

研究業績
物質化学系

研究論文

- Anjani G., Ohta A., Yasuhara K., Asakawa T.
Solubilization of Genistein by Caseinate Micellar System. *Journal of Oleo Science*, 2014, 63 (4) 413-422
- Asakawa T., Ozawa T., Ohta A.
Generation of Fluorocarbon and Hydrocarbon Hybrid Gemini Surfactants Controlled by Micellar Miscibility. *Journal of Oleo Science*, 2013, 62 (1), 17-20
- Ohta A., Tatsumi T., Takemoto R., Asakawa T.
Release Control of RNA from Lipoplex by Cleaving Disulfide Linked Gemini Surfactant. *Proceedings of 12th International Conference on Frontiers of Polymers and Advanced Materials*, T6 (2013 12).
- Ohta A., Suzuki T., Asakawa T.,
Process Depending Nano-fiber Formation of N-Acyl Phenylalanylphenylalanine by Binding of Cationic Dye. *Proceedings of 1st International Conference on Emerging Advanced Nanomaterials*, P491 (2012 10).
- Sakuma N., Ohta A., Asakawa T.,
Investigation on the Interaction between Phospholipid Vesicle and Surfactant from a Viewpoint of Lamellar Interval. *Proceedings of 14th International Association of Colloid and Interface Scientists Conference S1P17-17* (2012 5).
- Numata M., Kinoshita D., Taniguchi N., Tamiaki H., Ohta A.
Self-Assembly of Amphiphilic Molecules in Droplet Compartments: An Approach Toward Discrete Submicrometer-Sized One-Dimensional Structures *Angew Chem*, 2012, 128 (8) 1880-1884
- H. Sawai, I. M. M. Rahman, C. Lu, Y. Tsukagoshi, Z. A. Begum, T. Maki, H. Hasegawa, Temporal variations of accumulated cesium in natural soils after an uncharacteristic external exposure, *Microchem. J.*, 118, 158-165, 2014.12.
- F. Kobayashi, T. Maki, M. Kakikawa, M. Yamada, F. Puspitasari, Y. Iwasaka, Bioprocess of Kosa bioaerosols: effect of ultraviolet radiation on airborne bacteria within Kosa (Asian dust), *Journal of Bioscience and Bioengineering*, DOI:10.1016/j.jbiosc.2014.10.015, 2014.10.
- S. Barua, I. M. M. Rahman, M. Nazimuddin, H. Hasegawa, Evaluation of *Moringa oleifera* Carbon for the As (III) Removal from Contaminated Groundwater, *International Journal of Innovation and Applied Studies*, 8, 1390-1399, 2014.9.
- H. Hasegawa, I. M. M. Rahman, Y. Egawa, H. Sawai, Z.A. Begum, T. Maki, S. Mizutani, Recovery of the rare metals from various waste ashes with the aid of temperature and ultrasound irradiation using chelants, *Water Air Soil Pollut.*, 225, art.no.2112, 2014.8.

- T. Maki, F. Puspitasari, K. Hara, M. Yamada, F. Kobayashi, H. Hasegawa, Y. Iwasaka, Variations in the structure of airborne bacterial communities in a downwind area during an Asian dust (Kosa) event *Sci. Total Environ.*, 488-489, 75-84, 2014.8.
- M. A. Rahman, H. Hasegawa, M. M. Rahman, A new citrate-bicarbonate-ethylenediaminetetra acetate (CBE) method for chemical extraction of hydrous iron oxides from plant root surfaces, *Communications in Soil Science and Plant Analysis*, 45, 1760-1771, 2014.7.
- 岩崎 望, 長谷川 浩, 鈴木 淳, 森脇 太郎, 池本 夕佳, 赤外放射光を用いた宝石サンゴ骨軸の組織構造解析, *分析化学*, 63, 593-602, 2014.7.
- He, M., Ichinose, T., Liu, B., Song, Y., Yoshida, Y., Kobayashi, F. T. Maki, S. Yoshida, M. Nishikawa, H. Takano and G. Sun., Silica - carrying particulate matter enhances *Bjerkandera adusta* - induced murine lung eosinophilia. *Environmental toxicology*. DOI: 10.1002/tox.22025, 2014.7.
- 市瀬 孝道・牧 輝弥, ヤケイロタケのアレルギー学的基礎研究, アレルギーの臨床, 7月臨時増刊号 p34-39, 2014.7.
- Y. Tamenori, T. Yoshimura, N. T. Luan, H. Hasegawa, A. Suzuki, H. Kawahata, N. Iwasaki, Identification of the chemical form of sulfur compounds in the Japanese pink coral (*Corallium elatius*) skeleton using μ -XRF/XAS speciation mapping, *J. Struct. Biol.*, 186, 214-223, 2014.5
- B. Liu, T. Ichinose, M. He, N. Kobayashi, T. Maki, S. Yoshida, Y. Yoshida, K. Arashidani, M. Nishikawa, H. Takano, G. Sun, T. Shibamoto, Lung inflammation by fungus, *Bjerkandera adusta* isolated from Asian sand dust (ASD) aerosol and enhancement of ovalbumin -induced lung eosinophilia by ASD and the fungus in mice. *Allergy, Asthma & Clinical Immunology*. 10.1 (2014): 10. 1150321545113404
- M. M. Rahman, M. A. Rahman, T. Maki, T. Nishiuchi, T. Asano, H. Hasegawa, A marine phytoplankton (*Prymnesium parvum*) up-regulates ABC transporters and several other proteins to acclimatize with Fe-limitation, *Chemosphere*, 95, 213-219, 2014.1.
- N. T. Luan, M. A. Rahman, T. Maki, Y. Tamenori, T. Yoshimura, A. Suzuki, N. Iwasaki, H. Hasegawa, Distribution of trace element in Japanese red coral (*Paracorallium japonicum*) by μ -XRF and sulfur speciation by XANES: Linkage between trace element distribution and growth ring formation, *Geochim. Cosmochim. Acta*, 127, 1-9, 2014.1.
- 牧 輝弥, 福島理英, 小林 史尚, 山田 丸, 長谷川 浩, 岩坂 泰信, 大気中を風送される細菌叢の 16SrDNA-クローニングライブラー解析, *分析化学*, 62, 1095-1104, 2013.12.
- M. Habibullah, I. M. M. Rahman, M. A. Uddin, M. A. Anowar, M. M. Alam, K. Iwakabe, H. Hasegawa,

- Densities, viscosities and speeds of sound of binary mixtures of heptan-1-ol with 1,4-dioxane at temperatures from 298.15 to 323.15 K and atmospheric pressure, *J. Chem. Eng. Data*, **58**, 2887–2897, 2013.11.
- 牧輝弥, 原和崇, 山田丸, 小林史尚, 長谷川浩, 岩坂泰信, バイオエアロゾルの蛍光顕微鏡観察, エアロゾル研究, **28**, 201–207, 2013.10.
- H. Hasegawa, I. M. M. Rahman, Y. Umehara, H. Sawai, T. Maki, Y. Furusho, S. Mizutani, Selective recovery of indium from the etching waste solution of the flat-panel display fabrication process, *Microchem. J.*, **110**, 133–139, 2013.9.
- I. M. M. Rahman, Z. A. Begum, H. Hasegawa, Selective separation of elements from complex solution matrix with molecular recognition plus macrocycles attached to a solid-phase: A review, *Microchem. J.*, **110**, 485–493, 2013.9.
- T. Maki, F. Kobayashi, M. Yamada, H. Hasegawa, Y. Iwasaka, NaCl-amendment assay targeting airborne bacteria in tropospheric bioaerosols transported by westerly wind over Noto Peninsula, *Aerobiologia*, **29**, 341–354, 2013.9.
- T. Yoshimura, Y. Tamenori, N. Iwasaki, H. Hasegawa, A. Suzuki, H. Kawahata, Magnesium K-edge XANES spectroscopy of geological standards, *J. Synchrotron Rad.*, **20**, 734–740, 2013.9.
- T. Maki, M. Kakikawa, F. Kobayashi, M. Yamada, A. Matsui, H. Hasegawa, Y. Iwasaka, Assessment of composition and origin of airborne bacteria in the free troposphere over Japan, *Atmospheric Environment*, **74**, 73–82, 2013.8.
- T. Yoshimura, Y. Tamenori, A. Suzuki, R. Nakashima, N. Iwasaki, H. Hasegawa, H. Kawahata, Element profile and chemical environment of sulfur in a giant clam shell: insights from μ -XRF and X-ray absorption near-edge structure, *Chemical Geology*, **352**, 170–175, 2013.8.
- K. Ninomiya, C. Ogino, S. Kawabata, K. Kitamura, T. Maki, H. Hasegawa, N. Shimizu, Ultrasonic inactivation of *Microcystis* 1 aeruginosa in the presence of TiO_2 particles, *J. Biosci. Bioeng.*, **116**, 214–218, 2013.8.
- M. A. Rahman, H. Hasegawa, M. M. Rahman, T. Maki, R. P. Lim, Effect of iron (Fe^{2+}) concentration in soil on arsenic uptake in rice plant (*Oryza sativa* L.) when grown with arsenate [As (V)] and dimethylarsinate (DMA), *Water Air Soil Pollut.*, **224**, art.no.1623, 2013.7.
- H. Hasegawa, I. M. M. Rahman, Y. Egawa, H. Sawai, Z.A. Begum, T. Maki, S. Mizutani, Chelant-induced reclamation of indium from the spent liquid crystal display panels with the aid of microwave irradiation, *J. Hazard. Mater.*, **254–255**, 10–17, 2013.6.
- H. Hasegawa, M. M. Rahman, S. Kato, T. Maki, M. A. Rahman, Potential of proteins and their expression level in marine phytoplankton (*Prymnesium parvum*) as biomarker of N, P and Fe conditions in aquatic systems, *Advances in Biological Chemistry*, **3**, 338–346, 2013.6
- I. M. M. Rahman, Y. Furusho, Z. A. Begum, R. Sato, H. Okumura, H. Honda, H. Hasegawa, Determination of lead in solution with 4-(2-pyridylazo)-resorcinol by coupling with selective separation using a silica-gel bonded macrocycle system, *Cent. Eur. J. Chem.*, **11**, 672–678, 2013.5.
- I. M. M. Rahman, Z. A. Begum, Y. Furusho, S. Mizutani, T. Maki, H. Hasegawa, Selective separation of tri- and pentavalent arsenic in aqueous matrix with a macrocycle-immobilized solid phase extraction system, *Water Air Soil Pollut.*, **224**, art. no.1526, 2013.5.
- C. Okumura, M. A. Rahman, A. Takimoto, H. Hasegawa, Effect of nitrate on the determination of iron concentration in phytoplankton culture medium by liquid scintillation counting (LSC) method using ^{55}Fe radioisotope tracer, *J. Radioanal. Nucl. Chem.*, **296**, 1295–1302, 2013.5.
- I. M. M. Rahman, Z. A. Begum, H. Sawai, T. Maki, H. Hasegawa, Decontamination of spent iron-oxide coated sand from filters used in arsenic removal, *Chemosphere*, **92**, 196–200, 2013.4.
- 長谷川 浩, 自然界におけるヒ素のスペシエーションと植物との相互作用, 海洋化学研究, **26**, 14–21, 2013.4.
- H. Hasegawa, I. M. M. Rahman, Z.A. Begum, Y. Umehara, T. Maki, Y. Furusho, S. Mizutani, A silica gel-bound macrocycle system for the selective separation of toxic cadmium from metal-affluent aqueous matrix, *Cent. Eur. J. Chem.*, **11**, 341–347, 2013.3.
- Z. A. Begum, I. M. M. Rahman, H. Sawai, S. Mizutani, T. Maki, H. Hasegawa, Effect of extraction variables on the biodegradable chelant-assisted removal of toxic metals from artificially contaminated European reference soils, *Water Air Soil Pollut.*, **224**, art.no.1381, 2013.3.
- N. T. Luan, M. A. Rahman, T. Maki, N. Iwasaki, H. Hasegawa, Growth characteristics and growth rate estimation of Japanese precious corals, *J. Exp. Mar. Biol. Ecol.*, **441**, 117–125, 2013.3.
- H. Hasegawa, I. M. M. Rahman, Y. Egawa, H. Sawai, Z.A. Begum, T. Maki, S. Mizutani, Recovery of indium from end-of-life liquid-crystal display panels using aminopolycarboxylate chelants with the aid of mechanochemical treatment, *Microchem. J.*, **106**, 289–294, 2013.1.
- M. A. Rahman, M. M. Rahman, T. Maki, H. Hasegawa, The significance of biodegradable methylglycinidacetic acid (MGDA) for iron and arsenic bioavailability and uptake in rice plant, *Soil Sci. Plant Nutr.*, **58**, 627–636, 2012.11.

- Z. A. Begum, I. M. M. Rahman, Y. Tate, Y. Egawa, T. Maki, H. Hasegawa, Formation and stability of binary complexes of divalent ecotoxic ions (Ni, Cu, Zn, Cd, Pb) with biodegradable aminopolycarboxylate chelants (dl-2-(2-carboxymethyl)nitrilotriacetic acid, GLDA, and 3-hydroxy-2,2'-iminodisuccinic acid, HIDS) in aqueous solutions, *J. Solution Chem.*, **41**, 1713–1728, 2012.10.
- Z. A. Begum, I. M. M. Rahman, H. Sawai, Y. Tate, T. Maki, H. Hasegawa, Stability constants of Fe (III) and Cr (III) complexes with DL-2-(2-carboxymethyl)nitrilotriacetic acid (GLDA) and 3-hydroxy-2,2'-iminodisuccinic acid (HIDS) in aqueous solution, *J. Chem. Eng. Data*, **57**, 2723–2732, 2012.10.
- M. M. Rahman, M. G. Rasaul, M. A. Hossain, K. M. Iftekharuddaula, H. Hasegawa, Molecular characterization and genetic diversity analysis of rice (*Oryza sativa L.*) using SSR markers, *J. Crop Improv.*, **26**, 244–257, 2012.9.
- H. Hasegawa, M. M. Rahman, K. Kadobashi, Y. Takasugi, Y. Tate, T. Maki, M. A. Rahman, Significance of the concentration of chelating ligands on Fe^{3+} -solubility, bioavailability, and uptake in rice plant, *Plant Physiol. Biochem.*, **58**, 205–211, 2012.7.
- Z. A. Begum, I. M. M. Rahman, Y. Tate, H. Sawai, T. Maki, H. Hasegawa, Remediation of toxic metal contaminated soil by washing with biodegradable, aminopolycarboxylate chelants, *Chemosphere*, **87**, 1161–1170, 2012.6.
- F. Kobayashi, T. Maki, Y. Nakamura, Biodegradation of phenol in seawater using marine bacteria Isolated from the intestinal contents of marine creatures. *International Biodeterioration & Biodegradation* **69**:113–118, 2012.6.
- M. M. Rahman, M. A. Rahman, T. Maki, H. Hasegawa, Phytotoxicity of arsenate and salinity on early seedling growth of rice (*Oryza sativa L.*): A threat to sustainable rice cultivation in South and South-East Asia, *Bull. Environ. Contam. Toxicol.*, **88**, 695–702, 2012.5.
- M. A. Rahman, H. Hasegawa, R. Lim, Bioaccumulation, biotransformation and trophic transfer of arsenic in the aquatic food chain, *Environmental Research*, **116**, 118–135, 2012.4.
- M. A. Rahman, M. M. Rahman, H. Hasegawa, Arsenic-induced straighthead: an impending threat to sustainable rice production in South and South-East Asia!, *Bull. Environ. Contam. Toxicol.*, **88**, 311–315, 2012.3.
- H. Hasegawa, M. A. Rahman, N. T. Luan, T. Maki, N. Iwasaki, Trace elements in *Corallium* spp. as indicators for origin and habitat, *J. Exp. Mar. Biol. Ecol.*, **414–415**, 1–5, 2012.3.
- M. A. Rahman, H. Hasegawa, Arsenic in freshwater systems: Influence of eutrophication on occurrence, distribution, speciation, and bioaccumulation, *Applied Geochemistry*, **27**, 304–314, 2012.1.
- K. Maeda, S. Wakasone, K. Shimomura, T. Ikai, S. Kanoh Chiral Amplification in Polymer Brushes Consisting of Dynamic Helical Polymer Chains through the Long-Range Communication of Stereochemical Information, *Macromolecules*, Vol.47, No.19, pp.6540–6546, (2014.10).
- J. Shen, T. Ikai, Y. Okamoto Synthesis and Application of Immobilized Polysaccharide-Based Chiral Stationary Phases for Enantioseparation by High-Performance Liquid Chromatography, *J. Chromatogr. A*, Vol.1363, No.10, pp.51–61, (2014.10).
- T. Ikai, K. Kimura, K. Maeda, S. Kanoh Synthesis of Polysaccharide Derivatives Bearing Bromobenzoate Pendants for Use as Chiral Auxiliaries, *React. Funct. Polym.*, Vol.82, pp.52–57, (2014.9).
- K. Shimomura, T. Ikai, S. Kanoh, E. Yashima, K. Maeda Switchable Enantioseparation Based on Macromolecular Memory of a Helical Polyacetylene in the Solid State, *Nat. Chem.*, Vol.6, No.5, pp.429–434, (2014.5).
- T. Ikai, T. Kudo, M. Nagaki, T. Yamamoto, K. Maeda, S. Kanoh Fine Tuning of Frontier Orbital Energy Levels in Dithieno[3,2-*b*:2',3'-*d*]silole-Based Copolymers Based on the Substituent Effect of Phenyl Pendants, *Polymer*, Vol.55, No.9, pp.2139–2145, (2014.4).
- T. Ikai, A.K.M.F. Azam, M. Kuzuba, T. Kuwabara, K. Maeda, K. Takahashi, S. Kanoh Synthesis of Seleno[3,4-*c*]pyrrole-4,6-dione-based Polymers for Polymer Solar Cells, *Synthetic Met.*, Vol.162, No.17–18, pp.1707–1712, (2012.10).
- K. Maeda, S. Wakasone, K. Shimomura, T. Ikai, S. Kanoh Helical Polymer Brushes with a Preferred-handed Helix-sense Triggered by a Terminal Optically Active Group in the Pendant, *Chem. Commun.*, Vol.48, No.27, pp.3342–3344, (2012.2).
- S. Ohsawa, S. Sakurai, K. Nagai, K. Maeda, J. Kumaki, E. Yashima Amplification of Macromolecular Helicity of Dynamic Helical Poly (phenylacetylene)s Bearing Non-racemic Alanine Pendants in Dilute Solution, Liquid Crystal and Two-dimensional Crystal, *Polym. J.*, Vol.44, No.1, pp.42–50, (2012.1).
- K. Maeda, M. Muto, T. Sato, E. Yashima Effect of Polyelectrolyte Function on Helical Structures of Optically Active Poly (phenylacetylene) Derivatives Bearing Basic or Acidic Functional Pendant Groups, *Macromolecules*, Vol.44, No.20, pp.8343–8349, (2011.10).

- T. Yamamoto, T. Ikai, M. Kuzuba, T. Kuwabara, K. Maeda, K. Takahashi, S. Kanoh
Synthesis and Characterization of Thieno[3,4-b]thiophene-Based Copolymers Bearing 4-Substituted Phenyl Ester Pendants: Facile Fine-Tuning of HOMO Energy Levels, *Macromolecules*, Vol.44, No.17, pp.6659–6662, (2011.8).
- T. Ikai, M. Moro, K. Maeda, S. Kanoh
Synthesis of Polysaccharide Derivatives Bearing Pyridine N-Oxide Groups and Their Use as Asymmetric Organocatalysts, *React. Funct. Polym.*, Vol.71, No.10, pp.1055–1058, (2011.10).
- K. Tamura, N.S.M. Sam, T. Ikai, Y. Okamoto, E. Yashima
Synthesis and Chiral Recognition Ability of a Poly(phenylenevinylene)-Encapsulated Amylose Derivative, *Bull. Chem. Soc. Jpn.*, Vol.84, No.7, pp.741–747, (2011.6).
- K. Maeda, H. Mochizuki, K. Osato, E. Yashima
Stimuli-Responsive Helical Poly(phenylacetylene)s Bearing Cyclodextrin Pendants that Exhibit Enantioselective Gelation in Response to Chirality of a Chiral Amine and Hierarchical Super-Structured Helix Formation, *Macromolecules*, Vol.44, No.9, pp.3217–3226, (2011.5).
- K. Maeda, K. Kuroyanagi, S. Sakurai, T. Yamanaka, E. Yashima
Enantioselective Adsorption of Chiral Amines on an Induced Helical Poly(bis(4-carboxyphenoxy)phosphazene): Chiral Filter Effect, *Macromolecules*, Vol.44, No.8, pp.2457–2464, (2011.4).
- S. Ohsawa, S. Sakurai, K. Nagai, M. Banno, K. Maeda, J. Kumaki, E. Yashima
Hierarchical Amplification of Macromolecular Helicity of Dynamic Helical Poly(phenylacetylene)s Composed of Chiral and Achiral Phenylacetylenes in Dilute Solution, Liquid Crystal, and Two-Dimensional Crystal, *J. Am. Chem. Soc.*, Vol.133, No.1, pp.108–114, (2011.1).
- Y. Katoh, Y. Tsujimoto, C. Yamamoto, T. Ikai, M. Kamigaito, Y. Okamoto
Chiral Recognition Ability of Cellulose Derivatives Bearing Pyridyl and Bipyridyl Residues as Chiral Stationary Phases for High-Performance Liquid Chromatography, *Polym. J.*, Vol.43, No.1, pp.84–90, (2011.1).
- K. Maeda, S. Nozaki, T. Ikai, S. Kanoh
Synthesis of an Amphiphilic Block Copolymer Bearing an Optically Active π -Conjugated Polymer Chain and the Chiroptical Properties of Its Micelle, 2010 International Chemical Congress of Pacific Basin Societies, Honolulu, USA, (2010.12).
- T. Ikai, M. Moro, K. Maeda, S. Kanoh
Development of Asymmetric Organocatalysts Based on Cellulose Derivatives Bearing N-oxide Groups, 2010 International Chemical Congress of Pacific Basin Societies, Honolulu, USA, (2010.12).
- K. Maeda, S. Nozaki, T. Ikai, S. Kanoh
Synthesis of Amphiphilic Block Copolymers Bearing an Polyisocyanate Chain and Chiroptical Properties of Their Micelles, 22nd International Symposium on Chirality, Sapporo, Japan, p.275, (2010.7).
- T. Ikai, M. Moro, K. Maeda, S. Kanoh
Synthesis of Cellulose Derivatives Bearing N-oxide Groups and Their Application to Asymmetric Organocatalysts, 22nd International Symposium on Chirality, Sapporo, Japan, p.289, (2010.7).
- S. Tang, T. Ikai, M. Tsuji, Y. Okamoto
Immobilization of 3,5-Dimethylphenylcarbamates of Cellulose and Amylose onto Silica Gel Using (3-Glycidoxypropyl)triethoxysilane as Linker, *J. Sep. Sci.*, Vol.33, No.9, pp.1255–1263, (2010.5).
- J. Shen, T. Ikai, X. Shen, Y. Okamoto
Synthesis and Immobilization of Amylose Derivatives Bearing a 4-tert-Butylbenzoate Group at the 2-Position and 3,5-Dichlorophenylcarbamate/3-(Triethoxysilyl)propylcarbamate Groups at 3- and 6-Positions as Chiral Packing Material for HPLC, *Chem. Lett.*, Vol.39, No.5, pp.442–444, (2010.5).
- J. Shen, T. Ikai, Y. Okamoto
Synthesis and Chiral Recognition of Novel Amylose Derivatives Containing Regioselectively Benzoate and Phenylcarbamate Groups, *J. Chromatogr. A*, Vol.1217, No.7, pp.1041–1047, (2010.2).
- Y. Sugiura, C. Yamamoto, T. Ikai, M. Kamigaito, Y. Okamoto
Enantioseparation Using Amylose Esters as Chiral Stationary Phases for High-Performance Liquid Chromatography, *Polym. J.*, Vol.42, No.1, pp.31–36, (2010.1).
- S. Tang, T. Ikai, M. Tsuji, Y. Okamoto
Immobilization and Chiral Recognition of 3,5-Dimethylphenylcarbamates of Cellulose and Amylose Bearing 4-(Trimethoxysilyl)phenylcarbamate Groups, *Chirality*, Vol.22, No.1, pp.165–172, (2010.1).
- J. Li, T. Ikai, Y. Okamoto
Preparation and HPLC Application of Chiral Stationary Phase from 4-tert-Butylphenylcarbamates of Cellulose and Amylose Immobilized onto Silica Gel, *J. Sep. Sci.*, Vol.32, No.17, pp.2885–2891, (2009.9).
- Y. Hase, K. Nagai, K. Okoshi, N. Ochi, K. Sawabe, H. Iida, K. Maeda, E. Yashima
Mechanism of Memory of Macromolecular Helicity of Poly(phenyl isocyanide)s and Their Helical Structures, *J. Am. Chem. Soc.*, Vol.131, No.30, pp.10719–10732, (2009.7).
- H. Yamada, K. Maeda, E. Yashima
Chiral Self-aggregate Formation of an Optically Active Phosphonate Derivative, *Chem. Eur. J.*, Vol.15, No.28, pp.6794–6798, (2009.7).
- K. Miyabe, Y. Hase, H. Iida, K. Maeda, E. Yashima

- Synthesis of Functional Poly (phenyl isocyanide)s with Macromolecular Helicity Memory and Their Use as Asymmetric Organocatalysts, Chirality, Vol.21, pp.44–50, (2009.1).
- T. Ikai, C. Yamamoto, M. Kamigaito, Y. Okamoto
Organic-Inorganic Hybrid Materials for Efficient Enantioseparation Using Cellulose 3,5-Dimethylphenylcarbamate and Tetraethyl Orthosilicate, Chem. Asian J., Vol.3, No.8–9, pp.1494–1499, (2008.9).
- G. Sicolli, T. Ikai, L. Jicsinszky, V. Schurig
A Maltooctaose Derivative (Acyclodextrin) as a Chiral Stationary Phase for Enantioselective Gas Chromatography, Eur. J. Org. Chem., Vol.2008, No.25, pp.4241–4244, (2008.9).
- K. Tamura, K. Maeda, E. Yashima
Chemical Modification of a Luminescent Amylose-Poly (phenylenevinylene) Composite, Macromolecules, Vol.41, No.13, pp.5065–5069, (2008.7).
- K. Maeda, S. Tamaki, K. Tamura, E. Yashima
Memory of Macromolecular Helicity in Poly (phenylacetylene)s Bearing Biphenyl Pendants, Chem. Asian J., Vol.3, No.3, pp.614–624, (2008.3).
- Honda, M.; Nakamura, T.; Sumigawa, T.; Kunimoto, K.; Segi, M.
Stereoselective Synthesis of 1,2,3-Triol Derivatives from α , β -Unsaturated Acylsilanes, *Heteroatom Chem.*, Vol. 25, No. 6, pp. 565–577 (2014.11).
- Maeda, H.; Suzuki, T.; Shoji, T.; Segi M.
Effect of Substituents on Silicon Atoms upon Absorption and Fluorescence Properties of Tetrasilylpyrenes and Tetrakis (silylethynyl)pyrenes, The 14th International Symposium Organized by Institute for Chemical Research, Kyoto University (ICRIS'14) “The Science and Technology of Smart Materials”, Uji, pp. 123–124 (2014.3).
- Mizuno, K.; Negoro, N.; Nagayama, Y.; Maeda, H.; Ikeda, H.
Formation of a New Benzotriquinane Skeleton via Intramolecular Photocycloaddition Reactions of a Phenylethyne Moiety to a 1-Cyanonaphthalene Ring System, *Photochem. Photobiol. Sci.*, Vol. 13, No. 2, pp. 145–148 (2014.1).
- Shintaku, K.; Nishino, Y.; Maeda, H.; Segi, M.
Synthetic transformation of homopropargylic selenides to conjugated diene-substituted alcohols and amines using diisopropoxy (η^2 -alkyne)titanium intermediates, *Tetrahedron*, Vol. 69, No. 21, pp. 4311–4324 (2013.5).
- Shintaku, K.; Maeda, H.; Segi, M.
A Stereoselective Approach to (*Z*)-1-Silyl-2-aryl-1,3-dienes from 4-(Phenylseleno)but-1-yne via Palladium-catalyzed Silylstannylation and Selenoxide Elimination, *Synthesis*, Vol. 45, No. 3, pp. 341–346 (2013.2).
- Yamaji, M.; Maeda, H.; Minamida, K.; Maeda, T.; Asai, K.; Konishi, G.; Mizuno, K.
Emission and transient absorption measurements of substitution effects of C-C triple bonds on relaxation processes of the fluorescent state of naphthalenes, *Res. Chem. Intermed.*, Vol. 39, No. 1, pp. 321–345 (2013.1).
- Maeda, H.; Nishiura, S.; Mukae, H.; Yoshimi, Y.; Mizuno, K.
Improved Efficiency and Product Selectivity in the Photo-Claisen Type Rearrangement of an Aryl Naphthylmethyl Ether Using a Microreactor/Flow System, *Res. Chem. Intermed.*, Vol. 39, No. 1, pp. 301–310 (2013.1).
- Natori, N.; Maeda, H.; Segi, M.
Reaction of [4+2] Cycloadducts of Selenocarbonyl Compounds and Cyclopentadiene with Organo-lithium Compounds, The 12th International Kyoto Conference on New Aspects of Organic Chemistry (IKCOC-12), Kyoto (2012.11).
- Maeda, H.; Hironishi, M.; Segi, M.; Ishibashi, R.; Mizuno, K.
Conformation and Fluorescence Properties of [3.3] (1,3) Pyrenophanes, 7th Asian Photochemistry Conference 2012 (APC2012), Osaka, PII–71 (2012.11).
- Yamaji, M.; Maeda, H.; Nanai, Y.; Mizuno, K.
Substitution effects of C-C triple bonds on deactivation processes from the fluorescent state of pyrene studied by emission and transient absorption measurements, *ISRN Phys. Chem.*, manuscript ID 103817 (2012.10).
- Mizuno, K.; Negoro, N.; Enya, K.; Nagayama, Y.; Maeda, H.; Ikeda, H.
One-Step Synthesis of Polycyclic Compounds via Intramolecular Photocycloaddition, XXIV IUPAC Symposium on Photochemistry, Coimbra, Portugal (2012.7).
- Maeda, H.; Maeda, T.; Mizuno, K.
Absorption and Fluorescence Spectroscopic Properties of 1- and 1,4-Silyl-Substituted Naphthalene Derivatives, *Molecules*, Vol. 17, No. 5, pp. 5108–5125 (2012.5).
- Yamaji, M.; Maeda, H.; Nanai, Y.; Mizuno, K.
Substitution effects of C-C triplet bonds on the fluorescent properties of perylenes studied by emission and transient absorption measurements, *Chem. Phys. Lett.*, Vol. 536, pp. 72–76 (2012.5).
- Maeda, H.; Hironishi, M.; Segi, M.; Ishibashi, R.; Mizuno, K.
Fluorescence Properties of [3.3] (1,3) Pyrenophanes Tethered by Group 16 Elements, The 10th International Conference on Heteroatom Chemistry (ICHAC-10), Uji, p. 140 (2012.5).
- Shintaku, K.; Maeda, H.; Segi, M.
Synthetic Transformation via Silylstannylation of Terminal Alkynes and Oxidative Elimination of Phenylseleno Group, The 10th International Con-

- ference on Heteroatom Chemistry (ICHAC-10), Uji, p. 166 (2012.5).
- Yoshida, T.; Maeda, H.; Segi, M. Synthesis and Reaction of Pyridinium (*N*-Phenylselenocarbamoyl)methylide Derivatives, The 10th International Conference on Heteroatom Chemistry (ICHAC-10), Uji, p. 228 (2012.5).
- Shoji, T.; Maeda, H.; Segi, M. Effect of Substituents on Silicon Atoms upon Absorption and Fluorescence Properties of Tetrakis (silylethynyl)pyrenes, The 10th International Conference on Heteroatom Chemistry (ICHAC-10), Uji, p. 237 (2012.5).
- Maeda, H.; Takamizawa, Y.; Segi, M. [3+2] Cycloaddition of Seleno- and Thioaldehydes with Cyclic Azomethine Imines, *Heterocycles*, Vol. 84, No. 1, pp. 393–400 (2012.1).
- T. Ogoshi, R. Sueto, K. Yoshikoshi, T. Yamagishi, One-Dimensional Channels Constructed from per-Hydroxylated Pillar[6]arene Molecules for Gas and Vapour Adsorption, *Chem. Commun.* Vol.50, No.96, pp.15209–15211 (2014.10).
- T. Ogoshi, T. Aoki, S. Ueda, Y. Tamura, T. Yamagishi, Pillar[5]arene-Based Nonionic Polyrotaxanes and a Topological Gel Prepared from Cyclic Host Liquids, *Chem. Commun.* Vol.50, No.50, pp.6607–6609 (2014.5).
- T. Ogoshi, N. Ueshima, F. Sakakibara, T. Yamagishi, Conversion from Pillar[5]arene to Pillar[6–15]arenes by Ring Expansion and Encapsulation of C₆₀ by Pillar[n]arenes with Nanosize Cavities, *Org. Lett.* Vol.16, No.11, pp.2896–2899 (2014.5).
- T. Ogoshi, N. Ueshima, T. Akutsu, D. Yamafuji, T. Furuta, F. Sakakibara, T. Yamagishi, The Template Effect of Solvents on High Yield Synthesis, Cocyclization of Pillar[6]arenes and Interconversion between Pillar[5]- and Pillar[6]arenes, *Chem. Commun.* Vol.50, No.43, pp.5774–5777 (2014.4).
- K. Kitajima, T. Ogoshi, T. Yamagishi, Diastereoselective Synthesis of a [2]Catenane from a Pillar[5]arene and a Pyridinium Derivative, *Chem. Commun.* Vol.50, No.22, pp.2925–2927 (2014.1).
- T. Ogoshi, H. Kayama, T. Aoki, T. Yamagishi, R. Ohashi, M. Mizuno, Extension of Polyethylene Chains by Formation of Polypseudorotaxane Structures with Perpentylated Pillar[5]arenes, *Polym. J.* Vol.46, No.1, pp.77–81 (2014.1).
- T. Ogoshi, K. Yoshikoshi, T. Aoki, T. Yamagishi, Photoreversible Switching between Assembly and Disassembly of a Supramolecular Polymer Involving an Azobenzene-Bridged Pillar[5]arene Dimer, *Chem. Commun.* Vol.49, No.78, pp.8785–8787 (2013.8).
- T. Ogoshi, D. Yamafuji, T. Akutsu, M. Naito, T. Yamagishi, Achiral Guest-Induced Chiroptical Changes of a Planar-Chiral Pillar[5]arene Containing One π-Conjugated Unit, *Chem. Commun.* Vol.49, No.78, pp.8782–8784 (2013.8).
- T. Ogoshi, N. Ueshima, T. Yamagishi, An Amphiphilic Pillar[5]arene as Efficient and Substrate-Selective Phase-Transfer Catalyst, *Org. Lett.* Vol.15, No.14, pp.3742–3745 (2013.7).
- T. Ogoshi, T. Akutsu, D. Yamafuji, T. Aoki, T. Yamagishi, Solvent- and Achiral-Guest-Triggered Chiral Inversion in a Planar Chiral pseudo[1]Catenane, *Angew. Chem. Int. Ed.* Vol.52, No.31, pp.8111–8115 (2013.6).
- T. Ogoshi, D. Yamafuji, T. Yamagishi, A. M. Brouwer, Forster Resonance Energy Transfer by Formation of a Mechanically Interlocked [2]Rotaxane, *Chem. Commun.* Vol.49, No.48, pp.5468–5470 (2013.4).
- 塚崎裕希, 本橋憲仁, 山田良幸, 生越友樹, 山岸忠明, セルロース誘導体を用いたキラル特性をもつネットワークポリマーの合成, ネットワークポリマー, Vol.34, No.2, pp.72–76 (2013.4).
- T. Ogoshi, K. Demachi, K. Masaki, T. Yamagishi, Diastereoselective Synthesis of meso-Pillar[6]arenes by Bridging between Hydroquinone Units in an Alternating Up-and-Down Manner, *Chem. Commun.* Vol.49, No.38, pp.3952–3954 (2013.3).
- T. Ogoshi, T. Aoki, R. Shiga, R. Iizuka, S. Ueda, K. Demachi, D. Yamafuji, H. Kayama, T. Yamagishi, Cyclic Host Liquids for Facile and High-Yield Synthesis of [2]Rotaxanes, *J. Am. Chem. Soc.* Vol.134, No.50, pp.20322–20325 (2012.12).
- T. Ogoshi, K. Kida, T. Yamagishi, Photoreversible Switching of the Lower Critical Solution Temperature in a Photoresponsive Host-Guest System of Pillar[6]arene with Triethylene Oxide Substituents and an Azobenzene Derivative, *J. Am. Chem. Soc.* Vol.134, No.49, pp.20146–20159 (2012.12).
- T. Ogoshi, D. Yamafuji, D. Kotera, T. Aoki, S. Fujinami, T. Yamagishi, Clickable Di- and Tetra-Functionalized Pillar[n]arenes (n = 5, 6) by Oxidation-Reduction of Pillar[n]arene Units, *J. Org. Chem.* Vol.77, No.24, pp.11146–11152 (2012.12).
- T. Ogoshi, H. Kayama, D. Yamafuji, T. Aoki, T. Yamagishi, Supramolecular Polymers with Alternating Pillar[5]arene and Pillar[6]arene Units from a Highly Selective Multiple Host-Guest Complexation System and Monofunctionalized Pillar[6]arene, *Chem. Sci.* Vol.3, No.11, pp.3221–3226 (2012.7).
- T. Ogoshi, D. Yamafuji, T. Aoki, Y. Nakamoto, Thermally Responsive Shutting Behavior of a Pillar[6]arene-Based [2]Rotaxane, *Chem. Commun.*

- Vol.48, No.54, pp.6842–6844 (2012.5).
 T. Ogoshi, D. Yamafuji, T. Aoki, K. Kitajima,
 T. Yamagishi, Y. Hayashi, S. Kawauchi,
 High-yield Diastereoselective Synthesis of Planar-chiral [2]- and [3]Rotaxanes Constructed from per-Ethylated Pillar[5]arene and Pyridinium Derivatives, *Chem. Eur. J.* Vol.18, No.24, pp.7493–7500 (2012.4).
- 加藤千博,高山雄貴,生越友樹,山岸忠明,
 ビニル基を導入したフェノール導体の合成とポリマー化,ネットワークポリマー,Vol.33, No.2, pp.56–63 (2012.4).
- T. Ogoshi, R. Shiga, T. Yamagishi,
 Reversibly Tunable Lower Critical Solution Temperature Utilizing Host-Guest Complexation of Pillar[5]arene with Triethylene Oxide Substituents, *J. Am. Chem. Soc.* Vol.134, No.10, pp.4577–4580 (2012.2).
- T. Ogoshi, N. Ueshima, T. Yamagishi, Y. Toyota,
 N. Matsumi,
 Ionic Liquid Pillar[5]arene: Its Ionic Conductivity and Solvent-Free Complexation with a Guest, *Chem. Commun.* Vol.48, No.29, pp.3536–3538 (2012.2).
- Honda M., Nakamura T., Sumigawa T., Kunimoto K., Segi M.
 Stereoselective synthesis of 1,2,3-triol derivatives from α , β -unsaturated acylsilanes, *Heteroat. Chem.*, Vol. 25 (6), pp. 565–577, (2014.11).
- Deval V., Kumar A., Gupta V., Sharma A., Gupta A., Tandon P., Kunimoto K.
 Molecular structure (monomeric and dimeric) and hydrogen bonds in 5-benzyl 2-thiohydantoin studied by FT-IR and FT-Raman spectroscopy and DFT calculations, *Spectrochim. Acta A*, Vol. 132, pp. 15–26, (2014.11).
- Okumura H., Kitoh S., Suda M., Honda M., Kunimoto K.
 Crystal structure of 4-ethyl-1,3-oxazolidine-2-thione, *Eur. Chem. Bull.*, Vol. 3 (10), pp. 1017–1019, (2014.10).
- Sasaki C., Ichitani M., Kunimoto K., Asada C., Nakamura Y.
 Extraction of arbutin and its comparative content in branches, leaves, stems, and fruits of Japanese pear *Pyrus pyrifolia* cv. Kousui, *Biosci. Biotechnol. Biochem.*, Vol. 78 (5), pp. 874–877, (2014.5).
- Ichitani M., Kitoh S., Tanaka K., Fujinami S., Suda M., Honda M., Kunimoto K.
 Crystal structures of racemic and enantiomeric 5-isopropyl-5-methylhydantoin, *Eur. J. Chem.*, Vol. 5 (1), pp. 6–10, (2014.3).
- Hanai K., Kuwae A., Kunimoto K., Kitoh S.
 Vibrational spectra and normal coordinate analysis of lithium pyruvate monohydrate and its isotopic compounds, *Eur. J. Chem.*, Vol. 5 (2), pp. 305–310, (2014.2).
- Kitoh S., Feng Y., Fujinami S., Ichitani M., Honda M., Kunimoto K.
 1-Acetyl-5-(4-fluorophenyl)-2-sulfanyl-imidazolidin-4-one, *Acta Cryst.*, Vol. 69, pp. o1699, (2013.10).
- Iwase A., Ueda A., Kuwae A., Hanai K., Kunimoto K.
 Raman spectra and structures of 1-methyl-4-(4-diethylaminophenylazo)-pyridinium iodide in neutral and acidic aqueous solutions, *J. Mol. Struct.*, Vol. 1047, pp. 55–60, (2013.9).
- Ahmad L. O., Linh L. H. M., Akimoto M., Kaneki Y., Honda M., Suda M., Kunimoto K.
 Persimmon tannin gel: formation by autoxidation and caffeine adsorption properties, *Food Sci. Technol. Res.*, Vol. 19 (4), pp. 697–703, (2013.9).
- Ichitani M., Kitoh S., Tanaka K., Fujinami S., Suda M., Honda M., Kuwae A., Hanai K., Kunimoto K.
 Synthesis and crystal structure of (S)-5-isopropyl-5-methyl-2-thiohydantoin, *Eur. J. Chem.*, Vol. 4 (4), pp. 350–352, (2013.7).
- Ichitani M., Kitoh S., Fujinami S., Suda M., Honda M., Kunimoto K.
 5-Isopropyl-5-methyl-2-sulfanylideneimidazolidin-4-one, *Acta Cryst. E*, Vol. 69, pp. o953, (2013.5).
- Kitoh S., Fujinami S., Iwase A., Kuwae A., Hanai K., Suda M., Honda M., Kunimoto K.
 Crystal structure of 1-methyl-4-(4-diethylaminophenylazo)pyridinium iodide, $C_{16}H_{21}N_4^+ \cdot I^-$, $C_{16}H_{21}IN_4$, *Z. Kristallogr. NCS*, Vol. 228, pp. 33–34, (2013.3).
- Ui R., Honda M., Suda M., Kunimoto K., Segi M.
 Acid-catalyzed reaction behavior of 1-cyclopropyl or 1-vinyl substituted silylmethanols, *Proceedings of the 12th International Kyoto Conference on New Aspects of Organic Chemistry*, pp. 140, (2012.11).
- Sharma A., Gupta V., Tandon P., Rawat P., Maeda S., Kunimoto K.
 Experimental (FT-IR, FT-Raman, NMR) and theoretical spectroscopic properties of intermolecular hydrogen bonded 1-acetyl-2-thiohydantoin polymorphs, *Spectrochim. Acta A*, Vol. 90, pp. 141–151, (2012.5).
- Maeda S., Oumae S., Kaneko S., Kunimoto K.
 Formation of carbamates and cross-linking of microbial poly (ϵ -L-lysine) studied by ^{13}C and ^{15}N solid-state NMR, *Polym. Bull.*, Vol. 68, pp. 745–754, (2012.2).
- T. Kuwabara, B. Nishizawa, K. Nakamura, Y. Ikeda, T. Yamaguchi, K. Takahashi
 Electrocatalytic activity of electrode-positied cobalt oxide-modified to produce oxygen gas from water, *J. Electroanal. Chem.*, 2015 in press, (2014.11).
- T. Ikai, R. Kojima, S. Katori, T. Yamamoto, T. Kuwabara, K. Maeda, K. Takahashi, S. Kanoh
 Thieno[3,4-b]thiophene-benzo-[1,2-b:4,5-b]dithio-

- phene-based polymers bearing optically pure 2-ethylhexyl pendants: synthesis and application in polymer solar cells, *Polymer*, 2014 in press, (2014.11).
- T. Kuwabara, Y. Omura, T. Yamaguchi, T. Taima, K. Takahashi
Development of Flexible Inverted Polymer Solar Cells on Pet-ITO Substrate with Zinc Oxide Electron Collection Layer Prepared by Novel Low-Temperature Sol-Gel Methods, EU-PVSEC2014, 3.3 Organic-based PV, 3CO.8 Stability and Scale Up of Organic Based Solar Cells, 3CO.8.6 (1 page in CD-ROM), (2014.9).
- K. Yamamoto, Y. Zhou, T. Kuwabara, K. Takahashi, M. Endo, A. Wakamiya, Y. Ogomori, S. Hayase, T. Taima
Low Temperature TiO_x Compact Layer by Chemical Bath Deposition Method for Vapor Deposited Perovskite Solar cells, Conference Record of The 2014 IEEE PVSC-40, in printing, (2014.6).
- T. Kuwabara, T. Yamaguchi, T. Taima, K. Takahashi
Preparation of Zinc Oxide Film By A Novel Low-Temperature Sol-Gel Method and Its Application to An Electron Collection Layer for Flexible Inverted Polymer Solar Cells, 2014 MRS Spring Meeting, Symposium R: Materials Challenges and Integration Strategies for Flexible Energy Devices and Systems, R9.06 (1 page in CD-ROM) , (2014.4).
- T. Taima, Y. Zhou, T. Kuwabara, K. Takahashi
Efficient small-molecule photovoltaic cells using nanostructured template, Proc. of SPIE, Vol. 8983, 898310-1-6, (2014.2).
- T. Kuwabara, S. Katori, K. Arima, Y. Omura, T. Yamaguchi, T. Taima, K. Takahashi
Development of bifacial inverted polymer solar cells using a conductivity controlled transparent poly (3,4-ethylenedioxylbenzene):poly (4-styrene sulfonic acid) and a striped Au electrode on the hole collection side, *Jpn. J. Appl. Phys.*, Vol.53, No.2S, pp.02BE07-1-4, 2014, (2014.2).
- T. Kuwabara, M. Kuzuba, N. Emoto, T. Yamaguchi, T. Taima, K. Takahashi
Effect of the solvent used to prepare the photoactive layer on the performance of inverted bulk hetero-junction polymer solar cells, *Jpn. J. Appl. Phys.*, Vol.53, No.2S, pp.02BE06-1-7 2014, (2014.2).
- T. Kuwabara, Y. Omura, T. Yamaguchi, T. Taima, K. Takahashi, K. Higashimine, V. Vohra, H. Murata
Factors affecting the performance of bifacial inverted polymer solar cells with a thick photoactive layer, *J. Phys. Chem. C*, Vol.118, No.8, pp.4050-4055, 2014, (2014.1).
- T. Kuwabara, Y. Omura, T. Yamaguchi, T. Taima, K. Takahashi
Mechanistic insights into UV-induced electron transfer from PCBM to zinc oxide in inverted polymer solar cells using impedance spectroscopy, 2013 MRS Fall Meeting, Symposium Y: Physics of Organic and Hybrid Organic-Inorganic Solar Cells, Y6.28 (1 page in CD-ROM), (2013.12).
- Y. Zhou, T. Taima, T. Kuwabara, K. Takahashi
Efficient Small-Molecule Photovoltaic Cells Using a Crystalline Diindenoperylene Film as a Nanostructured Template, *Adv. Mater.*, Vol.25, No.42, pp.6069-6075, 2013, (2013.9).
- S. Miyamoto, Y. Zhou, T. Kuwabara, K. Takahashi, T. Taima
Enhancement of Organic Photovoltaics by Vacuum Deposition with Substrate Rotation towards Large-scale Application, EM-nano 2013 technical digest, P3-14, p178, (2013.6).
- Y. Omura, T. Kuwabara, T. Yamaguchi, T. Taima, K. Takahashi
Effect of UV light irradiation on photovoltaic characteristics of inverted polymer solar cells with various zinc oxide electron collection layer, EM-nano 2013 technical digest, P2-56, p160, (2013.6).
- T. Kuwabara, T. Yamaguchi, T. Taima, K. Takahashi
Flexible inverted polymer solar cells on PET-ITO substrate with zinc ox-ide electron collection layer pre-pared by novel sol-gel method and low-temperature treatments, EM-nano 2013 technical digest, P1-59, p104, (2013.6).
- Y. Zhou, T. Taima, T. Kuwabara, K. Takahashi
Efficient Nanostructured Organic Solar Cells Based On Crystalline Template, EM-nano 2013 technical digest, PA2-2, p13, (2013.6).
- T. Kuwabara, C. Tamai, Y. Omura, T. Yamaguchi, T. Taima, K. Takahashi
Effect of UV Light Irradiation on Photovoltaic Characteristics of Inverted Polymer Solar Cells Containing Sol-Gel Zinc Oxide Electron Collection Layer, *Org. Electron.*, Vol.14, No.2, pp.649-656, 2013, (2013.1).
- T. Ikai, T. Yamamoto, M. Kuzuba, T. Kuwabara, K. Maeda, K. Takahashi, S. Kanoh
Development of thieno[3,4-b]thiophene-based low-bandgap polymers bearing aryl ester pendants and their application to the photovoltaic devices, 2012 MRS Fall Meeting, Symposium O: Next-Generation Polymer-based Organic Photovoltaics, O3.17 (1 page in CD-ROM) , (2012.12).
- T. Ikai, A.K.M.F. Azam, M. Kuzuba, T. Kuwabara, K. Maeda, K. Takahashi, S. Kanoh
Synthesis of seleno[3,4-c]pyrrole-4,6-dione-based polymers for polymer solar cells, *Synthetic Met.*, Vol.162, No.17-18, pp.1707-1712, 2012, (2012.10).
- T. Kuwabara, T. Nakashima, T. Yamaguchi, K. Takahashi
Flexible inverted polymer solar cells on polyethylene terephthalate substrate containing zinc oxide electron-collection-layer prepared by novel sol-

- gel method and low-temperature treatments, *Org. Electron.*, Vol.13, No.7, pp.1136-1140, 2012, (2012.5).
- Y. Matsuo, J. Hatano, T. Kuwabara, K. Takahashi
Fullerene acceptor for improving open-circuit voltage in inverted organic photovoltaic devices without accompanying decrease in short-circuit current density, *Appl. Phys. Lett.*, Vol.100, pp. 063303-1-3 2012, (2012.2).
- Tatsuya Yoshimura, Hirohisa Nagatani, Toshiyuki Osakai
Combined use of two membrane-potential-sensitive dyes for determination of the Galvani potential difference across a biomimetic oil/water interface, *Anal. Bioanal. Chem.*, 406 (14), 3407-3414 (2014).
- Hirohisa Nagatani, Makoto Harada, Hajime Tanida, Hiroki Sakae, Hisanori Imura
Coordination structure of bromide ions associated with hexyltrimethylammonium cations at liquid/liquid interfaces under potentiostatic control as studied by total-reflection X-ray absorption fine structure, *J. Chem. Phys.*, 140 (10), 101101 (2014).
- Hiroyuki Okamura, Hitomi Takagi, Taku Isomura, Kotaro Morita, Hirohisa Nagatani, Hisanori Imura
Highly selective synergism for the extraction of lanthanoid (III) ions with β -diketones and triocetylphosphine oxide in an ionic liquid, *Anal. Sci.*, 30 (3), 323-325 (2014).
- Hiroki Sakae, Hirohisa Nagatani, Kotaro Morita, Hisanori Imura
Spectroelectrochemical characterization of dendrimer-porphyrin associates at polarized liquid|liquid interfaces, *Langmuir*, 30 (3), 937-945 (2014).
- Naoki Hirayama, Takaaki Higo, Hisanori Imura
Salting-out phase separation system of water-tetrahydrofuran with co-using 1-butyl-3-methylimidazolium chloride and sodium chloride for possible extraction separation of chloro-complexes, *Solvent Extr. Res. Dev.-Jpn.*, 21 (1), 71-76 (2014).
- Kotaro Morita, Kazuki Nakano, Hisanori Imura
The extraction of copper (I) ions with heterocyclic bidentate amines in the presence of glutathione, *Solvent Extr. Res. Dev.-Jpn.*, 21 (1), 1-7 (2014).
- Hisanori Imura and Yuko Hasegawa
Formation and preparation of binuclear complexes by synergistic extraction, *Solvent Extr. Ion Exch.*, 31 (4), 345-357 (2013).
- Michie Ebisawa, Akira Ohashi, Hisanori Imura, Kousaburo Ohashi
Synergistic effects of tris (4-isopropyltropolonato) cobalt (iii) on the extraction of lanthanum (iii) and lutetium (iii) with acetylacetone into benzene, *Solvent Extr. Res. Dev.-Jpn.*, 20, 131-136 (2013).
- Kotaro Morita, Kenichi Shibata, Hirohisa Nagatani, Naoki Hirayama, Hisanori Imura
Valence discriminative detection of metal cations by a chromotropic acid-grafted glassy carbon electrode, *Anal. Sci.*, 29 (1), 95-99 (2013).
- Kojiro Shimojo, Ayaka Nakai, Hiroyuki Okamura, Akira Ohashi and Hirochika Naganawa Extraction behavior and selective separation of lead (II) using *N,N*-dioctyldiglycol amic acid, *Anal. Sci.*, 29 (1), 147-150 (2013).
- Hiroyuki Okamura, Atsushi Ikeda-Ohno, Takumi Saito, Noboru Aoyagi, Hirochika Naganawa, Naoki Hirayama, Shigeo Umetani, Hisanori Imura, and Kojiro Shimojo
Specific cooperative effect of a macrocyclic receptor for metal ion transfer into an ionic liquid, *Anal. Chem.*, 84 (21), 9332-9339 (2012).
- Toshiyuki Osakai, Tatsuya Yoshimura, Daichi Kaneko, Hirohisa Nagatani, Sang-Hyun Son, Yutaka Yamagishi and Koji Yamada
Potential-modulated fluorescence spectroscopy of zwitterionic and dicationic membrane-potential-sensitive dyes at the 1,2-dichloroethane/water interface, *Anal. Bioanal. Chem.*, 404 (3), 785-79 (2012).
- Shuntaro Matsuta, Kotaro Morita, Naoki Hirayama, Hisanori Imura
Effect of halogenation of 5-alkyloxymethyl-8-quinolinol derivatives at 7-position on extraction capability of copper (ii) ion, *Bunseki Kagaku*, 61 (8), 699-704 (2012).
- Astrid J. Olaya, Delphine Schaming, Pierre-Francois Brevet, Hirohisa Nagatani, Hai-Jun Xu, Michel Meyer, Hubert H. Girault
Interfacial self assembly of water soluble cationic porphyrins for the reduction of oxygen to water, *Angew. Chem. Int. Ed.*, 51 (26), 6447-6451 (2012).
- Naoki Hirayama, Takaaki Higo, and Hisanori Imura
Evaluation of a hydrophilic ionic liquid as a salting-out phase separation agent to a water-tetrahydrofuran homogeneous system for aqueous biphasic extraction separation, *Anal. Sci.*, 28 (6), 541-543 (2012).
- Keisuke Morita, Hisanori Imura
Substoichiometric isotope dilution mass spectrometry of boron by the ion-pair extraction with halogenated salicyl alcohol derivatives and a quaternary ammonium salt, *Anal. Sci.*, 28 (3), 243-249 (2012).
- Astrid J. Olaya, Delphine Schaming, Pierre-Francois Brevet, Hirohisa Nagatani, Tomas Zimmermann, Jiri Vanicek, Hai-Jun Xu, Claude P. Gros, Jean-Michel Barbe, and Hubert H. Girault
Self-assembled molecular rafts at liquid|liquid interfaces for four-electron oxygen reduction, *J. Am. Chem. Soc.*, 134 (1), 498-506 (2012).
- Hiroyuki Okamura, Hiroki Sakae, Keiji Kidani, Naoki Hirayama, Noboru Aoyagi, Takumi Saito, Kojiro

- Shimojo, Hirochika Naganawa, Hisanori Imura
Laser-induced fluorescence and infrared spectroscopic studies on the specific solvation of tris (1-(2-thienyl)-4,4,4-trifluoro-1,3-butanedionato)europium (III) in an ionic liquid, *Polyhedron*, 31 (1), 748–753 (2012).
- W. Sato, S. Komatsuda, Y. Yamada, and Y. Ohkubo,
Detection of a missing spinel ZnIn₂O₄ formed as nanostrucrures in ZnO, *Phys. Rev. B*, Vol. 90, pp.235204 (1–5), (2014).
- S. Komatsuda, W. Sato, and Y. Ohkubo,
Formation energy of oxygen vacancies in ZnO determined by investigating thermal behavior of Al and In impurities, *J. Appl. Phys.*, Vol. 116, pp.183502 (1–5), (2014).
- W. Sato, R. Mizuuchi, N. Irioka, S. Komatsuda,
S. Kawata, A. Taoka, and Y. Ohkubo,
Extranuclear dynamics of ¹¹¹Ag (\leftrightarrow ¹¹¹Cd) doped in AgI nanoparticles, *Chem. Phys. Lett.*, Vol. 609, pp.104–107, (2014).
- Y. Kobayashi, M. Mihara, T. Nagatomo, Y. Yamada, M. K. Kubo, J. Miyazaki, W. Sato, S. Sato, and A. Kitagawa,
Time-resolved Mössbauer spectra obtained after ⁵⁷Mn implantation in Si, *Hyperfine Interact.*, Vol. 226, pp.679–685, (2014).
- Y. Yamada, Y. Kobayashi, M. K. Kubo, M. Mihara, T. Nagatomo, W. Sato, J. Miyazaki, S. Sato, and A. Kitagawa,
In-beam Mössbauer study of ⁵⁷Mn implanted into a low-temperature xenon, *Hyperfine Interact.*, Vol. 226, pp.35–40, (2014).
- M. K. Kubo, Y. Kobayashi, Y. Yamada, M. Mihara, T. Nagatomo, W. Sato, J. Miyazaki, S. Sato, and A. Kitagawa,
In-beam Mössbauer spectroscopy of ⁵⁷Fe/⁵⁷Mn in MgO and NaF at HIMAC, *Rev. Sci. Instrum.*, Vol. 85, pp.02C310 (1–3), (2014).
- N. Yamada, M. Uesugi, A. Yokoyama, T. Nakanishi,
Studies on temporal change in depth profiles of the Rn concentrations in natural water columns, *J. Radioanal. Nucl. Chem.*, Vol. 299, pp.1177–1182, (2014).
- W. Sato, S. Komatsuda, and Y. Ohkubo,
Characteristic interactions of ¹¹¹Cd probes with nonradioactive In impurities doped in ZnO, *Hyperfine Interact.*, Vol. 221, pp.79–84, (2013).
- Y. Yamada, Y. Kobayashi, M. K. Kubo, M. Mihara, T. Nagatomo, W. Sato, J. Miyazaki, S. Sato, and A. Kitagawa,
In-beam Mössbauer spectra of ⁵⁷Mn implanted into low-temperature solid Ar, *Chem. Phys. Lett.*, Vol. 567, pp.14–17, (2013).
- 田崎和江, 竹原照明, 石垣靖人, 中川秀昭, 根本直樹, 橋山明彦, 木村元,
放射能汚染環境における生物の元素濃度分布, 河北潟総合研究第16巻, pp.7–24, (2013).
- N. Kinoshita, M. Paul, Y. Kashiv,
P. Collon, C. M. Deibel, B. DiGiovine, J. P. Greene, D. J. Henderson, C. L. Jiang, S. T. Marley, T. Nakanishi, R. C. Pardo, K. E. Rehm, D. Robertson, R. Scott, C. Schmitt, X. D. Tang, R. Vondrasek, and A. Yokoyama,
A Shorter ¹⁴⁶Sm half-life and reexamination of ¹⁴⁶Sm–¹⁴²Nd chronology in the solar system, *Science*, Vol. 335, pp.1614–1617, (2012).
- Z. J. Li, A. Toyoshima, M. Asai, K. Tsukada, T. K. Sato, N. Sato, T. Kikuchi, Y. Nagame, M. Schädel, V. Pershina, X. H. Liang, Y. Kasamatsu, Y. Komori, K. Ooe, A. Shinohara, S. Goto, H. Murayama, M. Murakami, H. Kudo, H. Haba, Y. Takeda, M. Nishikawa, A. Yokoyama, S. Ikarashi, K. Sueki, K. Akiyama, J. V. Kratz,
Sulfate complexation of element 104, Rf, in H₂SO₄/HNO₃ mixed solution, *Radiochimca Acta*, Vol. 100, pp.157–164, (2012).
- W. Sato, S. Komatsuda, and Y. Ohkubo,
Characteristic local association of In impurities dispersed in ZnO, *Phys. Rev. B*, Vol. 86, pp.235209 (1–5) (2012).
- Takashi Nagatomo, Yoshio Kobayashi, Kenya M. Kubo, Yasuhiro Yamada, Mototsugu Mihara, Wataru Sato, Jun Miyazaki, Kazuya Mae, Shinji Sato, and Atsushi Kitagawa,
In-beam Mössbauer spectroscopy of ⁵⁷Mn implanted into lithium hydride, *Hyperfine Interact.*, Vol. 204, pp.125–128, (2012).
- Y. Tanaka, R. Iwamoto, R. Sakata, T. Soeta, K. Endo, S. Fujinami, K. Inomata, Y. Ukaji
Regioselective Introduction of Substituents to the meso-Position of Pyrromethenone Derivative – Application to the Synthesis of Sterically Fixed Phytochrome Chromophore Anchored to the C15 meso-Position, *Heterocycles* 2014, 90, ASAP.
- T. Soeta, T. Ohgai, T. Sakai, S. Fujinami, Y. Ukaji
Ring Enlargement Reaction of *C,N*-Cyclic-*N'*-Acyl Azomethine Imines with Sulfonium Ylide: An Efficient Synthesis of 3-Benzazepine Derivatives, *Org. Lett.* 2014, 16, 4854–4857.
- T. Soeta, T. Ishizaka, Y. Tabatake, Y. Ukaji
Chiral NHC Ligands Bearing a Pyridine Moiety for the Copper-Catalyzed Alkylation of *N*-Sulfonylimines with Dialkylzinc Reagents, *Chem. -Eur. J.* 2014, 20, 16773–16778.
- T. Soeta, Y. Miyamoto, S. Fujinami, Y. Ukaji
The Lewis Acid-Catalyzed [3+1+1] Cycloaddition of Azomethine Ylides with Isocyanides, *Tetrahedron* 2014, 70, 6623–6629.
- Y. Yonezawa, T. Furuya, T. Aratani, S. Fujinami, K. Inomata, Y. Ukaji
Desymmetrization of *meso*-Methylenecyclopropanes by a Palladium-Catalyzed Asymmetric Ring-Opening Bis (alkoxycarbonylation) Reaction,

- Tetrahedron: Asymmetry* 2014, **25**, 936–943.
- T. Soeta, K. Tamura, Y. Ukaji
 [4+1] Cycloaddition of N-Acyl Imine Derivatives with Isocyanides: Efficient Synthesis of 5-Amino-oxazoles and 5-Aminothiazoles, *Tetrahedron* 2014, **70**, 3005–3010.
- T. Nakano, K. Endo, Y. Ukaji
 Catalytic Tandem C-C Bond Formation/Cleavage of Cyclopropene for Allylzincation of Aldehydes or Aldimine Using Organozinc Reagents, *Org. Lett.* 2014, **16**, 1418–1421.
- T. Soeta, S. Matsuzaki, Y. Ukaji
 A One-Pot *O*-Phosphinative Passerini/Pudovik Reaction: Efficient Synthesis of Highly Functionalized α -(Phosphinyloxy)amide Derivatives, *Chem. -Eur. J.* 2014, **20**, 5007–5012.
- T. Soeta, Y. Ukaji
 Carboxylic Acid-Free Novel Isocyanide Based Reactions, *Chem. Rec.* 2014, **14**, 101–116.
- M. Yoshida, N. Sassa, T. Kato, S. Fujinami, T. Soeta, K. Inomata, Y. Ukaji
 Desymmetrization of 1,4-Pentadien-3-ol by the Asymmetric 1,3-Dipolar Cycloaddition of Azomethine Imines, *Chem. -Eur. J.* 2014, **20**, 2058–2064.
- K. Endo, T. Ishioka, T. Shibata
 One-Pot Cross-Coupling of Diborylmethane for the Synthesis of Dithienylmethane Derivatives, *Synlett* 2014, **25**, 2184–2188.
- K. Endo, S. Yakeishi, R. Takayama, T. Shibata
 Highly Chemo-, Enantio, and Regioselective Synthesis of α,α -Disubstituted Furanones via Cu-catalyzed Conjugate Addition, *Chem. -Eur. J.* 2014, **20**, 8893–8897.
- T. Nakano, T. Soeta, K. Endo, K. Inomata, Y. Ukaji
 Stereoselective Synthesis of (*2Z,4E*)-2,4-Pentadien-1-ols via Sequential 1,4-Elimination Reaction and [1,2]-Wittig Rearrangement Starting from (*E*)-4-Alkoxy-2-butenoil Benzoates, *J. Org. Chem.* 2013, **78**, 12654 – 12661.
- K. Endo, T. Nakano, S. Fujinami, Y. Ukaji
 Chemoselective Carbozincation of Cyclopropene for C-C Bond Formation and Cleavage Sequence in Single Operation, *Eur. J. Org. Chem.* 2013, 6514–6518.
- K. Endo, F. Kurosawa, Y. Ukaji
 Dramatic Silver (I) Oxide-Promoted Chemoselective Cross-Coupling Reaction of (Diborylmethyl) trimethylsilane, *Chem. Lett.* 2013, **42**, 1363–1365.
- T. Sakai, T. Soeta, K. Endo, S. Fujinami, Y. Ukaji
 Magnesium-Tartramide Complex Mediated Asymmetric Strecker-Type Reaction of Nitrones Using Cyanohydrin, *Org. Lett.* 2013, **15**, 2422–2425.
- T. Soeta, Y. Tabatake, S. Fujinami, Y. Ukaji
N-Heterocyclic Carbene Catalyzed Oxidative Coupling of Aldehydes with Carbodiimides under Aerobic Conditions: Efficient Synthesis of N-Acylureas, *Org. Lett.* 2013, **15**, 2088–2091.
- Y. Hirose, N. C. Rockwell, K. Nishiyama, R. Narikawa, Y. Ukaji, K. Inomata, J. C. Lagarias, M. Ikeuchi
 Green/red Cyanobacteriochromes Regulate Complementary Chromatic Acclimation via a Protochromic Photocycle, *Proc. Natl. Acad. Sci. USA* 2013, **110**, 4974–4979.
- Y. Miyamoto, N. Wada, T. Soeta, S. Fujinami, K. Inomata, Y. Ukaji
 One-pot Stereoselective Syntheses of 2-Acylaziridines and 2-Acylpyrrolidines from N-(Propargylid)hydroxylamines, *Chem. -Asian J.* 2013, **8**, 824–831.
- T. Soeta, K. Tamura, S. Fujinami, Y. Ukaji
 Three-Component Reaction of *C,N*-Cyclic *N*-Acyl Azomethine Imine, Isocyanide, and Azide Compounds: Effective Synthesis of 1,5-Disubstituted Tetrazoles with Tetrahydroisoquinoline Skeletons, *Org. Biomol. Chem.* 2013, **11**, 2168–2174.
- K. Endo, R. Takayama, T. Shibata
 BINAM-mono-PHOS as New Entry for Multinuclear Cu-Catalysts in Asymmetric Conjugate Addition of Organozinc Reagents, *Synlett* 2013, **24**, 1155–1159.
- K. Endo, S. Yakeishi, D. Hamada, T. Shibata
 Functionalized BINOL-mono-PHOS for Multinuclear Cu-Catalysts in Asymmetric Conjugate Addition of Organozinc Reagents, *Chem. Lett.* 2013, **42**, 547–549.
- K. Endo, D. Hamada, S. Yakeishi, T. Shibata
 Effect of Multinuclear Cu/Al-Complexes in Highly Asymmetric Conjugate Addition of Trimethylaluminum to Acyclic Enones, *Angew. Chem. Int. Ed.* 2013, **52**, 606–610.
- K. Takahashi, R. Iwamoto, R. Sakata, T. Soeta, K. Inomata, Y. Ukaji
 Direct Oxidation of 4-Methylpyrrole-2-carboxylates with DDQ in the Presence of a Glycol, *Heterocycles* 2012, **86**, 1031–1038.
- T. Soeta, S. Fujinami, Y. Ukaji
 The Chlorosilane-Promoted Addition Reaction of Isocyanides to 3,4-Dihydroisoquinoline *N*-Oxides, *J. Org. Chem.* 2012, **77**, 9878–9883.
- T. Soeta, Y. Tabatake, Y. Ukaji
 An Asymmetric Intramolecular Stetter Reaction Catalyzed by a Chiral Triazolium Precatalyst Bearing a Pyridine Moiety, *Tetrahedron* 2012, **68**, 10188–10193.
- T. Aratani, K. Tahara, S. Takeuchi, S. Kitamura, M. Murai, S. Fujinami, K. Inomata, Y. Ukaji
 Asymmetric Bis(alkoxycarbonylation) Reaction of Cyclic Olefins Catalyzed by Palladium in the Presence of Copper (I) Triflate, *Bull. Chem. Soc. Jpn.* 2012, **85**, 1225–1232.
- R. Yang, K. Nishiyama, A. Kamiya, Y. Ukaji, K. Inomata, T. Lamarter

- Assembly of Synthetic Locked Phycocyanobilin Derivatives with Phytochrome in Vitro and in Vivo in *Ceratodon purpureus* and *Arabidopsis*, *Plant Cell* 2012, 24, 1936–1951.
- T. Soeta, K. Tamura, Y. Ukaji
[5+1] Cycloaddition of *C,N*-Cyclic *N*-Acyl Azomethine Imines with Isocyanides, *Org. Lett.* 2012, 14, 1226–1229.
- T. Sakai, T. Soeta, K. Inomata, Y. Ukaji
Strecker-Type Reaction of Nitrones Using Cyano-hydrin, *Bull. Chem. Soc. Jpn.* 2012, 85, 231–235.
- T. Soeta, Y. Tabatake, K. Inomata, Y. Ukaji
Asymmetric Benzoin Condensation Promoted by Chiral Triazolium Precatalyst Bearing a Pyridine Moiety, *Tetrahedron* 2012, 68, 894–899.
- K. Endo, T. Ishioka, T. Ohkubo, T. Shibata
One-Pot Synthesis of Symmetrical and Unsymmetrical Diarylmethanes via Diborylmethan, *J. Org. Chem.* 2012, 77, 7223–7231.
- K. Endo, T. Ohkubo, T. Ishioka, T. Shibata
Cross Coupling between sp³-Carbon and sp³-Carbon Using a Diborylmethane Derivative at Room Temperature, *J. Org. Chem.* 2012, 77, 4826–4831.
- K. Endo, D. Hamada, S. Yakeishi, M. Ogawa, T. Shibata
Multinuclear Cu-Catalysts Based on SPINOL-PHOS in Asymmetric Conjugate Addition of Organozinc Reagents, *Org. Lett.* 2012, 14, 2342–2345.
- J. M. LaLonde, Y. Do Kwon, D. M. Jones, A. W. Sun, J. R. Courter, T. Soeta, T. Kobayashi, A. M. Princiotto, X. Wu, A. Schön, E. Freire, P. D. Kwong, J. R. Mascola, J. Sodroski, N. Madani, A. B. Smith, III
Structure-Based Design, Synthesis and Characterization of Dual Hotspot Small-Molecule HIV-1 Entry Inhibitors, *J. Med. Chem.* 2012, 55, 4382–4396.
- R. Ohashi, G. Wakabayashi, M. Mizuno, T. Soeta, M. Hashimoto, K. Yamamura
Molecular Dynamics of Octyl Urea Crystals Analyzed by Solid-State NMR, *Chem. Lett.* 2012, 41, 1433–1435.
- D. Seo, T. Asano, H. Komori, and T. Sakurai
Role of the C-terminal extension stacked on the *re*-face of the isoalloxazine ring moiety of the flavin adenine dinucleotide prosthetic group in ferredoxin-NADP⁺ oxidoreductase from *Bacillus subtilis*, *Plant Phys. Biochem.*, Vol. 81, pp. 143–148, (2014, 8).
- H. Morishita, D. Kurita, K. Kataoka, and T. Sakurai
Study on dioxygen reduction by mutational modifications of the hydrogen bond network leading from bulk water to the trinuclear copper center in bilirubin oxidase, *Biochem. Biophys. Res. Commun.*, Vol. 450, No. 1, pp. 767–772, (2014, 7).
- H. Komori, R. Sugiyama, K. Kataoka, K. Miyazaki, Y. Higuchi, and T. Sakurai
New insights into the catalytic active-site structure of multicopper oxidases, *Acta Cryst. Sec. D*, Vol. 70, No. 3, pp. 772–779, (2014, 3).
- H. Komori, T. Kajikawa, K. Kataoka, Y. Higuchi, and T. Sakurai
Crystal structure of the CueO mutants at Glu506, the key amino acid located in the proton transfer pathway for dioxygen reduction, *Biochem. Biophys. Res. Commun.*, Vol. 438, No. 4, pp. 686–690, (2013, 9).
- K. Kataoka and T. Sakurai
Role of hydrogen bond connecting ligands for substrate and type I copper in copper (I) oxidase CueO, *Chem. Lett.*, Vol. 42, No. 9, pp. 1102–1104, (2013, 9).
- K. Kataoka, H. Kogi, S. Tsujimura, and T. Sakurai
Modifications of laccase activities of copper efflux oxidase, CueO by synergistic mutations in the first and second coordination spheres of the type I copper center, *Biochem. Biophys. Res. Commun.*, Vol. 431, No. 3, pp. 393–397, (2013, 2).
- K. Saito, S. Kurose, Y. Tsujino, T. Osakai, K. Kataoka, T. Sakurai, and E. Tamiya
Electrochemical characterization of a unique, “neutral” laccase from *Flammulina velutipes*, *J. Biosci. Bioeng.*, Vol. 115, No. 2, pp. 159–167, (2013, 2).
- T. Kajikawa, K. Kataoka, and T. Sakurai
Modifications on the hydrogen bond network by mutations of *Escherichia coli* copper efflux oxidase affect the process of proton transfer to dioxygen leading to alterations of enzymatic activities, *Biochem. Biophys. Res. Commun.*, Vol. 422, No. 1, pp. 152–156, (2012, 5).
- H. Komori, R. Sugiyama, K. Kataoka, Y. Higuchi, and T. Sakurai
An O-centered structure of the trinuclear copper center in the Cys500Ser/Glu506Gln mutant of CueO and structural changes in low to high X-ray dose conditions, *Angew. Chem. Int. Ed.*, Vol. 51, No. 8, pp. 1861–1864, (2012, 2).
- S. Akine, T. Nabeshima
Increased Nuclearity of Salen-Type Transition Metal Complexes by Incorporation of O-Alkyloxime Functionality, *Heteroat. Chem.* 25, 410–421 (2014.11).
- T. Soeta, Y. Miyamoto, S. Fujinami, Y. Ukaji
The Lewis acid-catalyzed [3+1+1] cycloaddition of azomethine ylides with isocyanides, *Tetrahedron*, 70, 6623–6629 (2014.9).
- S. Sairenji, S. Akine, T. Nabeshima
Dynamic Helicity Control of a Single-Helical Oligo-oxime Complex and Acid-Base Triggered Repeated Helicity Inversion Mediated by Amino Acids, *Chem. Lett.* 43, 1107–1109 (2014.7).
- M. T. Kieber-Emmons, J. W. Ginsbach, P. K. Wick, H. R. Lucas, M. E. Helton, B. Lucchese, M. Suzuki, A. D. Zuberbühler, K. D. Karlin, E. I. Solomon

- Observation of a Cu^{II}₂(μ-1,2-peroxo)/Cu^{II}₂(μ-oxo) Equilibrium and its Implications for Copper-Dioxygen Reactivity Complex, *Angew. Chem. Int. Ed.* 53, 4935–4939 (2014.5).
- M. Kondo, S. Furukawa, K. Hirai, T. Tsuruoka, J. Reboul, H. Uehara, S. Diring, Y. Sakata, O. Sakata, S. Kitagawa
Trapping of a Spatial Transient State During the Framework Transformation of a Porous Coordination Polymer, *J. Am. Chem. Soc.* 136, 4938–4944 (2014.4).
- S. Sairenji, S. Akine, T. Nabeshima
Dynamic helicity control of single-helical oligooxime metal complexes by coordination of chiral carboxylate ions, *Tetrahedron Lett.* 55, 1987–1990 (2014.3).
- M. Yoshida, N. Sassa, T. Kato, S. Fujinami, T. Soeta, K. Inomata, Y. Ukaji
Desymmetrization of 1,4-Pentadiene-3-ol by the Asymmetric 1,3-Dipolar Cycloaddition of Azomethine Imines, *Chem. Eur. J.* 20, 2058–2064 (2014.2).
- S. Akine, M. Miyashita, S. Piao, T. Nabeshima
Perfect encapsulation of guanidinium ion in a helical trinickel (II) metallocryptand for efficient regulation of helix inversion rate, *Inorg. Chem. Front.* 1, 53–57 (2014.1).
- S. Akine, Z. Varadi, T. Nabeshima
Synthesis of Planar Metal Complexes and the Stacking Abilities of Naphthalenediol-Based Acyclic and Macroyclic Salen-Type Ligands, *Eur. J. Inorg. Chem.* 2013, 5987–5998 (2013.12).
- S. Akine, H. Nagumo, T. Nabeshima
Programmed multiple complexation for the creation of helical structures from acyclic phenol-bipyridine oligomer ligands, *Dalton Trans.* 42, 15974–15986 (2013.12).
- K. Hirai, K. Chen, T. Fukushima, S. Horike, M. Kondo, N. Louvain, C. Kim, Y. Sakata, M. Meilikhov, O. Sakata, S. Kitagawa, S. Furukawa
Programmed crystallization via epitaxial growth and ligand replacement towards hybridizing porous coordination polymer crystals, *Dalton Trans.* 42, 15868–15872 (2013.12).
- S. Akine, S. Piao, M. Miyashita, T. Nabeshima
Cage-like tris (salen)-type metallocryptand for cooperative guest recognition, *Tetrahedron Lett.* 54, 6541–6544 (2013.11).
- S. Kitoh, Y. Feng, S. Fujinami, M. Ichitani, M. Honda, K.-K. Kunimoto
1-Acethyl-5-(4-fluorophenyl)-2-sulfanylidenimidazolidin-4-one, *Acta Cryst. E* 69, o1699 (2013.11).
- K. Endo, T. Nakao, S. Fujinami, Y. Ukaji
Chemoselective Carbozincation of Cyclopropene for C-C Bond Formation and Cleavage in a Single Operation, *Eur. J. Org. Chem.* 2013, 6514–6518 (2013.10).
- S. Akine, S. Sairenji, T. Taniguchi, T. Nabeshima
Stepwise Helicity Inversions by Multisequential Metal Exchange, *J. Am. Chem. Soc.* 135, 12948–12951 (2013.9).
- S. Furukawa, Y. Sakata, S. Kitagawa
Control over Flexibility of Entangled Porous Coordination Frameworks by Molecular and Mesoscopic Chemistries, *Chem. Lett.* 42, 570–576 (2013.6).
- S. Aiki, Y. Kijima, J. Kuwabara, A. Taketoshi, T. Koizumi, S. Akine, T. Kanbara
Ligand Modification of Cyclometalated Ruthenium Complexes in the Aerobic Oxidative Dehydrogenation of Imidazolines, *ACS Catal.* 3, 812–816 (2013.5).
- T. Sakai, T. Soeta, K. Endo, S. Fujinami, Y. Ukaji
Magnesium-Tartramide Complex Mediated Asymmetric Strecker-Type Reaction of Nitrones Using Cyanohydrin, *Org. Lett.* 15, 2422–2425 (2013.5).
- T. Soeta, K. Tamura, S. Fujinami, Y. Ukaji
A three-component reaction of *C,N*-cyclic *N*-acyl azomethine imines, isocyanides, and azide compounds: effective synthesis of 1,5-disubstituted tetrazoles with tetrahydroisoquinoline skeletons, *Org. Biomol. Chem.* 11, 2168–2174 (2013.4).
- Y. Miyamoto, N. Wada, T. Soeta, S. Fujinami, K. Inomata, Y. Ukaji
One-Pot Stereoselective Synthesis of 2-Acylaziridines and 2-Acylpyrrolidines from *N*-(Propargylic) hydroxylamines, *Chem. Eur. J.* 8, 824–831 (2013.4).
- S. Akine, D. Kusama, T. Nabeshima
Conformational Control of Electron-rich Calix[6]arene Skeleton by Paraquat Recognition, *Tetrahedron Lett.* 54, 205–209 (2013.1).
- T. Soeta, Y. Tabatake, S. Fujinami, Y. Ukaji
N-Heteracyclic Carbene Catalyzed Oxidative Coupling of Aldehydes with Carbodiimides under Aerobic Conditions: Efficient Synthesis of *N*-Acylureas, *Org. Lett.* 15, 2088–2091 (2013.1).
- K. Park, T. Tsugawa, H. Furutachi, Y. Kwak, L. V. Liu, S. D. Wong, Y. Yoda, Y. Kobayashi, M. Saito, M. Kurokzu, M. Seto, M. Suzuki, E. I. Solomon
Nuclear Resonance Vibrational Spectroscopy of Peroxo-bridged Biferric Complexes: Structural insight into Peroxy Intermediates of Binuclear Non-heme Iron Enzymes, *Angew. Chem. Int. Ed.* 52, 1294–1298 (2013.1).
- Y. Sakata, S. Furukawa, M. Kondo, K. Hirai, N. Horike, Y. Takashima, H. Uehara, N. Louvain, M. Meilikhov, T. Tsuruoka, S. Isoda, W. Kosaka, O. Sakata, S. Kitagawa
Shape-Memory Nanopores Induced in Coordination Frameworks by Crystal Downsizing, *Science* 339, 193–196 (2013.1).
- T. Ogoshi, D. Yamafuji, D. Kotera, T. Aoki, S. Fujinami, T. Yamagishi

- Clickable Di- and Tetrafunctionalized Pillar[*n*]arenes (*n* = 5, 6) by Oxidation–Reduction of Pillar[*n*]arene Units, *J. Org. Chem.* 77, 11146–11152 (2012.12).
- S. Akine, T. Tadokoro, T. Nabeshima
Oligometallic Template Strategy for Synthesis of a Macroyclic Dimer-type Octaoxime Ligand for Its Cooperative Complexation, *Inorg. Chem.* 51, 11478–11486 (2012.11).
- T. Aratani, K. Tahara, S. Takeuchi, S. Kitamura, M. Murai, S. Fujinami, K. Inomata, Y. Ukaji
Asymmetric Bis (alkoxycarbonylation) Reaction of Cyclic Olefins Catalyzed by Palladium in the Presence of Copper (I) Triflate, *Bull. Chem. Soc. Jpn.* 85, 1225–1232 (2012.11).
- T. Soeta, S. Fujinami, Y. Ukaji
Chlorosilane-Promoted Addition Reaction of Iso-cyanides to 3,4-Dihydroisoquinoline *N*-Oxides, *J. Org. Chem.* 77, 9878–9883 (2012.11).
- Y. Sakata, S. Furukawa, C. Kim, S. Kitagawa
Formation of Nanocrystals of a Zinc Pillared-Layer Porous Coordination Polymer Using Microwave-Assisted Coordination Modulation, *Chem. Lett.* 41, 1436–1438 (2012.11).
- T. Moriuchi, Y. Sakamoto, S. Noguchi, T. Fujiwara, S. Akine, T. Nabeshima, T. Hirao
Design and controlled emission properties of bioorganometallic compounds composed of uracils and organoplatinum (II) moieties, *Dalton Trans.* 41, 8524–8531 (2012.7).
- K. Hirai, S. Furukawa, M. Kondo, M. Meilikov, Y. Sakata, O. Sakata, S. Kitagawa
Targeted Functionalisation of a Hierarchically-Structured Porous Coordination Polymer Crystal Enhances Its Entire Function, *Chem. Commun.* 48, 6472–6474 (2012.7).
- S. Akine, H. Nagumo, T. Nabeshima
Hierarchical Helix of Helix in the Crystal: Formation of Variable-Pitch Helical Pi-Stacked Array of Single-Helical Dinuclear Metal Complexes, *Inorg. Chem.* 51, 5506–5508 (2012.5).
- M. Tsotsalas, A. Umemura, F. Kim, Y. Sakata, J. Reboul, S. Kitagawa, S. Furukawa
Crystal Morphology-Directed Framework Orientation in Porous Coordination Polymer Films and Freestanding Membranes via Langmuir–Blodgetttry, *J. Mater. Chem.* 22, 10159–10165 (2012.5).
- K. Endo, K. Hayashi, T. Ida, and T. Takemura
IR and Py-GC/MS Spectral Simulation of Polymer Film by Quantum Chemical and Quantum Molecular Dynamics Calculations Using the Polymer Models, *Russ. J. Phys. Chem. A*, 88, 2370–2379 (2014.12).
- M. Mizuno, A. Iwasaki, T. Umiyama, R. Ohashi, and T. Ida
Local Structure and Dynamics of Imidazole Molecules in Proton-Conducting Poly(vinylphosphonic acid)-Imidazole Composite Material, *Macromolecules*, 47, 7469–7476 (2014.11).
- Y. Yoshida, M. Maesato, Y. Kumagai, M. Mizuno, K. Isomura, H. Kishida, M. Izumi, Y. Kubozono, A. Otsuka, H. Yamochi, G. Saito, K. Kirakci, S. Cordier, and C. Perrin
An Isotropic Three-Dimensional Molecular Conductor Based on the Coronene Radical Cation, *Eur. J. Inorg. Chem.*, 3871–3878 (2014.8).
- K. Yamada, M. Saito, R. Ohashi, T. Nakai, K. Deguchi, and T. Shimizu
Solid-State $^{47/49}\text{Ti}$ Nuclear Magnetic Resonance of TiO_2 , *Chem. Lett.*, 43, 1520–1521 (2014.6).
- M. Saitow, T. Ida and Y. Mochizuki
Improved description of the orbital relaxation effect by practical use of the self-energy, *Int. J. Quant. Chem.*, 114, 577–586 (2014.5)
- T. Ogoshi, H. Kayama, T. Aoki, T. Yamagishi, R. Ohashi, and M. Mizuno
Extension of Polyethylene Chains by Formation of Polypseudorotaxane Structures with Perpentylated Pillar[5]arenes Polymer J., 46, 77–81 (2014.1).
- T. Umiyama, R. Ohashi, T. Ida, and M. Mizuno
Analysis of Molecular Motion of Proton-Conductive Imidazolium Hydrogen Succinate Crystal using Solid-State NMR, *Chem. Lett.*, 42, 1323–1325 (2013.7).
- S. Tamamura, R. Ohashi, S. Nagao, M. Yamamoto, and M. Mizuno
Molecular-Size-Distribution-Dependent Aggregation of Humic Substances by Na (I), Ag (I), Ca (II), and Eu (III), *Colloids and Surf. A*, 434, 9–15 (2013.10).
- T. Ida, K. Endo, D. Matsumoto, N. Kato, M. Mizuno, Y. Suzuki, and M. Tadokoro
Dynamic and Static Behaviors of CH_4 and CO_2 in Small and Large Cavities of Hydrate, *J. Mol. Struct.*, 1032, 275–280 (2013.1).
- M. Tadokoro, C. Iida, Y. Shimazaki, K. Isoda, Y. Suzuki, T. Sugaya, Y. Kumagai, and M. Mizuno
Water Nanotubes Clathrating Solvent Molecules Stabilized by Molecular 1-D Nanoporous Crystals *RSC Advances*, 2, 12101–12104 (2012.12).
- R. Ohashi, M. Saito, T. Fujita, T. Nakai, H. Utsumi, K. Deguchi, M. Tansho, T. Shimizu
Observation of $^{47/49}\text{Ti}$ NMR Spectra of $\text{TiCl}_4/\text{MgCl}_2$ Catalysts under an Ultrahigh Magnetic Field, *Chem. Lett.*, 41, 1563–1565 (2012.11).
- R. Ohashi, G. Wakabayashi, M. Mizuno, T. Soeta, M. Hashimoto, and K. Yamamura
Molecular Dynamics of Octyl Urea Crystals Analyzed by Solid-state NMR, *Chem. Lett.*, 41, 1433–1435 (2012.10).
- K. Endo, T. Ida, S. Shimada, J.V. Ortiz, K. Deguchi, T. Shimizu, K. Yamada

- Valence XPS, IR, and C13 NMR spectral analysis of 6 polymers by quantum chemical calculations, *J. Mol. Struct.*, 1027, 20–30 (2012.4).
- J. A. Rodríguez-Velamazán, M. A. González, J. A. Real, M. Castro, M. C. Muñoz, A. B. Gaspar, R. Ohtani, M. Ohba, K. Yoneda, Y. Hijikata, N. Yanai, M. Mizuno, H. Ando, and S. Kitagawa
- A Switchable Molecular Rotator: Neutron Spectroscopy Study on a Polymeric Spin-Crossover Compound, *J. Am. Chem. Soc.*, 134, 5083–5089 (2012.3).
- K. Endo, H. Shinomiya, T. Ida, S. Shimada, K. Takahashi, Y. Suzuki, H. Yazima
- Depth profile assignments of nm and mm orders by quantum chemical calculations for chitosan films modified by Kr+ beam bombardment, *Progress in Theo. Chem. and Phys.*, B26, 475–485 (2012.1).
- K. Endo, T. Ida, S. Shimada, J.V. Ortiz
- Valence XPS, IR, and solution ¹³C NMR spectral analysis of representative polymers by quantum chemical calculations, *Progress in Theo. Chem. and Phys.*, B26, 393–406 (2012.1).
- T. Kobayashi, S. Kuwajima, T. Kurata, Y. Hayashi
- Structural Conversion from Bowl- to Ball-type Polyoxovanadates: Synthesis of a Spherical Tetradecavanadate through a Chloride-incorporated Bowl-type Dodecavanadate, *Inorg. Chim. Acta*, 2014, 420, 69–74.
- K. Suzuki, F. Tang, Y. Kikukawa, K. Yamaguchi, N. Mizuno
- Hydrogen Evolution Using the Visible-Light-Induced Metal-to-Polyoxometalate Multiple Electron Transfer, *Chem. Lett.* 2014, 43, 1429–1431.
- K. Suzuki, F. Tang, Y. Kikukawa, K. Yamaguchi, N. Mizuno
- Visible Light-Induced Photoredox Catalysis of a Tetracerium-Containing Silicotungstate, *Angew. Chem. Int. Ed.* 2014, 53, 5356–5360.
- W. Kosaka, K. Yamagishi, A. Hori, H. Sato, R. Matsuda, S. Kitagawa, M. Takata, H. Miyasaka
- Selective NO Trapping in the Pores of Chain-Type Complex Assemblies Based on Electronically Activated Paddlewheel-Type [Ru₂II,II]/[Rh₂II,II] Dimers, *J. Am. Chem. Soc.* 2013, 135, 18469–18480.
- W. Kosaka, N. Yamamoto, H. Miyasaka
- Axial-Site Modifications of Paddlewheel Diruthenium (II, II) Complexes Supported by Hydrogen Bonding, *Inorg. Chem.* 2013, 52, 9908–9914.
- Y. Kikukawa, K. Suzuki, K. Yamaguchi, N. Mizuno
- Synthesis, Structure Characterization, and Reversible Transformation of a Cobalt Salt of a Dilacunary γ -Keggin Silicotungstate and Sandwich-Type Di- and Tetracobalt-Containing Silicotungstate Dimers, *Inorg. Chem.* 2013, 52, 8644–8652.
- N. Kato Y. Hayashi
- Discrete Spherical Hexadecavanadates Incorporating a Bromide with Oxidative Bromination Activity, *Dalton Trans.* 2013, 42, 11804–11811.
- A. Hashikawa, Y. Sawada, Y. Yamamoto, M. Nishio, W. Kosaka, Y. Hayashi, H. Miyasaka
- Polyoxometalate-based Frameworks with a Linker of Paddlewheel Diruthenium (II, III) Complexes, *Cryst. Eng. Comm.* 2013, 15, 4852–4859.
- W. Kosaka, Y. Ishii, H. Miyasaka
- Donor/acceptor neutral aggregation of a paddlewheel-type [Ru₂^{III,II}] complex and TCNQ, *Polyhedron* 2013, 52, 1213–1218.
- M. Nishio, S. Inami, Y. Hayashi
- Early-Lanthanide Complexes with All-Inorganic Macroyclic Polyoxovanadate Ligands, *Eur. J. Inorg. Chem.* 2013, 10, 1876–1881.
- Y. Kikukawa, Y. Kuroda, K. Suzuki, M. Hibino, K. Yamaguchi, N. Mizuno
- A Discrete Octahedrally Shaped [Ag₆]⁴⁺ Cluster Encapsulated within Silicotungstate Ligands, *Chem. Commun.* 2013, 49, 376–378.
- W. Kosaka, K. Yamagishi, H. Yoshida, R. Matsuda, S. Kitagawa, M. Takata, H. Miyasaka
- CO₂ superabsorption in a paddlewheel-type Ru dimer chain compound: Gate-open performance dependent on inter-chain interactions, *Chem. Commun.* 2013, 49, 1594–1596.
- H. Miyasaka, A. Saitoh, M. Nakano
- Observation of two types of magnetization relaxation in a weakly correlated antiferromagnetic chain of Mn^{III}₂ single-molecule magnets, *Dalton Trans.* 2012, 41, 13691–13696.
- T. Nozaki, W. Kosaka, H. Miyasaka
- Honeycomb frameworks with a very large mesh of 39 × 29 Å diameters stabilized by π -stacked coronene molecules, *CrystEngComm* 2012, 14, 5398–5401.
- K. Suzuki, M. Sugawa, Y. Kikukawa, K. Kamata, K. Yamaguchi, N. Mizuno
- Strategic Design and Refinement of Lewis Acid-Base Catalysis by Rare-Earth-Metal-Containing Polyoxometalates, *Inorg. Chem.* 2012, 51, 6953–6961.
- M. Mito, M. Ogawa, H. D., M. Yamashita, H. Miyasaka
- Effects of Pressure on Two-Dimensional Networked Single-Molecule Magnets exhibiting AC Field-Switchable Magnetic Properties, *J. Phys. Soc. Jpn.* 2012, 81, 064716–1–6.
- W.-X. Zhang, T. Shiga, H. Miyasaka, M. Yamashita
- New Approach for Designing Single-Chain Magnets: Organization of Chains via Hydrogen Bonding between Nucleobases, *J. Am. Chem. Soc.* 2012, 134, 6908–6911.
- Y. Sawada, W. Kosaka, Y. Hayashi, H. Miyasaka
- Coulombic Aggregations of Mn^{III} salen-Type Complexes and Keggin-Type Polyoxometalates: Isolation of Mn₂ Single-Molecule Magnets, *Inorg.*

- Chem.* 2012, 51, 4824–4832.
 K. Nakabayashi, M. Nishio, K. Kubo, W. Kosaka,
 H. Miyasaka
 An ionicity diagram for the family of $[Ru_2(CF_3CO_2)_4]_2$ (TCNQR_x) (TCNQR_x = R-substituted 7,7,8,8-tetracyanoquinodimethane), *Dalton Trans.* 2012, 41, 6072–6074.
- Y. Kikukawa, K. Suzuki, M. Sugawa, T. Hirano,
 K. Kamata, K. Yamaguchi, N. Mizuno
 Cyanosilylation of Carbonyl Compounds with Trimethylsilyl Cyanide by an Yttrium-Pillared Silicotungstate Dimer, *Angew. Chem. Int. Ed.* 2012, 51, 3686–3690.
- Y. Sawada, Y. Yamamoto, M. Nishio, W. Kosaka,
 Y. Hayashi, H. Miyasaka
 Inorganic Frameworks Made by Combining Paddle-wheel Diruthenium (II, III) Complexes and Polyoxometalate Clusters, *Chem. Lett.* 2012, 41, 212–214.
- H. Miyasaka, T. Madanbashi, A. Saitoh, N. Motokawa,
 R. Ishikawa, M. Yamashita, S. Bahr, W. Wernsdorfer,
 R. Clérac
 Cyano-Bridged Mn^{III}-M^{III} Single-Chain Magnets with M^{III} = Co^{III}, Fe^{III}, Mn^{III}, and Cr^{III}, *Chem. Eur. J.* 2012, 18, 3942–3954.
- Y. Kikukawa, Y. Kuroda, K. Yamaguchi, N. Mizuno
 Diamond-Shaped [Ag₄]⁴⁺ Cluster Encapsulated with Silicotungstate Ligands: Synthesis and the Catalysis for Hydrolytic Oxidation of Silanes, *Angew. Chem. Int. Ed.* 2012, 51, 2434–2437.
- K. Suzuki, Y. Kikukawa, S. Uchida, H. Tokoro,
 K. Imoto, S. Ohkoshi, N. Mizuno
 Three-Dimensional Ordered Arrays of 58 x 58 x 58 Å³ Hollow Frameworks in Ionic Crystals of M₂Zn₂-Substituted Polyoxometallates, *Angew. Chem. Int. Ed.* 2012, 51, 1597–1601.
- 長谷川 浩, 土壤・廃棄物中の重金属に対する低環境負荷型キレート抽出技術, ケミカルエンジニアリング, 59, p.43–50, 2014.4.
 水谷 聰, 長谷川 浩, キレート剤を用いた廃液晶パネルからのインジウムの抽出, ケミカルエンジニアリング, 59, p.51–56, 2014.4.
 長谷川 浩, 環境を改善する化学を創成しよう, 環境技術, 43, p.208, 2014.4.
 長谷川 浩, 分子認識技術を用いた埋立廃棄物中レアメタルに対する新規回収法の開発, 文部科学省科学研究費補助金(特別研究員奨励費)平成24-25年度研究成果報告書, 2014.3.
 小林史尚, 牧輝弥, 柿川真紀子, 南極域の風送バイオエアロゾル実相調査: 気球等を使った先駆的生態系観測の展開, 科学研究費補助金(基盤研究B)平成23-25年度研究成果報告書, 2014.03.
 村上正隆, 牧輝弥, 他2名, 黄砂バイオエアロゾル及び人為起源エアロゾルの雲核・氷晶核能に関する研究, 科学研究費補助金(基盤研究A)平成23-25年度研究成果報告書, 2014.03.
 牧輝弥, PCR法を併用した超並列シーケンサーによる環境微生物叢の群集構造解析, ぶんせき, 2014 (3) 129–130, 2014.1.
 長谷川 浩, 生分解性水溶性キレート剤による放射性セシウム汚染廃棄物洗浄法の開発, JST復興促進プログラム(A-STEP) 平成24-25年度完了報告書, 2013.10.
 長谷川 浩, 微量成分分析から宝石サンゴの謎を解明する, 化学と教育, 61, p.294–295, 2013.6.
 岩崎 望, 長谷川 浩, 他7名, 宝石サンゴの持続的利用のための資源管理技術の開発, 農林水産省新たな農林水産政策を推進する実用技術開発事業平成22-24年度研究成果報告書, 2013.3.
 古本翔吾・牧輝弥・松木篤・原和崇・小林史尚・長谷川浩・岩坂泰信, 「氷晶核バイオエアロゾルの探索と定量化にむけた蛍光およびラマン顕微鏡観察法の確立」 展望とトピックス, 日本分析化学第61年会 p.1, 2013.10.
 牧輝弥, 黄砂バイオエアロゾルの遺伝学的識別法を用いた耐塩微生物の越境輸送と環境影響の解明, 科学研究費補助金(若手研究A)平成22-24年度研究成果報告書, 2013.03.
 M. A. Rahman, R. Lim, H. Hasegawa, Biodegradable chelating ligands for iron and arsenic bioavailability and uptake in rice (*Oryza sativa* L.), Understanding the Geological and Medical Interface of Arsenic, As 2012 – 4th International Congress: Arsenic in the Environment, p. 394–396, 2012.7.
 長谷川 浩, 水谷 聰, 溶融飛灰及び焼却飛灰の資源化と有用金属回収を可能とする化学的ゼロエミッション技術の開発, 循環型社会形成推進科学研究費補助金 平成23年度総合研究成果報告書, 2012.5.
 長谷川 浩, 汚染土壤中重金属の低環境負荷・高効率除去を実現するキレート洗浄技術の開発, JST研究成果最適展開支援プログラム(A-STEP)探索タイプ 平成23年度完了報告書, 2012.4.

総説, 解説, 報告書

太田明雄

- DPPCリポソームへのアシル化アミノ酸型界面活性剤の作用, 日本化学会コロイドおよび界面化学部会, *C & I Commun.*, 2014, 39 (2), 18–20.
 牧輝弥, 空飛ぶ科学者, 空飛ぶ納豆を語る, リーダーのオピニオン誌 石川教育展望 石川県教育文化会議, 66号29–37, 2014.12.
 長谷川 浩, 国内湖沼におけるヒ素の化学形態別分布と挙動, 水環境学会誌, 37, p.397–400, 2014.11.
 牧輝弥, 空飛ぶ科学者, 空飛ぶ納豆を語る, リーダーのオピニオン誌 石川自治と教育, 6月号(681号) 30–40, 2014.7.
 市瀬孝道, 小林史尚, 牧輝弥, 柿川真紀子, 東朋美, 他7名, 黄砂エアロゾルおよび付着微生物・化学物質の生態影響とそのメカニズム解明に関する研究, 環境省環境研究総合推進費 環境問題対応型研究課題, 平成23-25年度研究成果報告書, 2014.05.

岩崎 望, 長谷川 浩, 他5名, 宝石珊瑚類の持続的利用と適切な国際取引管理に関する研究 -ワシントン条約への貢献, 文部科学省科学研究費補助金(基盤研究B) 平成20-23年度研究成果報告書, 2012.3.

前田勝浩

らせん高分子の動的特性を活用したキラル識別材料, 高分子, Vol. 63, pp.856-857, (2014.12).

前田勝浩

発光性らせん高分子を利用した高性能蛍光キラルセンサーの開発, 平成25年度研究成果展開事業 研究成果最適展開支援プログラム フィージビリティスタディ [FS]ステージ探索タイプ完了報告書, (2013.3).

前田勝浩

動的らせん高分子の特性を活かした選択性のスイッチングが可能なキラル分離剤の開発, 平成23年度研究成果展開事業 研究成果最適展開支援プログラム フィージビリティスタディ [FS]ステージ探索タイプ完了報告書, (2012.8).

前田勝浩

主鎖に分子認識部位と動的軸性キラリティーを有するπ共役らせん高分子の創製と応用, 平成25年度科学研究費補助金実績報告書, 基盤研究(C), (2014.4).

前田勝浩

主鎖に分子認識部位と動的軸性キラリティーを有するπ共役らせん高分子の創製と応用, 平成24年度科学研究費補助金実績報告書, 基盤研究(C), (2013.4).

前田勝浩

主鎖に分子認識部位と動的軸性キラリティーを有するπ共役らせん高分子の創製と応用, 平成23年度科学研究費補助金実績報告書, 基盤研究(C), (2012.4).

井改知幸

ビフェニル基含有らせん高分子を用いた不斉選択性の反転が可能なキラル固定相の創製, 平成25年度科学研究費補助金実績報告書, 若手研究(B), (2014.4).

井改知幸

π共役高分子のキラリティー制御を新基軸とする至極の有機薄膜太陽電池開発, 平成25年度研究成果展開事業 研究成果最適展開支援プログラム フィージビリティスタディ [FS]ステージ探索タイプ完了報告書, (2013.11).

井改知幸

有機薄膜太陽電池用発電層のモルフォロジー究極制御～相互貫入接合型構造の構築～, 平成24年度成果報告書(倉田記念日立科学技術財団), (2013.6).

井改知幸

ビフェニル基含有らせん高分子を用いた不斉選択性の反転が可能なキラル固定相の創製, 平成24年度科学研究費補助金実績報告書, 若手研究(B), (2013.4).

井改知幸

多糖類系バイオマスの構造特性を利用したキャリア

輸送材料の創製, 平成24年度高橋産業経済研究財团助成金成果報告書, (2013.4).

井改知幸

固定状態におけるらせん構造制御を基軸とした新形態スイッチングキラル固定相の開発, 平成24年度京都技術科学センター助成金成果報告書, (2013.4).

井改知幸

電場配向性らせん状ポリフェニルアセチレンのナノ構造制御と有機薄膜太陽電池への応用, 平成24年度矢崎科学技術振興記念財团助成金成果報告書, (2013.4).

井改知幸

バイオマス資源糖類の構造特性を利用したホール輸送材料の創製, 平成23年度高橋産業経済研究財团助成金成果報告書, (2012.4).

井改知幸

多糖のらせんキラリティーを利用した高分子不斉触媒の開発, 平成23年度研究成果展開事業 研究成果最適展開支援プログラム フィージビリティスタディ [FS]ステージ探索タイプ完了報告書, (2012.3).

井改知幸

バイオマス・多糖の構造特性を活かしたキラルラダーポリマーの合成と不斉認識材料への応用, 平成22年度池谷科学技術振興財团助成金成果報告書, (2011.12).

Y. Okamoto, T. Ikai, J. Shen

Controlled Immobilization of Polysaccharide Derivatives for Efficient Chiral Separation, Isr. J. Chem., Vol.51, No.10, pp.1096-1106, (2011.11).

前田勝浩

コアにらせん高分子鎖を有する機能性ミセルの創成と応用, 平成22年度科学研究費補助金実績報告書, 若手研究(B), (2011.5).

井改知幸

多糖の構造特性を活かした蛍光キラリティーセンサーの創製, 平成22年度科学研究費補助金実績報告書, 若手研究(B), (2011.5).

井改知幸

キラリティーセンシング材料「エキシマー蛍光性多糖誘導体」の開発, 平成22年度理工学振興会研究助成報告書, (2011.5).

前田勝浩

刺激応答性π共役らせん高分子システムの開発と応用, 平成21年度高橋産業経済研究財团助成金成果報告書, (2011.4).

前田勝浩

らせん高分子鎖を有する両親媒性ブロック共重合体ミセルのナノ構造解析, 平成22年度「京都・先端ナノテク総合支援ネットワーク」成果報告書, H22-JA013, (2011.4).

前田勝浩

リン酸基の水素結合を介した二量体形成を利用した二重らせん高分子の創製と不斉有機触媒への応用, 平成21年度徳山科学技術振興財团研究助成成果報告書, (2010.8).

前田勝浩

- コアにらせん高分子鎖を有する機能性ミセルの創成と応用, 平成21年度科学研究費補助金実績報告書, 若手研究 (B), (2010.4).
- 前田勝浩
コアにらせん高分子鎖を有する機能性ミセルの創成と応用, 平成21年度シーズ発掘試験(発掘型)研究報告書, (2010.4).
- 前田勝浩
外部刺激に応答して構造変化するπ共役らせん高分子システムの開発と応用, 平成20年度高橋産業経済研究財団助成金成果報告書, (2010.4).
- 井改知幸
多糖の構造特性を活かした蛍光キラリティーセンサーの創製, 平成21年度科学研究費補助金実績報告書, 若手研究 (B), (2010.4).
- E. Yashima, K. Maeda, H. Iida, Y. Furusho, K. Nagai
Helical Polymers: Synthesis, Structures and Functions, Chem. Rev., Vol.109, No.11, pp.6102-6211, (2009.12).
- T. Ikai, Y. Okamoto
Structure Control of Polysaccharide Derivatives for Efficient Separation of Enantiomers by Chromatography, Chem. Rev., Vol.109, No.11, pp.6077-6101, (2009.12).
- T. Ikai, C. Yamamoto, M. Kamigaito, Y. Okamoto
Immobilized-type Chiral Packing Materials for HPLC Based on Polysaccharide Derivatives, J. Chromatogr. B, Vol.875, No.1, pp.2-11, (2008.11).
- E. Yashima, K. Maeda, Y. Furusho
Single- and Double-Stranded Helical Polymers: Synthesis, Structures and Functions, Acc. Chem. Res., Vol.41, No.9, pp.1166-1180, (2008.9).
- Y. Okamoto, T. Ikai
Chiral HPLC for Efficient Resolution of Enantiomers, Chem. Soc. Rev., Vol.37, No.12, pp.2593-2608, (2008.9).
- 前田勝浩
動的らせん高分子の不齊増幅現象を利用した不齊配位空間の構築と機能発現, 平成19年度科学研究費補助金実績報告書, 特定領域研究, (2008.3).
- 前田勝浩
動的らせん高分子からなる剛直主鎖型コレステリック液晶の開発と応用, 平成19年度科学研究費補助金実績報告書, 若手研究 (B), (2008.3).
- E. Yashima, K. Maeda
Chirality-Responsive Helical Polymers, Macromolecules, Vol.41, No.1, pp.3-12, (2008.1).
- 前多 肇
有機合成化学協会関西支部第12回支部賞受賞, 有機合成化学協会誌, Vol. 72, No. 11, p. 1327 (2014.11).
- 前多 肇
実験室で事故に遭わないとために, 化学と工業, Vol. 67, No. 8, p. 710 (2014.8).
- 前多 肇, 千木昌人
蛍光でON-OFFを識別するスイッチ材料の開発, 公益財団法人マツダ財団研究報告書(科学技術振興関係), Vol. 26, pp. 121-128 (2014.6).
- 前多 肇, 千木昌人
環境応答型強発光性スイッチ分子の開発, 文部科学省科学研究費補助金[基盤研究(C)]平成25年度実績報告書(2014.5).
- 千木昌人
核酸医薬品創製に向けた多彩な置換基導入が可能なセレノスクレオシド類の新構築法の開発, JST・A-STEP研究成果最適展開支援プログラム・平成25年度第1回【FS】探索タイプ・少子高齢化先進国としての持続性確保・ライフイノベーション分野, 完了報告書(2014.3).
- 千木昌人, 前多 肇
研究室紹介 金沢大学理工研究域物質化学系応用化学コース 千木研究室(精密有機合成化学研究室), OM News, Vol. 2012, No. 1, pp. 22-23 (2012.3).
- T. Ogoshi, T. Yamagishi,
Pillar[5]- and Pillar[6]arene-Based Supramolecular Assemblies Built by Using Their Cavity-Size-Depending Host-Guest Interactions, Chem. Commun. Vol.50, No.37, pp.4776-4787 (2014.2).
- T. Ogoshi, T. Yamagishi,
Pillararenes, Versatile Synthetic Receptors for Supramolecular Chemistry, Eur. J. Org. Chem. No.15, pp.2961-2975 (2013.4).
- T. Ogoshi, T. Yamagishi,
New Synthetic Host Pillararenes: Their Synthesis and Application to Supramolecular Materials, Bull. Chem. Soc. J. No.86, Vol.3, pp.312-322 (2013.3).
- 山岸忠明
液晶性を利用したセルロース誘導体の高次構造制御, Cellulose Commun. Vol.19, No.4, pp.180-183 (2012.8).
- T. Ogoshi
Synthesis of Novel Pillar-Shaped Cavitands "Pillar[5]arenes" and Their Application for Supramolecular Materials, J. Incl. Macrocycl. Chem. No.72, Vol.3-4, pp.247-262 (2012.4).
- 生越友樹, 山岸忠明,
新規環状ホスト分子Pillar [5] areneを基とした超分子材料の創成, 高分子, No.61, Vol.6, pp.413-414 (2012.6).
- 生越友樹, 山岸忠明,
パラ位連結環状ホスト分子Pillar[5]arenes: 合成と超分子材料への応用, 有機合成化学協会誌, No.70, Vol.8, pp.842-851 (2012.8).
- 本田光典
工学的実践力を育む「課題探求ゼミナール」, 国立大学53工学系学部長会議HP, (2014.10).
- 長谷川浩, 前多肇, 前田勝浩, 本田光典
LSIテクノロジーによるマイクロ空間化学反応の高精度制御と解析, 平成25年度異分野融合LSIプロジェクト実施報告, (2014.9).
- 千木昌人, 本田光典, 藤波修平, 太田明雄, 徳永雄次, 堀野良和
有機薄膜太陽電池の高効率化を指向した有機材料の

- 創製とモルフォロジー制御, 平成25年度大学連携研究設備ネットワーク共同研究報告書, (2014.4).
須田光広, 本田光典, 国本浩喜
能登ヒバの間伐材の有効利用と商品化に関する調査研究, 平成24年度大学コンソーシアム石川「地域課題研究ゼミナール支援事業 成果報告集」, pp. 60-63, (2013.2).
須田光広, 本田光典, 国本浩喜
能登ヒバの間伐材の有効利用と教材化に関する実地研究, 平成23年度大学コンソーシアム石川「地域課題研究ゼミナール支援事業 成果報告集」, pp. 52-57, (2012.2).
高橋光信
高分子材料創製を基軸とする高性能な逆型有機薄膜太陽電池構築のための基盤技術の確立, 平成25年度科学研究費補助金実績報告書(研究実績報告書), 基盤研究(B), (2014.4).
高橋光信
紡織によって大面積化が可能な纖維型有機薄膜太陽電池の開発, 平成25年度科学研究費補助金実績報告書(研究実績報告書), 挑戦的萌芽研究, (2014.4).
桑原貴之
C60誘導体アクセプターの配列制御を基軸とした逆型有機薄膜太陽電池の高効率化, 平成25年度科学研究費補助金実績報告書(研究実績報告書), 若手研究(A), (2014.4).
高橋光信, 桑原貴之
期待膨らむ有機薄膜太陽電池, 北陸経済研究, 417巻, 11月号, p.44-45, 2013, (2013.10).
高橋光信, 桑原貴之
高耐久性逆型有機薄膜太陽電池の開発, 化学工業, 63巻, 11号, p.18-22, 2012, (2012.11).
高橋光信, 桑原貴之, 當摩哲也
大気中低温塗布プロセスで作製できる高分子系逆型有機薄膜太陽電池の開発 - フィールドでの実証実験が遂に始まった-, 月刊ディスプレー, Vol.18, No.7, p.35-39, 2012, (2012.7).
高橋光信, 桑原貴之
大気中で塗って作製できる逆型有機薄膜太陽電池, コンバーテック, No.469, p.82-85, 2012, (2012.4).
高橋光信
高分子材料創製を基軸とする高性能な逆型有機薄膜太陽電池構築のための基盤技術の確立, 平成24年度科学研究費補助金実績報告書(研究実績報告書), 基盤研究(B), (2013.4).
高橋光信
紡織によって大面積化が可能な纖維型有機薄膜太陽電池の開発, 平成24年度科学研究費補助金実績報告書(研究実績報告書), 挑戦的萌芽研究, (2013.4).
桑原貴之
次世代有機薄膜太陽電池の開発, 平成24年度 重点戦略経費(研究活性化推進経費(重点研究経費)) 実施報告書, (2013.4).
高橋光信
環境研究・技術開発推進事業, 新規ナノマテリアルを用いた超フレキシブル有機太陽電池の研究, 平成24年度成果報告書, 環境省 再委託研究, (2013.3).
桑原貴之
無機／有機ヘテロ界面制御による逆型有機薄膜太陽電池の性能劣化解析と高耐久化, 平成23年度科学研究費補助金実績報告書(研究実績報告書), 若手研究(A), (2012.4).
高橋光信
環境研究・技術開発推進事業, 新規ナノマテリアルを用いた超フレキシブル有機太陽電池の研究, 平成23年度成果報告書, 環境省 再委託研究, (2012.3).
森田耕太郎
進歩総説: ラジカル反応による炭素電極および導電性材料の化学修飾, ぶんせき, 2013 (7), 416-419.
江場宏美, 国村伸祐, 篠田弘造, 永谷広久, 中野和彦, 保倉明子, 松林信行, 森良弘, 山本孝
2012年X線分析関連文献総合報告, X線分析の進歩, 44, 41-72 (2013).
江場宏美, 篠田弘造, 高山透, 永谷広久, 中野和彦, 原田雅章, 前尾修司, 松林信行, 森良弘, 山本孝
2011年X線分析関連文献総合報告, X線分析の進歩, 43, 1-31 (2012).
谷田肇, 原田誠, 瀧上隆智, 永谷広久
ソフト界面の分子膜の精密構造解析 I: X線吸収分光法, オレオサイエンス, 12 (1), 11-16 (2012).
永谷広久
トピックス: 陽極酸化アルミニウム膜と液液界面を組み合わせたイオン透過チャンネル, ぶんせき, 2012 (8), 448.
横山明彦,
理事会より「学会の将来に関するアンケート」の結果について, 放射化学, 第30号, pp.21-25 (2014).
山本政儀, 横山明彦, 宮本エタカ, 渡邊雅之, 永目諭一郎, 長尾誠也, 鷺山幸信, 佐藤涉, 海老原充, 浜島靖典, アジア太平洋地域放射化学国際会議(APSORC13)報告について, 放射化学, 第29号, pp.34-41 (2014).
渡良祐, 上杉正樹, 横山明彦, 中西孝,
海水中Sr-90分析における濃縮法と測定法の検討, KEK Proceedings 2014-7, pp.300-305 (2014.11).
木村元, 上杉正樹, 鈴木開登, 横山明彦, 中西孝,
福島第一原子力発電所事故に対応したPu分析法の検討及び放出されたPuの存在状態に関する研究, KEK Proceedings 2014-7, pp.322-328 (2014.11).
Y. Kobayashi, M. Mihara, Y. Yamada, M. K. Kubo, J. Miyazaki, W. Sato, T. Nagatomo, S. Tanigawa, Y. Sato, D. Natori, M. Suzuki, S. Sato, and A. Kitagawa,
Time-resolved In-beam Mössbauer spectroscopy coupled with a β - γ coincidence measurement Proceedings of the Specialist Research Meeting on Science and Engineering of Unstable Nuclei and Their Uses on Condensed Matter Physics, KURRI-KR-195, pp.27-30, (2014).
Y. Yamada, Y. Kobayashi, M. K. Kubo, M. Mihara, T. Nagatomo, J. Miyazaki, W. Sato, S. Sato, and A. Kitagawa,
In-beam Mössbauer spectra of ^{57}Mn implanted

- into solid Ar and Xe Proceedings of the Specialist Research Meeting on Science and Engineering of Unstable Nuclei and Their Uses on Condensed Matter Physics, KURRI-KR-195, pp.14-17, (2014).
- S. Komatsuda, W. Sato, and Y. Ohkubo,
Stability of locally-associated Al and In impurities doped in ZnO Proceedings of the Specialist Research Meeting on Science and Engineering of Unstable Nuclei and Their Uses on Condensed Matter Physics, KURRI-KR-195, pp.5-9, (2014).
- W. Sato, R. Mizuuchi, N. Irioka, S. Komatsuda, S. Kawata, A. Taoka, and Y. Ohkubo,
Dynamics of ^{111}Ag in a supersonic conductor AgI Proceedings of the Specialist Research Meeting on Science and Engineering of Unstable Nuclei and Their Uses on Condensed Matter Physics, KURRI-KR-195, pp.1-4, (2014).
- S. Komatsuda, W. Sato, and Y. Ohkubo,
Atmosphere dependence of local fields in Al-doped ZnO, KURRI Progress Report 2013, p.103, (2014).
- W. Sato, R. Mizuuchi, N. Irioka, S. Komatsuda, S. Kawata, A. Taoka, and Y. Ohkubo,
Extranuclear dynamic motion around ^{111}Cd ($\leftarrow^{111}\text{Ag}$) doped in AgI nanoparticles, KURRI Progress Report 2013, p.101, (2014).
- 棟田章裕, 上杉正樹, 木村元, 渡辺良祐, 横山明彦,
福島第一原子力発電所事故により放出されたAg-110mの粒子性, KEK Proceedings 2013-7, pp.336-343 (2013.11).
- 木村元, 上杉正樹, 棟田章裕, 渡辺良祐, 横山明彦, 中西孝,
福島第一原子力発電所事故で放出されたPuの粒子性, KEK Proceedings 2013-7, pp.344-349 (2013.11).
- S. Miyashita, A. Toyoshima, K. Ooe, T. K. Sato, M. Asai, K. Tsukada, Y. Nagame, M. Schädel, Y. Kaneya, H. Haba, J. Kanaya, M. Huang, A. Wada, Y. Kitayama, A. Yokoyama,
Solvent extraction of ^{93m}Mo using 4-isopropyltropone (Hinokitiol) in the preparation of Sg reduction study, RIKEN Accelerator Progress Report 2012, Vol. 46, p.239 (2013).
- A. Yokoyama, Y. Shigeyoshi, Y. Kitayama, A. Toyoshima, K. Tsukada, K. Ooe, E. Maeda, H. Kimura, H. Kikunaga, Y. Kudou, J. Kanaya, M. Huang, H. Haba,
Preliminary study on quadrivalent chemical species of rutherfordium in an aqueous solution by using TTA resin RIKEN Accelerator Progress Report 2012, Vol. 46, p.242 (2013).
- I. Nishinaka, M. Tanikawa, K. Nishio, H. Makii, S. Mitsuoka, Y. Wakabayashi, A. Yokoyama
Fission fragment anisotropy in heavy-ion-induced fission of actinide nuclei, JAEA-Tokai Tandem Annual Report 2011 JAEA-Review 2013-02, p.23 (2013.1)
- I. Nishinaka, N. S. Ishiokal, K. Hashimoto,
S. Watanabe, A. Toyoshima, H. Makii, A. Yokoyama, K. Washiyama, R. Amano, N. Yamada, E. Maeda, K. Li,
Production and utilization of radioactive astatine isotopes using lithium ion beams, JAEA-Tokai Tandem Annual Report 2011 JAEA-Review 2013-02, p.33 (2013.1)
- Y. Yamada, Y. Kobayashi, K. M. Kubo, M. Mihara, T. Nagatomo, W. Sato, J. Miyazaki, S. Sato, and A. Kitagawa,
In-beam Mössbauer spectroscopic study on isolated probe nuclide, NIRS-M-260 HIMAC-140, pp.278-279, (2013).
- T. Nagatomo, K. M. Kubo, Y. Yamada, M. Mihara, W. Sato, Y. Kobayashi, J. Miyazaki, S. Sato, and A. Kitagawa,
Mössbauer spectroscopic study of materials with unstable nuclear beam, NIRS-M-260 HIMAC-140, pp.226-227, (2013).
- W. Sato, S. Komatsuda, and Y. Ohkubo,
Novel indium compound formed in ZnO, Proceedings of the Specialist Research Meeting on Science and Engineering of Unstable Nuclei and Their Uses on Condensed Matter Physics, KURRI-KR-177, pp.47-50, (2013).
- S. Komatsuda, Y. Ohkubo, and W. Sato,
Dissociation of locally-associated Al and In impurities doped in zinc oxide, Proceedings of the Specialist Research Meeting on Science and Engineering of Unstable Nuclei and Their Uses on Condensed Matter Physics, KURRI-KR-177, pp.34-38, (2013).
- T. Nagatomo, Y. Kobayashi, K. M. Kubo, Y. Yamada, M. Mihara, W. Sato, J. Miyazaki, S. Sato, and A. Kitagawa,
Development of time-resolved $^{57}\text{Mn}/^{57}\text{Fe}$ in-beam Mössbauer spectroscopy by utilizing β and delayed γ coincidence method, Proceedings of the Specialist Research Meeting on Science and Engineering of Unstable Nuclei and Their Uses on Condensed Matter Physics, KURRI-KR-177, pp.13-15, (2013).
- W. Sato, T. Suzuki, Y. Kano, T. Takahashi, N. Abe, and Y. Ohkubo,
Irradiation effect on the formation of defects in ^{57}Co -doped ZnO observed by the Mössbauer spectroscopy, KURRI Progress Report 2012, p.114, (2013).
- S. Komatsuda, W. Sato, and Y. Ohkubo,
Dispersion state of AL and Cd impurities in ZnO KURRI Progress Report 2012, p.113, (2013).
- W. Sato, R. Mizuuchi, S. Komatsuda, S. Kawata, A. Taoka, and Y. Ohkubo,
Dynamic perturbation to ^{111}Cd ($\leftarrow^{111}\text{Ag}$) doped in AgI nanoparticles, KURRI Progress Report 2012, p.111, (2013).
- 木下哲一, 中西孝, 横山明彦,

- 従来よりも短い¹⁴⁶Sm半減期の測定結果と¹⁴⁶Sm-¹⁴²Ndを用いた太陽系年代に及ぼす影響, 放射化学ニュース, 第26号, pp.1-8, (2012).
- 木村元, 中井美希, 長村雄一郎, 中西孝, 上杉正樹, 横山明彦,
福島第一原子力発電所事故後の金沢大学角間キャンパスにおける環境放射能測定について, KEK Proceedings 2012-6, pp.56-60 (2012.11).
- 山田記大, 前田英太, 上杉正樹, 佐藤渉, 横山明彦, 中西孝,
環境水試料柱におけるラドン深度分布の時間変化に関する研究, KEK Proceedings 2012-6, pp.247-251 (2012.11).
- W. Sato, T. Togimitsu, R. Ono, and Y. Ohkubo,
Irradiation effect on the formation of defects in silicon observed by the positron annihilation spectroscopy, KURRI Progress Report 2011, p.176, (2012).
- S. Komatsuda, W. Sato, S. Kawata, and Y. Ohkubo,
Local association of aluminum impurities doped in zinc oxide, KURRI Progress Report 2011, p.175, (2012).
- S. Komatsuda, W. Sato, S. Kawata, and Y. Ohkubo,
Interactions between PAC probes and aluminum impurities doped in ZnO, Proceedings of the Specialist Research Meeting on Science and Engineering of Unstable Nuclei and Their Uses on Condensed Matter Physics, KURRI-KR-168, pp.24-27, (2012).
- W. Sato, S. Komatsuda, I. Furumoto, T. Nishida, and Y. Ohkubo,
Electric conductivity and local fields in ZnO doped with In donor impurities, Proceedings of the Specialist Research Meeting on Science and Engineering of Unstable Nuclei and Their Uses on Condensed Matter Physics, KURRI-KR-168, pp.28-30, (2012).
- J. Miyazaki, T. Nagatomo, Y. Kobayashi, K. M. Kubo, Y. Yamada, M. Mihara, W. Sato, K. Mae, S. Sato, and A. Kitagawa,
In-beam Mössbauer spectroscopy of ⁵⁷Mn/⁵⁷Fe implanted into LiH, Proceedings of the Specialist Research Meeting on Science and Engineering of Unstable Nuclei and Their Uses on Condensed Matter Physics, KURRI-KR-168, pp.61-64, (2012).
- M. Suzuki
Control of Dioxygen Binding and Activation by Metal Complexes, *Bull. Jpn. Soc. Coord. Chem.* 61, 2-16 (2013.5).
- S. Akine
Novel Ion Recognition Systems Based on Cyclic and Acyclic Oligo(salen)-type Ligands, *J. Inclusion Phenom. Macrocycl. Chem.* 72, 25-54 (2012.2).
- H. Miyasaka
Control of Charge-Transfer in Donor/Acceptor Metal-Organic Frameworks, *Acc. Chem. Res.* 2013, 46, 248-257.

著書

- 浅川毅 『油脂・脂質・界面活性剤データブック』 共著 丸善 2012/12 日本油化学会編
- 金沢大学日中韓環境エコ技術特別コース, 牧 輝弥, 長谷川 浩, 他14名, 日中韓英対訳 環境工学用語集, 学術図書出版社, 202ページ, 2014.3.
- 吉村寿絃, 為則雄佑, 鈴木 淳, 岩崎 望, 長谷川 浩, Nguyen T. Luan, 中島 礼, 川幡穂高, 炭酸カルシウムに含まれる微量元素の化学形態, in バイオミネラリゼーションと石灰化, 月刊地球, 海洋出版, 35, 705-711, 2013.12.
- Z. A. Begum, I. M. M. Rahman, H. Hasegawa, Management of EDTA-containing aqueous effluent: Environmental concerns and remedies, In: A. Molnar (Ed.). EDTA: Synthesis, Uses and Environmental Concerns, Nova Science Publishers: Hauppauge, NY, USA, pp. 163-177, 2013.10.
- M. A. Rahman, C. Hassler, H. Hasegawa, R. Lim, Ecotoxicology of arsenic in the freshwater environment: Consequences and risk assessment, in Arsenic: Sources, Environmental Impact, Toxicity and Human Health - a Medical Geology Perspective, A. Masotti, Editor. Nova Science Publisher: Hauppauge, NY, USA, pp. 85-103, 2013.3.
- M. M. Hossain, I. M. M. Rahman, Z. A. Begum, H. Hasegawa, An overview of toxic environmental releases from e-waste, In: Y. C. Li and B. L. Wang (Eds.). E-Waste: Management, Types and Challenges, Nova Science Publishers: Hauppauge, NY, USA, pp. 205-220, 2012.9.
- M. A. Rahman, M. M. Rahman, H. Hasegawa, Arsenic in rice: A human health emergency in South and South-East Asia, in Rice: Production, Consumption and Health Benefits, Y. Liu and L. Froyen, (Eds.), Nova Science Publisher: Hauppauge, NY, USA, pp. 37-64, 2012.6.
- 長谷川 浩, 2章 海底はめぐる, in 海はめぐる, 日本海洋学会編, 地人書館, pp. 25-40, 2012.4.
- I. M. M. Rahman, H. Hasegawa, Water Stress, In-Tech, Croatia, pp. 300, ISBN 978-953-307-963-9, 2012.1
- 前田勝浩
CSJカレントレビュー第14号「『キラリティ(キラル化学)ーその起源から最新のキラル材料研究まで』」第8章「合成らせん高分子」執筆, 日本化学会編, 化学同人, pp. 92-99, (2013.10).
前田勝浩, 井改知幸
高性能ローバンドギャップポリマー材料の開発, 「有機薄膜太陽電池の研究最前線」第1章第2節執筆, (株)シーエムシー出版, (2012.7).
T. Ikai, Y. Okamoto
Chiral Recognition in Separation Methods: Mechanisms and Applications, Alain Berthod (Ed.), Springer, pp.33-52, (2010.5).
E. Yashima, K. Maeda

- Fullerene Polymers: Synthesis, Properties and Applications, F. Giacalone, N. Martin (Eds.), Wiley-VCH, pp.129-144, (2009.12).
- 前田勝浩
らせんポリマー、「超分子サイエンス～基礎から応用への展開～」第2章第2節執筆, (株)エヌ・ティー・エス出版, pp.296-304, (2009.5).
- 前多 肇
有機合成実験法ハンドブック（分担執筆）, 第27章第2節第4項, 光転位反応, 有機合成化学協会編集, 丸善出版株式会社 (2014.12).
- 前多 肇
光化学の事典（分担執筆）, 第4章第1節(5), 多環芳香族炭化水素の光化学, 光化学協会編集, 朝倉書店 (2014.6).
- 前多 肇
実践・化学英語リスニング 物理化学編 世界のトップの化学者と競うために（分担執筆）, 第1部第3章 (pp. 14-19), The Fate of Excited States, 福井希一, 福住俊一, ルーク・上田サーソン編, 化学同人 (2014.4).
- Maeda, H.; Mizuno, K.
CRC Handbook of Organic Photochemistry and Photobiology, Third Edition (分担執筆), Vol. 1, pp. 489-509, Inter- and Intramolecular Photocycloaddition of Aromatic Compounds, Griesbeck, A., Oelgemöller, M., Ghetti, F. Eds.; CRC Press: Boca Raton (2012.2).
- T. Ogoshi, T. Yamagishi,
Cucurbiturils-Based Supramolecular Polymers, Encyclo. Polym. Nanomater. Springer, pp.1-8 (2014.4).
- 生越友樹, 山岸忠明（分担執筆）
環状ホスト分子を基にした超分子センサー, 超分子材料の設計と応用展開, シーエムシー, pp.249-257 (2014.9).
- 生越友樹, 山岸忠明（分担執筆）
アルキンーアジドクリック反応を用いた柱状環状ホスト分子“ピラー[n]アレーン”の官能基化及びインターロック分子の合成, クリックケミストリー－基礎から応用まで－, シーエムシー, pp.174-183 (2014.8).
- 山岸忠明（分担執筆）
樹脂材料の高耐熱化と設計・開発技術, 情報機構, pp.123-132 (2013.12).
- 高橋光信, 桑原貴之
逆型有機薄膜太陽電池の交流インピーダンス解析法による評価, 「有機薄膜太陽電池の研究最前線」第5章3節執筆, 株式会社シーエムシー出版, p.210-218, 2012, (2012.7).
- Hirohisa Nagatani
In Situ Spectroscopic Characterization of Porphyrins at Liquid Interfaces, in *Handbook of Porphyrin Science*, Vol 34, Chap. 176 (pp. 51-96), K. M. Kadish, K. M. Smith, R. Guilard (Eds.), World Scientific Publishing (2014).
- Y. Ukaji, T. Soeta
Development of New Methods for the Construction of Heterocycles Based on Cycloaddition Reaction of 1,3-Dipoles, *Methods and Applications of Cycloaddition Reactions in Organic Syntheses*, ed. by N. Nishiwaki, John Wiley & Sons. Inc., 2014, Chap. 11.
- Y. Ukaji
Addition reaction / Cycloaddition involving oxidation (no C-C bond formed), *Comprehensive Chirality*, ed. by H. Yamamoto, E. Carreira, Elsevier, Oxford, 2012, 6.22.
- Y. Ukaji, T. Soeta
Acetogenin (polypropionate) Derived Auxiliaries/Tartaric Acid, *Methods and Applications of Cycloaddition Reactions in Organic Syntheses*, ed. by H. Yamamoto, E. Carreira, Elsevier, Oxford, 2012, 4.06.
- T. Sakurai, K. Kataoka
Chap. 6 (pp. 211-233), Bilirubin Oxidase in Bilirubin: Chemistry, Regulation and Disorder, Eds. by J. F. Novotny, F. Sedlacek, Nova Science, New York (2012, 7).
- 山内脩, 鈴木晋一郎, 櫻井 武
生物無機化学, 総405頁, 朝倉書店 (2012.6).

特許、実用新案

- 小峰重樹, 安達紀和, 西信之, 太田明雄, 炭素複合体及び蓄電デバイス, 特願2014-001564
- 石渡寛之, 浅井靖史, 山崎将義, 佐藤靖彦, 小林正典, 長谷川浩, “泥水処理システムおよび泥水処理方法”, 特願2014-192934 (2014.9.26)
- 長谷川浩, 澤井光, 塚越義則, 石渡寛之, “汚染土壤の処理方法”, 特願2014-194423 (2014.9.24)
- 山崎公信, 長谷川浩, “汚染土壤浄化システム”, 特願2014-156722 (2014.7.31).
- 長谷川浩, 澤井光, 塚越義則, 若林友弥, “鉄物廃砂中の有害金属の除去方法”, 特願2014-096794 (2014.5.8)
- 長谷川浩, 小林学, 中野正義, “有害金属汚染物の浄化方法”, 特許第5164169号 (2012.12.28)
- 前田勝浩, 井改知幸, 下村昂平, 丸田みゆき
光学活性ポリ(ジフェニルアセチレン)化合物及びその製造方法, 並びにその光学異性体分離剤としての用途, 特願2013-024421.
- 前田勝浩, 加納重義, 井改知幸, 下村昂平, 小松優規
新規ポリ(ジフェニルアセチレン)化合物及びその製造方法, 並びにその光学異性体分離剤としての用途, 特願2013-024423
- 前田勝浩, 井改知幸, 下村昂平
不齊選択性の切り替えが可能なクロマトグラフィー用充填剤, 特願2012-109971
- 岡本佳男, 山本智代, 井改知幸, 上垣外正己
光学異性体用分離剤, WO2008/136512.
- 生越友樹, 山岸忠明, 阿久津知宏
特願2014-093933「ポリマー」
- 高橋光信, 桑原貴之, 河野崇史, 野呂寿人, 石川伸
金属材料を支持体とする有機薄膜太陽電池, 特願

2012-0077.

片岡邦重, 櫻井 武

電極触媒, 酵素電極, 燃料電池及びバイオセンサ,
特 -5445902 (2014,1)

T. Kajino, N. Setoyama, K. Uemura, H. Kato, K. Kano,
S. Tsujimura, T. Sakurai, K. Kataoka

Electrocatalyst and enzymatic electrode, US-Patent US 8361662 B2 (2013, 1).

