

External Presentations

Main Submitted Theses and Oral Presentations

April 1, 2023 - March 31, 2024

The papers posted here have been published in English-language journals and in Japanese-language journals with English titles. Conference presentations have been given at international conferences and at Japanese conferences with English titles.

Organic & polymer material function design

Flow properties of degradable baroplastic block copolymer and the enzymatic degradability

H. Tada*^{1,2}, I. Taniguchi*² (*¹ Health & Crop Sciences Research Laboratory, *² Kyoto Institute of Technology)
MRM2023/IUMRS-ICA2023 (Kyoto, Japan), December 11 - 16, 2023

Fabrication and electrochemical characterization of polymer electrolytes membranes for solid-state batteries by combining SIC polymers and ionic liquids

D. Kim*, S. Okada*, H. Nakajima, I. Yamada*, T. Abe*, M. Ouchi*, N. Inui* (Energy & Functional Materials Research Laboratory, *Kyoto University)
72nd Symposium on Macromolecules (Kagawa, Japan), September 26 - 28, 2023

Synthesis of alternating copolymers as a single-ion conducting polymer and their application for lithium Ion

H. Nakajima, K. Suwa, D. Inokuchi, H. Kubota*, I. Yamada*, T. Abe*, M. Ouchi*, N. Inui* (Energy & Functional Materials Research Laboratory, *Kyoto University)
32nd Polymer Materials Forum (Aichi, Japan), November 30 - December 1, 2023

Design of methacrylate-styrene alternating copolymers carrying lithium ion side chain as single-ion conducting polymers

S. Okada*, H. Kubota*, H. Nakajima, D. Kim*, I. Yamada*, N. Inui*, M. Ouchi* (Energy & Functional Materials Research Laboratory, *Kyoto University)
32nd Polymer Materials Forum (Aichi, Japan), November 30 - December 1, 2023

Inorganic material function design

Anionic sublattices in halide solid electrolytes: a case study with the high-pressure phase of Li_3ScCl_6

F. Ding*², A. Doi, T. Ogawa*⁵, H. Ubukata*², T. Zhu*², D. Kato*², C. Tassel*², I. Oikawa*³, N. Inui*², S. Kuze*², T. Yamabayashi*¹, K. Fujii*⁴, M. Yashima*⁴, X. Qu*⁶, Z. Wang*⁷, X. Min*⁶, K. Fujita*², H. Takamura*³, A. Kuwabara*⁵, T. Zhang*⁸, K. J. Griffith*⁸, Z. Lin*⁶, L. Chai*⁶, H. Kageyama*² (Advanced Materials Development Laboratory, *¹ Energy & Functional Materials Research Laboratory, *² Kyoto University, *³ Tohoku University, *⁴ Tokyo Institute of Technology, *⁵ Fine Ceramics Center, *⁶ Central South University, *⁷ Human Rare Earth Metal Material Research Institute Co. Ltd., *⁸ University of California)
Angewandte Chemie International Edition, 63, e202401779 (2024)

Fabrication of AlGaN/GaN heterostructures on halide vapor phase epitaxy AlN/SiC templates for high electron mobility transistor application

M. Sumiya*¹, O. Goto, Y. Takahara*^{1,2}, Y. Imanaka*¹, L. Sang*¹, N. Fukuhara, T. Konno, F. Horikiri, T. Kimura, A. Uedono*², H. Fujikura (Ibaraki Works, *¹ National Institute for Materials Science, *² University of Tsukuba)
Japanese Journal of Applied Physics, 62(8), 085501 (2023)

Alumina ceramic firing efficiency in the challenging energy cost environment

Y. Kawamura, T. Hoshikawa, D. Ozaki, S. Jimbo (Energy & Functional Materials Research Laboratory)
Ceramic Forum International/Berichte der Deutschen Keramischen Gesellschaft, 101(2), E92 (2024)

Development of ultralong CNTs by FC-CVD method and its application

S. Okamoto (Corporate Planning Office)
Material Stage 23(6), 37 (2023)

KNN piezoelectric film technology

T. Kuroda (IT-related Chemicals Research Laboratory)
The 14th MEMS Engineer Forum (MEF) (Tokyo, Japan), April 19 - 20, 2023

Improvement of GaN p-n diode characteristics by interface treatment in HVPE/MOVPE hybrid growth

H. Ohta, H. Fujikura, Y. Narita, T. Mishima* (Ibaraki Works, *Hosei University)
14th International Conference on Nitride Semiconductors 2023 (ICNS-14) (Fukuoka, Japan), November 12 - 17, 2023

Recent progress of HVPE-based GaN on GaN technology

H. Fujikura, T. Konno, T. Kimura, S. Kaneki, T. Fujimoto, T. Inoue (Ibaraki Works)
14th International Conference on Nitride Semiconductors 2023 (ICNS-14) (Fukuoka, Japan), November 12 - 17, 2023

Hall mobilities of high-purity GaN crystals -Record high mobilities and anomalous C-concentration dependence-
S. Kaneki, T. Konno, T. Kimura, K. Kanegae*1,2, J. Suda*2, H. Fujikura (Ibaraki Works, *1 Kyoto University, *2 Nagoya University)

14th International Conference on Nitride Semiconductors 2023 (ICNS-14) (Fukuoka, Japan), November 12 - 17, 2023

Pore-assisted separation for fabrication of free-standing GaN substrates based on electro-chemically formed porous layer

M. Yokoyama, F. Horikiri, H. Mori, T. Konno, H. Fujikura (Ibaraki Works)

14th International Conference on Nitride Semiconductors 2023 (ICNS-14) (Fukuoka, Japan), November 12 - 17, 2023

Lead free KNN piezoelectric film technology and its adaption in piezoMEMS applications

K. Shibata, K. Watanabe, T. Kuroda, T. Osada (IT-related Chemicals Research Laboratory)

The 40th Meeting on Ferroelectric Materials and Their Application (Kyoto, Japan), May 24 - 27, 2023

Pore-assisted separation using porous layer for free-standing GaN substrate fabrication

M. Yokoyama, F. Horikiri, H. Mori, T. Konno, H. Fujikura (Ibaraki Works)

The 42nd Electronic Materials Symposium (Nara, Japan), October 11 - 13, 2023

Biological mechanism analysis

In vivo transfection of cytokine genes into tumor cells using a synthetic vehicle promotes antitumor immune responses in a visceral tumor model

S. Watanabe*1, A. Takagi*1, E. Yuba*1, C. Kojima*1, N. Dei*1, A. Matsumoto*1, J. Tanikawa, T. Kawamura, N. H. De Silva*1, T. Izawa*1, T. Akazawa*2, R. Kanegi*1, S. Hatoya*1, T. Inaba*1, K. Sugiura*1 (Bioscience Research Laboratory, *1 Osaka Metropolitan University, *2 Osaka International Cancer Institute)

FASEB Journal, 37(11), e23228 (2023)

Hyperspectral analysis for discriminating herbicide site of action: A novel approach for accelerating herbicide research

Z. Niu*2, T. Rehman*3, J. Young*2, W. G. Johnson*2, T. Yokoo*1,2, B. Young*2, J. Jin*2 (*1 Health & Crop Sciences Research Laboratory, *2 Purdue University, *3 Auburn University)

Sensors, 23(23), 9300 (2023)

Using mass spectrometry imaging to visualize pesticide accumulation and time-dependent distribution in fungicide-coated seeds

S. Shimma*2, H. Saito*2, T. Inoue*1, F. Iwahashi (Health & Crop Sciences Research Laboratory, *1 AgroSolutions Division-International, *2 Osaka University)

Mass Spectrometry, 12(1), A0132 (2023)

Metabolome profiling of QOI-treated *Zymoseptoria tritici*

F. Iwahashi (Health & Crop Sciences Research Laboratory)

20th International Reinhardtbrunn Symposium (Germany), April 23 - 27, 2023

Impact to Cytb F129L frequency by metyltetraprole treatment

Y. Matsuzaki, F. Roux* (Health & Crop Sciences Research Laboratory, *Sumitomo Chemical Agro Europe S.A.S.)

20th International Reinhardtbrunn Symposium (Germany), April 23 - 27, 2023

Detection of SdhC-I87F in cereal leaf rusts

Y. Matsuzaki, F. Iwahashi, F. Roux* (Health & Crop Sciences Research Laboratory, *Sumitomo Chemical Agro Europe S.A.S.)

20th International Reinhardtbrunn Symposium (Germany), April 23 - 27, 2023

A serum N-glycan profile is a novel biomarker for the clinical management of psoriasis

K. Nishimura*1, N. Oyama*1, T. Hasegawa*1, H. Kasamatsu*1, T. Chino*1, T. Tokunaga*1, K. Higashi, K. Saito, K. Yamada*2, M. Hasegawa*1 (Advanced Materials Development Laboratory, *1 University of Fukui, *2 Osaka Ohtani

International Societies for Investigative Dermatology 2023 (Tokyo, Japan), May 10 - 13, 2023

Validation of a human model of cell proliferation via YAP signaling by administration of Phenobarbital

S. Sugaya, Y. Shimotsuma, S. Fukunaga, H. Asano (Environmental Health Science Laboratory)

The 50th Annual Meeting of the Japanese Society of Toxicology (Kanagawa, Japan), June 19 - 21, 2023

The screening of useful lactic acid bacteria for high value-added food production utilizing the library of lactic acid bacteria originally isolated in Kyoto

J. Wada*2, Y. Kawai, H. Kondo, H. Tanaka*2, T. Kiyono*2, N. Tomari*2, C. Kohsaka*2, K. Hirooka*2, H. Sueoka, T.

Fukuda, K. Mikata*1 (Bioscience Research Laboratory, *1 Research Planning and Coordination Dept., *2 Kyoto Municipal Institute Of Industrial Technology And Culture)

The 96th Annual Meeting of the Japanese Biochemical Society (Fukuoka, Japan), October 31 - November 2, 2023

Inorganic synthesis

GaN and AlGaN epitaxy by HVPE

H. Fujikura, T. Konno, S. Kaneki (Ibaraki Works)

SPIE Photonics West (U.S.A.), January 27 - February 1, 2024

Structural and optical characterization of ScAlN thin films epitaxially grown on GaN bulk substrate by sputtering method

T. Maeda*1, Y. Wakamoto*1, S. Kaneki, H. Fujikura, A. Kobayashi*2 (Ibaraki Works, *1 The University of Tokyo, *2 Tokyo University of Science)

The 42nd Electronic Materials Symposium (Nara, Japan), October 11 - 13, 2023

Analysis of chemical and physical properties

Analysis of relation between bulk density of granules and drying condition

T. Honda (Health & Crop Sciences Research Laboratory)

The 42nd Japan Agricultural Formulation and Application Symposium (Nara, Japan), September 28 - 29, 2023

Toxicological safety assessment

Improved assessment of soil nonextractable residues of the pyrethroid insecticide cyphenothrin

K. Okuda, D. Ando, Y. Suzuki, T. Fujisawa (Environmental Health Science Laboratory)

Journal of Agricultural and Food Chemistry, 71(25), 9687 (2023)

Efficient synthesis of carbon-14 labeled metabolites of the strobilurin fungicide mandestrobin using biomimetic iron-porphyrin catalyzed oxidation

S. Murata, M. Kurosawa, T. Fujisawa (Environmental Health Science Laboratory)

Journal of Labelled Compounds and Radiopharmaceuticals, 66(10), 290 (2023)

Development of a short-term *in vivo* assay for thyroid hormone disrupting activity in maternal rats and their fetus/pups as prescreening for developmental neurotoxicity potential

T. Yamada, H. Aoyama*, H. Suto (Environmental Health Science Laboratory, *The Institute of Environmental Toxicology)

LRI Annual Report 2022, 23 (2022)

Degradation of the strobilurin fungicide mandestrobin in illuminated water-sediment systems

T. Adachi, Y. Suzuki, T. Fujisawa (Environmental Health Science Laboratory)

Journal of Pesticide Science, 49(1), 38 (2024)

Metagenomic analysis of ready biodegradability tests to ascertain the relationship between microbiota and the biodegradability of test chemicals

Y. Takano*1,2, S. Takekoshi*1, K. Takano*1, Y. Matoba*1, M. Mukumoto*1, O. Shirai*2 (*1 Environmental Health Science Laboratory, *2 Kyoto University)

Journal of Pesticide Science, 48(2), 35 (2023)

Application of mass spectrometry imaging in chimeric mice with humanized liver for species differences analysis of hepatotoxicity by a protoporphyrinogen oxidase inhibitor, epyrifenacil

K. Matsunaga, J. Abe, S. Kitamoto (Environmental Health Science Laboratory)

16th European ISSX and DMDG Meeting (U.K.), June 11 - 14, 2023

Computational fluid and particle dynamics modeling for repeated inhalation exposure assessment with OpenFOAM

K. Yokoo, S. Tanaka, M. Niwano, Y. Matoba, K. Kuga*, S. J. Yoo*, K. Ito (Environmental Health Science Laboratory, *Kyushu University)

SETAC North America 44th Annual Meeting (U.S.A.), November 12 - 16, 2023

Evaluating the human relevance of epyrifenacil-induced liver tumors in rodents -Quantitative risk assessment based on the mode of action-

S. Fukunaga, K. Ogata, A. Eguchi, K. Matsunaga, K. Sakurai, J. Abe, Samuel M Cohen*, H. Asano (Environmental Health Science Laboratory, *University of Nebraska Medical Center)

Society of Toxicology 63rd Annual Meeting and ToxExpo (U.S.A.), March 10 - 14, 2024

***In vivo* imaging analysis of bleomycin-induced lung fibrosis in mice**

J. Yano, K. Narita, Y. Shimotsuma, H. Asano (Environmental Health Science Laboratory)

Society of Toxicology 63rd Annual Meeting and ToxExpo (U.S.A.), March 10 - 14, 2024

Development of a novel *in vitro* phototoxicity test method using human ES/iPS cells-derived retinal pigment epithelial cells for evaluation of UVB absorbers

R. Kobayashi, R. Matsuyama, S. Kitamoto, H. Asano (Environmental Health Science Laboratory)

The 50th Annual Meeting of the Japanese Society of Toxicology (Kanagawa, Japan), June 19 - 21, 2023

Evaluation of effects of chemical compounds on visual function in rats using visually evoked potential recorded in visual cortex

K. Kawamoto, Y. Shimotsuma, K. Okada, H. Asano (Environmental Health Science Laboratory)

The 50th Annual Meeting of the Japanese Society of Toxicology (Kanagawa, Japan), June 19 - 21, 2023

A screening for thyroid hormone disruption-induced developmental neurotoxicity: a proposal for the use of a modified comparative thyroid assay with additional parameters and reduced number of animals

T. Yamada, H. Aoyama*, (Environmental Health Science Laboratory, *The Institute of Environmental Toxicology)

The 50th Annual Meeting of the Japanese Society of Toxicology (Kanagawa, Japan), June 19 - 21, 2023

Development of a short-term *in vivo* assay for thyroid hormone disrupting activity in maternal rats and their fetus/pups as prescreening for developmental neurotoxicity potential

T. Yamada (Environmental Health Science Laboratory)

2023 JCIA LRI Annual Workshop (Online), August 25, 2023

Development of automatic observation system for miniaturized Ames test (Ames MPF assay)

A. Maruchi, R. Matsuyama, S. Kitamoto, H. Asano (Environmental Health Science Laboratory)

52nd Annual Meeting of the Japanese Environmental Mutagen and Genome Society (JEMS) (Fukuoka, Japan), November 11 - 12, 2023

Development of a novel *in vitro* phototoxicity test method using human ES/iPS cells-derived retinal pigment epithelial cells for evaluation of UVB absorbers

R. Kobayashi, R. Matsuyama, S. Kitamoto, H. Asano (Environmental Health Science Laboratory)

The 36th annual meeting of the Japanese Society for Alternatives to Animal Experiments (Chiba, Japan), November 27 - 29, 2023

Current regulatory status of evaluation for thyroid disruptors and our research efforts using an *in vivo* short-term study, "thyroid comparative assay" in rats

T. Yamada (Environmental Health Science Laboratory)

The 36th Annual Meeting of the Japanese Society for Alternatives to Animal Experiments (Chiba, Japan), November 27 - 29, 2023

Chemical-induced perinatal thyroid hormone disruption and brain developmental adversity

T. Yamada (Environmental Health Science Laboratory)

The 97th Annual Meeting of the Japanese Pharmaceutical Society (Hyogo, Japan), December 14 - 16, 2023

Validation of appropriate administration period and timing for heterotopia in modified comparative thyroid assay

K. Ogata, K. Minami, H. Suto, K. Maeda, M. Kushida, A. Eguchi, A. Sato*, N. Takahashi*, H. Aoyama*, H. Asano, T. Yamada (Environmental Health Science Laboratory, *The Institute of Environmental Toxicology)

The 40th Annual Meeting of the Japanese Society of Toxicologic Pathology (Tokyo, Japan), January 23 - 24, 2024

Safety engineering

Thermal stability evaluation of chemical processes with the Friedman method

R. Itoh, S. Mori (Production & Safety Fundamental Technology Center)

APSS (Asia Pacific Symposium on Safety) 2023 (Thailand), October 17 - 20, 2023

Predicting method for wire basket test (EN15188) using isothermal DSC

K. Sasahara, W. Hirayama, S. Maruno, S. Mori (Production & Safety Fundamental Technology Center)

APSS (Asia Pacific Symposium on Safety) 2023 (Thailand), October 17 - 20, 2023

Material & plant engineering technology

Development of WES 2820 fitness-for-service procedure for pressure equipment-metal loss assessment

J. Takahashi, A. Yamaguchi* (Production & Safety Fundamental Technology Center, *National Institute of Occupational Safety and Health)

Pressure Vessels & Piping Conference 2023 (U.S.A.), July 16 - 21, 2023

Outlines of WES2820 metal loss assessment procedure

J. Takahashi (Production & Safety Fundamental Technology Center)

Welding Structure Symposium 2023 (Osaka, Japan), November 28, 2023

Computer simulation

Improvement of a simple coupled VOF with LS (S-CLSVOF) Method

Y. Uchihashi, Y. Yaegashi, M. Matsuo, N. Shimada, M. Ohta* (Production & Safety Fundamental Technology Center, *Tokushima University)

Journal of Chemical Engineering of Japan, 56(1), 2197456 (2023)

Enhancing plant operations using process digital twins

N.Suruvu, S.Okada (Production & Safety Fundamental Technology Center)
The Society of Separation Process Engineers, Japan 53(4), 242 (2023)

Improvement of simple CLSVOF method in the full Eulerian framework

N. Shimada, Y. Uchihashi, Y. Yaegashi, M. Matsuo, M. Ohta*1, A. Tomiyama*2 (Production & Safety Fundamental Technology Center, *1 Tokushima University, *2 Kobe University)
The 11th International Conference on Multiphase Flow (Hyogo, Japan), April 2 - 7, 2023

Numerical investigation for an optimized procedure of overlay welding repair for the metal loss of large-scale structures

J. Takahashi, Y. Yamauchi*, M. Shibahara* (Production & Safety Fundamental Technology Center, *Osaka Metropolitan University)
Pressure Vessels & Piping Conference 2023 (U.S.A.), July 16 - 21, 2023

Surrogate model based Process Digital Twin

N. Suruvu (Production & Safety Fundamental Technology Center)
SICE Annual Conference 2023 (Mie, Japan), September 6 - 9, 2023

Numerical simulation of condensation and boiling considering the volume change by THAINC method

Y. Yaegashi, H. Muramatsu, N. Shimada, Y. Uchihashi, M. Sato (Production & Safety Fundamental Technology Center)
Symposium for Multiphase Flow 2023 (Hokkaido, Japan), August 24 - 26, 2023

Application of nitrogen back shielding in single-sided welding of stainless steel

H. Nagashima, Y. Yokota, Y. Yaegashi, H. Muramatsu (Production & Safety Fundamental Technology Center, *1 Toyo Engineering Corporation, *2 Kobe Steel, Ltd.)
Welding Structure Symposium 2023 (Osaka, Japan), November 28, 2023

An accurate scheme for surface tension calculation

Y. Yaegashi (Production & Safety Fundamental Technology Center)
Lecture of Recent Chemical Engineering 72, "Cutting-edge Fluid Simulation in Chemical Engineering: Fundamentals, Practice, and Future Prospects" (Tokyo, Japan), January 15 - 16, 2024

An accurate mass-momentum consistent scheme for surface tension calculation

Y. Yaegashi (Production & Safety Fundamental Technology Center)
28th Working Party of Bubbles, Drops, Particles Dispersion Engineering (Osaka, Japan), March 18, 2024

Application of a mass-momentum consistent scheme for gas-liquid two-phase flow to the dam break problem: Focusing on the corner of the water column

Y. Yaegashi, N. Shimada, H. Muramatsu, Y. Uchihashi, M. Sato (Production & Safety Fundamental Technology Center)
The Society of Chemical Engineers 89th Annual Meeting (Osaka, Japan), March 18 - 20, 2024

Precise polymerization

Syntheses of lithium methacrylate-based alternating copolymers for polyelectrolytes

S. Okada*, H. Kubota*, H. Nakajima, I. Yamada*, N. Inui*, M. Ouchi* (Energy & Functional Materials Research Laboratory, *Kyoto University)
72nd SPSJ Annual Meeting (Gunma, Japan), May 24 - 26, 2023

Environmental field

Practical efficacy of pyrethrins against mosquitoes

H. Okamoto, A. Dewa, N. Sugimoto, N. Tsuda, T. Komori (Health & Crop Sciences Research Laboratory)
Control of Human Disease Vectors, Parasites and Pests - Meeting the Challenges of Resistance and Sustainability (U.K.), September 18 - 21, 2023

Food supply field

Effects of dietary supplementation with freeze-dried *Lactiplantibacillus plantarum* on the immune gene expression and resistance of whiteleg shrimp (*Penaeus Vannamei*) against diseases

J. P. M. Guzman*2, R. Nozaki*2, M. Aoki, H. Kuwahara, K. Mikata*1, K. Koiwai*2, H. Kondo*2, I. Hirono*2 (Bioscience Research Laboratory, *1 Research Planning and Coordination Dept., *2 Tokyo University of Marine Science and Technology)
11th International Fisheries Symposium 2023 (Thailand), November 22 - 24, 2023

Effects of s-abcisic acid administration on the antioxidative status and glucose absorption in the gut of rats

I. Shinzato, T. Kojo, D. Matsui, T. Tounoue, T. Tsukahara* (Animal Nutrition Division, *Kyoto Institute of Nutrition & Pathology, Inc.)
American Society of Animal Science 2024 Midwest Section Meeting (U.S.A.), March 10 - 13, 2024

Effects of sodium gluconate supplementation on growth performances of nursery piglets and growing pigs

D. Matsui, K. Iwamae*, T. Tounoue, I. Shinzato, (Animal Nutrition Division, *Fuso Chemical Co., Ltd.)

American Society of Animal Science 2024 Midwest Section Meeting (U.S.A.), March 10 - 13, 2024

Differential expression of immune-related genes and increased resistance of *Litopenaeus vannamei* against pathogens upon dietary supplementation with *Lactiplantibacillus plantarum*

J. P. M. Guzman*2, R. Nozaki*2, M. Aoki, H. Kuwahara, K. Mikata*1, K. Koiwai*2, H. Kondo*2, I. Hirano*2 (Bioscience Research Laboratory, *1 Research Planning and Coordination Dept., *2 Tokyo University of Marine Science and Technology) The Japanese Society of Fisheries Science Autumn Meeting 2023 (Miyagi, Japan), September 19 - 22, 2023

Botanical insecticide pyrethrins act as feeding deterrents by causing neuronal hyperexcitation of the oral taste organs of the blowfly through the intrinsic neurotoxic actions

T. Kojima, S. Kawamura, S. Yamato (Health & Crop Sciences Research Laboratory)

The 45th Annual Meeting of The Japanese Society for Comparative Physiology and Biochemistry (Osaka, Japan), December 2 - 3, 2023

Health care field

Inheritance and stacking effect of mutant ALS genes in *Schoenoplectiella juncooides* (Roxb.) Lye (Cyperaceae)

K. Ohta*1,2, Y. Sada*1 (*1 Health & Crop Sciences Research Laboratory, *2 Kyoto University)

Pesticide Biochemistry and Physiology 198, 105745 (2024)

Generation and purification of ACTH-secreting hPSC-derived pituitary cells for effective transplantation

S. Taga*1,2, H. Suga*1, T. Nakano, A. Kuwahara*2, N. Inoshita*3, Y. Kodani*4, H. Nagasaki*4, Y. Sato*1, Y. Tsumura*1, M. Sakakibara*1, M. Soen*1, T. Miwata*1, H. Ozaki*1, M. Kano*5, K. Watari*2, A. Ikeda*2, M. Yamanaka*2, Y. Takahashi, S. Kitamoto, Y. Kawaguchi*1, T. Miyata*1, T. Kobayashi*1, M. Sugiyama*1, T. Onoue*1, Y. Yasuda*1, D. Hagiwara*1, S. Iwama*1, Y. Tomigahara, T. Kimura*2, H. Arima*1 (Environmental Health Science Laboratory, *1 Nagoya University, *2 Sumitomo Pharma Co., Ltd., *3 Moriyama Memorial Hospital, *4 Fujita Health University, *5 St. Marianna University School of Medicine)

Stem Cell Reports, 18(8), 1657 (2023)

Commentary: Why have different key biomarkers been reported in the same types of samples from patients with identical diseases?

T. Sato*1, Y. Takahashi, Y. Mizutani*2 (Environmental Health Science Laboratory, *1 National Institute of Advanced Industrial Science and Technology, *2 Aino University)

Urine, 5, 53 (2023)

Fugacity model incorporating computational fluid dynamics for analyzing the behavior of an insecticide sprayed indoors

S. Tanaka*1,2, Y. Matoba*1, H. Kondo*3, T. Ihara*2 (*1 Environmental Health Science Laboratory, *2 The University of Tokyo, *3 National Institute of Advanced Industrial Science and Technology)

Journal of Pesticide Science, 48(4), 187 (2023)

Laboratory and field experience with SumiShield 50WG 5 years on

B. Zogo (Sumitomo Chemical (U.K.) , plc.)

World Malaria Day Scientific Conference & Exhibition 2023 (Uganda), April 20 - 21, 2023

A challenge to chemical synthesis of high quality RNAs up to 200 mer

I. Oshiro, T. Hara (Health & Crop Sciences Research Laboratory)

TIDES USA (U.S.A.), May 7 - 10, 2023

RP-HPLC analysis of chemically synthesized 200 mer RNA

T. Kano, T. Hara, H. Kawai, M. Shibata, H. Ihara, H. Ueda (Health & Crop Sciences Research Laboratory)

TIDES USA (U.S.A.), May 7 - 10, 2023

TALE-based nuclear base editing by the cooperation of novel single-molecule nickase and deaminase

T. Sakuma*, N. Nishibori*, H. Kubota, T. Yoshima (Bioscience Research Laboratory, *Hiroshima University)

CSIR-IGIB Frontiers in Genome Engineering 2023 (India), November 14 - 16, 2023

Nuclear base editing in human cells by the cooperation of novel single-molecule nickase and deaminase fused with TAL effectors

T. Sakuma*, N. Nishibori*, H. Kubota, T. Yoshima (Bioscience Research Laboratory, *Hiroshima University)

Keystone Symposia Precision Genome Engineering (Canada), January 22 - 25, 2024

CRISPR-free nuclear base editing by the cooperation of novel single-molecule nickase and deaminase fused with TAL effectors

T. Sakuma*, N. Nishibori*, H. Kubota, T. Yoshima (Bioscience Research Laboratory, *Hiroshima University)
Japanese Association for Animal Cell Technology (JAACT) 2023 (Aichi, Japan), November 28 - December 1, 2023

Development of Cas9-independent base editing technology targeting nuclear genome by the cooperation of novel single-molecule nickase and deaminase

T. Sakuma*, N. Nishibori*, H. Kubota, T. Yoshima (Bioscience Research Laboratory, *Hiroshima University)
The 46th Annual Meeting of the Molecular Biology Society of Japan(Hyogo, Japan), December 6 - 8, 2023

ICT related field

Surrogate model based process Digital Twin

N. Suruvu (Production & Safety Fundamental Technology Center)
SICE Annual Conference (Mie, Japan), September 6 - 9, 2023

Carbon neutrality

Development of new halide-based electrolyte for lithium-ion solid-state batteries

I. Yamada*, A. Doi, D. Inokuchi, F. Ding*, C. Tassel*, H. Kageyama*, T. Abe*, N. Inui* (Energy & Functional Materials Research Laboratory, *Kyoto University)
The 64th Battery Symposium (Osaka, Japan, Online), November 28 - 30, 2023

Recycling resources

Sumipex Meguri, your drop-in-recycling solution -Chemically recycled PMMA ("CR")-

Y. Yasutomi, G. Yoshida* (Essential Chemicals Research Laboratory, *MMA Division)
World Chemical Forum 2023 (U.S.A.), September 12 - 14, 2023

A solution for recycling plastic packaging using Sumicle

E. Ito (Essential Chemicals Research Laboratory)
World Chemical Forum 2023 (U.S.A.), September 12 - 14, 2023