomita (Co-Investigators; Kenkyu-Buntansha)
Associate Professor, Graduate School of Engineering, Hiroshima University
Articles in Japanese: 3

Yukikazu Takeoka (Principal Investigator)
Associate Professor, Department of Molecular Design & Engineering, Nagoya University
1. Yukikazu Takeoka, "Angle-Independent Structural Coloured Amorphous Arrays", *J. Mater. Chem.*, **22**, 23299-23309 (2012).（invited）
   [Highlighted in the back cover picture]

Other articles in Japanese: 2

Hirotomo Nishihara (Principal Investigator)
Associate Professor, Institute of Multidisciplinary Research for Advanced Materials, Tohoku University
1. *Hirotomo Nishihara, Takashi Kyotani, "Templated Nanocarbons for Energy Storage", *Adv. Mater.*, **24**, 4473-4498 (2012).
   [Highlighted in the inside cover] [Most accessed in 7/2012 and 8/2012]

Other article in Japanese: 1

Teruyuki Nakato (Principal Investigator)
Professor, Department of Applied Chemistry, Graduate School of Engineering, Kyushu Institute of Technology

1. *Nobuyoshi Miyamoto and Teruyuki Nakato, "Liquid Crystalline Inorganic Nanosheet Colloids Derived from Layered Materials", *Isr. J. Chem.*, **52**, 881-894 (2012).

Other article in Japanese: 2

Miki Hasegawa (Principal Investigator)
Professor, Department of Chemistry and Biological Science, Aoyama Gakuin University
Article in Japanese: 1

Masanori Ozaki (Principal Investigator)
Professor, Department of Electrical, Electronic and Information Engineering, Osaka University
Article in Japanese: 1

Tetsuya Tsuda (Principal Investigator)
Assistant Professor, Department of Applied Chemistry, Osaka University
Article in Japanese: 3

Takeshi Nagasaki (Principal Investigator)
Professor, Department of Applied Chemistry and Bioengineering, Graduate School of Engineering, Osaka City University
Article in Japanese: 1

Yutaka Takaguchi (Principal Investigator)
Associate Professor, Graduate School of Environmental Science, Okayama University
Article in Japanese: 2

Books

A03 Group (2012)

Hrioaki Imai (Principal Investigator)
Eiji Hosono (Co-Investigator; Renkei-Kenkyusha)
Yuya Oaki (Co-Investigator; Renkei-Kenkyusha)
Professor, Department of Applied Chemistry, Faculty of Science and Technology, Keio University

1. Yuya Oaki and Hiroaki Imai, "*Recent Advances in Mesocrystals and Their Related Structures*" Nanoscience Volume 1: Nanostructures through Chemistry, Ed. By Paul O'Brien, pp. 1-28, The Royal Society of Chemistry (2013).

Kiyofumi Katagiri (Principal Investigator)
Koji Tomita (Co-Investigators; Kenkyu-Buntansha)
Associate Professor, Graduate School of Engineering, Hiroshima University

1. *Kiyofumi Katagiri and Kunihito Koumoto "*Organic-Inorganic Hybrid Materials Prepared through Supramolecular Assembly*", Handbook of Advanced Ceramics, Second Edition: Materials, Applications, Processing and Properties, Ed. Shigeyuki Somiya, Elsevier, in press.

Yukikazu Takeoka (Principal Investigator)
Associate Professor, Department of Molecular Design & Engineering, Nagoya University

1. Yukikazu Takeoka, "*Applications of Stimuli-Sensitive Inverse Opal Gels*", Responsive Photonic Nanostructures: Smart Nanoscale Optical Materials, RSC, in press.

Other articles in Japanese: 1

Hirotomo Nishihara (Principal Investigator)
Associate Professor, Institute of Multidisciplinary Research for Advanced Materials, Tohoku University

1. *Hirotomo Nishihara, Takashi Kyotani, "*Zeolite-Templated Carbon-Its Unique Characteristics and Applications*", Novel Carbon Adsorbents, Eds. J. M. D. Tascón, Chapter 10 (pp. 295-322), Elsevier, Oxford, (September, 2012).
[Highlighted in the cover picture]

Hideki Sakai (Principal Investigator)
Professor, Faculty of Science and Technology, Tokyo University of Science

1. *Koji Tsuchiya, Hirohumi Yajima, Hideki Sakai, Masahiko Abe, "*Electrochemical Dynamic Control of Self-Assemblies Formed by Reox-Active Surfactants*", Electrical Phenomena at Interfaces and Biointerfaces, Hiroyuki Ohshima ed.., 567-582, WILEY, (July 2012).

Other articles in Japanese: 2

Yoshihiro Sasaki (Principal Investigator)
Associate Professor, Department of Polymer Chemistry, Graduate School of Engineering, Kyoto University

Articles in Japanese: 1

Teruyuki Nakato (Principal Investigator)
Professor, Department of Applied Chemistry, Graduate School of Engineering, Kyushu Institute of Technology

Articles in Japanese: 1

Tetsuya Tsuda (Principal Investigator)
Assistant Professor, Department of Applied Chemistry, Osaka University

1. *Susumu Kuwabata, Tsukasa Torimoto, Akihito Imanishi and Tetsuya Tsuda, "*Use of Ionic Liquid Under Vacuum Conditions*", Ionic Liquids-New Aspects for the Future, Ed. Jun-ichi Kadokawa, InTech (Vienna, Austria), pp. 597-615 (2013). （分担執筆）

Other article in Japanese: 1

Takashi Miyata (Principal Investigator)
Professor, Department of Chemistry and Materials Engineering, Faculty of Chemistry, Materials and Bioengineering, Kansai University

Articles in Japanese: 3

Takeshi Nagasaki (Principal Investigator)
Professor, Department of Applied Chemistry and Bioengineering, Graduate School of Engineering, Osaka City University

Article in Japanese: 1

"Fusion Materials: Creative Development of Materials and Exploration of Their Function through Molecular Control"
(2010-2014, Area No.2206) funded by Grant-in-Aid for Scientific Research on Innovative Areas from the MEXT
Project LeaderTakashi KATO