

External Presentations

Main Submitted Theses and Oral Presentations

April 1, 2021 - March 31, 2022

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.

Polymers

Latest development of soluble OLED materials and its application to mid- to large-sized panel production

D. Fukushima (Advanced Materials Development Laboratory)

2021 International Conference on Display Technology (China, Online), May 30 – June 2, 2021

Latest development of soluble OLED materials and its application to mid- to large-sized panel production

D. Fukushima (Advanced Materials Development Laboratory)

The 28th International Display Workshops (Online), December 1 – 3, 2021

Inorganic and metallic materials

Tunable giant negative thermal expansion in Ti2O3- based polycrystalline materials

A. Doi, S. Shimano, T. Matsunaga, Y. Tokura*1,2, Y. Taguchi*1 (Advanced Materials Development Laboratory, *1 RIKEN, *2 The University of Tokyo)

Applied Physics Express 14, 107001 (2021)

Functional role of aramid coated separator for dendrite suppression in lithium-ion batteries

I. Arise*1,2, Y. Miyahara*2, K. Miyazaki*2, T. Abe*2 (*1 Energy & Functional Materials Research Laboratory, *2 Kyoto University)

Journal of The Electrochemical Society, 169, 010536 (2022)

Dendrite growth of lithium through separator using in situ measurement technique

I. Arise*1,2, Y. Miyahara*2, K. Miyazaki*2, T. Abe*2 (*1 Energy & Functional Materials Research Laboratory, *2 Kyoto University)

Journal of The Electrochemical Society, 169, 020546 (2022)

Development of "one-material" Al anode for lithium batteries

S. Nishimura*2, H. Li*2, T. Yamaguchi, S. Matsumoto, H. Hoshikawa*1, T. Kumagai*1, N. L. Okamoto*2, T. Ichitsubo*2 (Advanced Materials Development Laboratory, *1 Energy & Functional Materials Research Laboratory, *2 Tohoku University)

ECSJ Fall Meeting (Hokkaido, Japan), September 8-9, 2021

Circumventing the volume strain formation in lithiation reaction

H. Li*2, T. Yamaguchi, S. Matsumoto, H. Hoshikawa*1, T. Kumagai*1, N. L. Okamoto*2, T. Ichitsubo*2 (Advanced Materials Development Laboratory, *1 Energy & Functional Materials Research Laboratory, *2 Tohoku University)

ECSJ Fall Meeting (Hokkaido, Japan), September 8 - 9, 2021

Speciality chemicals

Development of novel carbon black coupling agent SUMILINK

H. Aoshima, H. Iyama, M. Sekiguchi*3, Y. Watanabe* O. Tokuda S. Seko*2 (Energy & Functional Materials Research Laboratory, *1 Osaka Works, *2 Advanced Polymers Division, *3 Sumika Chemtex Co., Ltd.)

10th JACI/GSC Symposium (Online), June 28 - 29, 2021

Crop protection chemicals

New cytochrome *b* haplotypes, harboring L299F or N256S + L299F substitutions, were found in azoxystrobin-resistant *Puccinia horiana*, the causal agent of chrysanthemum white rust

Y. Matsuzaki, T. Harada, F. Iwahashi (Health & Crop Sciences Research Laboratory)

European Journal of Plant Pathology, 160(4), 963 (2021)

Oxazosulfyl, a novel sulfyl insecticide, binds to and stabilizes the voltage-gated sodium channels in the slow-inactivated state

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

Journal of Agricultural and Food Chemistry, 69(14), 4048 (2021)

Metabolomic analysis of *Schoenoplectus juncooides* reveals common markers of acetolactate synthase inhibition among paddy weeds

M. Hikosaka, F. Iwahashi, S. Yamato (Health & Crop Sciences Research Laboratory)

Pesticide Biochemistry and Physiology, 174, 104827 (2021)

Influence of tea harvesting season on the insecticidal activity of *Bacillus thuringiensis* serovar kurstaki formulation against smaller tea tortrix, *Adoxophyes honmai* (Lepidoptera: Tortricidae), and its relationship to catechins contained in tea leaves

S. Isayama, Y. Shimokawatoko* (AgroSolutions Division-Japan, * Health & Crop Sciences Research Laboratory)
Japanese Journal of Applied Entomology and Zoology, 65(2), 109 (2021)

Accelerating progress in controlling vector-borne diseases

B. Zogo*¹, J. Lucas*², T. Ishiwatari (Environmental Health Division, *¹ Sumitomo Chemical (U.K.) , plc., *² John Lucas Consulting Services)

Pan-African Mosquito Control Association (PAMCA) Annual Conference and Exhibition (Online), September 20 – 22, 2021

SumiShield 50WG: Meeting the challenge of insecticide resistance

B. Zogo*, T. Ishiwatari (Environmental Health Division, * Sumitomo Chemical (U.K.) , plc.)

Pan-African Mosquito Control Association (PAMCA) Annual Conference and Exhibition (Online), September 20 – 22, 2021

Rapidilic, a new and unique PPO inhibiting herbicide for burndown program

J. A. Pawlak*², L. D. Sandell*², Y. Fujino, Y. Sada*¹, Y. Jin*¹, A. Tomita (AgroSolutions Division – International, *¹ Health & Crop Sciences Research Laboratory, *² Valent U.S.A. LLC)

62nd Meeting of the Weed Science Society of America Joint Meeting with the Canadian Weed Science Society (Online), February 21 – 24, 2022

Rapidilic, a new systemic PPO herbicide for broad-spectrum weed control

Y. Jin, Y. Sada, M. Hikosaka, K. Ido, J. A. Pawlak* (Health & Crop Sciences Research Laboratory, * Valent U. S.A. LLC)

62nd Meeting of the Weed Science Society of America Joint Meeting with the Canadian Weed Science Society (Online), February 21 – 24, 2022

Medical and pharmaceutical materials

Sophisticated manufacturing method for high-quality gRNA under GMP

I. Oshiro (Health & Crop Sciences Research Laboratory)

TIDES 2021: Oligonucleotide and Peptide Therapeutics (U.S.A., Online), September 20 – 23, 2021

Development of analytical methods for high-purity gRNA

M. Shibata (Health & Crop Sciences Research Laboratory)

TIDES 2021: Oligonucleotide and Peptide Therapeutics (U.S.A., Online), September 20 – 23, 2021

Energy materials

Electrochemical Properties of All-solid-state Battery with Li-rich Cathode Materials

K. Nomoto*¹, J. Kageura, Y. Hasegawa*¹, K. Shimizu*¹, Y. Yamada*¹, K. Suzuki*¹, M. Ikematsu*¹, R. Kanno*¹, C. Murakami, Y. Takayanagi*², S. Miyakawa*², T. Saito*², K. Nishiyama*² (Energy & Functional Materials Research Laboratory, *¹ Tokyo Institute of Technology, *² SoftBank Corp.)

ECSJ Fall Meeting, 2021 (Online), September 8 - 9, 2021

Synthesis and electrochemical properties of ether-linked dicationic ionic liquids

K. Kamada*¹, H. Nakajima, S. Shimano*², N. Inui*², T. Abe*², T. Nokami*¹ (Energy & Functional Materials Research Laboratory, *¹ Tottori University, *² Kyoto University)

The 11th Symposium of the Ionic Liquid Research Association (Online), November 18 – 19, 2021

Structure and electrochemical properties of fluorine doped garnet $\text{Li}_7\text{La}_3\text{Zr}_2\text{O}_{12}$ electrolyte

A. Doi, T. Hayashi*², Y. Yang*², C. Tassel*², H. Nakajima*¹, S. Kuze*², S. Shimano*², N. Inui*², T. Abe*² and H. Kageyama*² (Advanced Materials Development Laboratory, *¹ Energy & Functional Materials Research Laboratory, *² Kyoto University)

The 62nd Battery Symposium in Japan (Kanagawa, Japan), November 30 - December 2, 2021

Electrochemical properties of doped Li_3InCl_6 solid electrolyte

A. Doi, C. Tassel*², H. Nakajima*¹, S. Kuze*², S. Shimano*², N. Inui*², T. Abe*² and H. Kageyama*² (Advanced Materials Development Laboratory, *¹ Energy & Functional Materials Research Laboratory, *² Kyoto University)

The 62nd Battery Symposium in Japan (Kanagawa, Japan), November 30 - December 2, 2021

Electrochemical properties of doped Li_2ZrCl_6 solid electrolyte

A. Doi, C. Tassel*², H. Nakajima*¹, S. Kuze*², N. Inui*², T. Abe*² and H. Kageyama*² (Advanced Materials Development Laboratory, *¹ Energy & Functional Materials Research Laboratory, *² Kyoto University)

The 89th ECSJ Spring Meeting (Online), March 15 - 17, 2022

Composite electrolyte of single ion conducting polymer and ionic liquids and their electrochemical properties

H. Nakajima, K. Suwa, H. Kubota*, I. Yamada*, S. Shimano*, S. Kuze*, N. Inui*, T. Abe*, M. Ouchi* (Energy & Functional Materials Research Laboratory, * Kyoto University)

The 89th ECSJ Spring Meeting (Online), March 15 - 17, 2022

Synthesis of single-ion-conducting polymers with sulfonylimide groups and their electrochemical properties

K. Suwa, H. Nakajima, H. Kubota*, I. Yamada*, S. Shimano*, S. Kuze*, N. Inui*, T. Abe*, M. Ouchi* (Energy & Functional Materials Research Laboratory, * Kyoto University)

The 89th ECSJ Spring Meeting (Online), March 15 - 17, 2022

Organic synthesis

One-shot synthesis of expanded heterohelicene exhibiting narrowband thermally activated delayed fluorescence

S. Oda*, B. Kawakami*, Y. Yamasaki*, R. Matsumoto, M. Yoshioka, D. Fukushima, S. Nakatsuka*, T. Hatakeyama* (Advanced Materials Development Laboratory, * Kwansei Gakuin University)

Journal of the American Chemical Society, 144(1), 106 (2022)

Catalysts

Sumitomo HCl oxidation technology: A sustainable solution for chlorine value chain

M. Ikeguchi (Petrochemicals Research Laboratory)

Global Chlor-alkali, Vinyls and Polyurethanes Conference 2021 (Online), September 13 – 17, 2021

Sumitomo PO cumene technology: Innovation in PO technology

M. Matoba (Petrochemicals Research Laboratory)

Global Chlor-alkali, Vinyls and Polyurethanes Conference 2021 (Online), September 13 – 17, 2021

Polymer molding

Deformation behavior and impact properties of injection molding studied with microbeam X-ray

N. Kuwasaki, A. Bando, S. Kanesaka, H. Hamamatsu (Advanced Materials Development Laboratory)

The 29th JSPP Autumn Meeting (Online), November 30 - December 1, 2021

Analysis of chemical and physical properties

Identification of skin sensitizing impurities in reaction mixtures by fluorescent nitrobenzoxadiazole-labeled glutathione

G. Yamamoto, T. Tokunaga, T. Takahashi, M. Mukumoto, M. Sato, M. Okamoto (Environmental Health Science Laboratory)

11th World Congress on Alternatives and Animal Use in the Life Sciences 2021 (Online), August 23 – September 2, 2021

Computer simulation

Computational study of electrical conductivity properties of organic semiconducting polymers and metal complex-host systems

M. Ishida, M. Arita, S. Nishino, T. Hoshi* (Digital and Data Science Innovation Dept., * Tottori University)

HPCI Research Report, 6, 15 (hp160087) (2021)

Experimental design for the highly accurate prediction of material properties using descriptors obtained by measurement

R. Tamura*1, Y. Takei*1,2, S. Imai*1,3, M. Nakahara*1,4, S. Shibata, T. Nakanishi*1, M. Demura*1 (Advanced Materials Development Laboratory, *1 National Institute for Materials Science, *2 Asahi Kasei Corporation, *3 Mitsubishi Chemical Corporation, *4 Mitsui Chemicals, Inc.)

Science and Technology of Advanced Materials: Methods, 1(1), 152 (2021)

A 3D-hydrodynamic ocean simulation at waters off Niihama in Seto inland sea

M. Niwano, Y. Matoba, F. Horiguchi*, Y. Ishikawa* (Environmental Health Science Laboratory, * National Institute of Advanced Industrial Science and Technology)

Society of Environmental Toxicology and Chemistry, North America 42nd Annual Meeting (Online), November 14 – 18, 2021

Deep learning for the detection of skeletal alterations in 3D biomedical images

S. Kawai, R. Ihara*, H. Nakagawa, K. Mikata, Y. Tominaga (Bioscience Research Laboratory, * Environmental Health Science Laboratory)

Informatics In Biology, Medicine and Pharmacology 2021 (Online), September 27 – 29, 2021

Toxicological safety assessment

Microbiological analysis for accelerated degradation by increasing the medium volume in ready biodegradability test

Y. Takano, S. Takekoshi, K. Takano, Y. Matoba, M. Mukumoto (Environmental Health Science Laboratory)

Society of Environmental Toxicology and Chemistry, North America 42nd Annual Meeting (Online), November 14 – 18, 2021

Designing a novel photoinduced electron transfer-based small-molecule fluorescent probe specific for CYP3A isozymes

K. Fujimoto, H. Takeuchi, T. Takaku, J. Abe, K. Harada* (Environmental Health Science Laboratory, * Intellectual Property Bioorganic & Medicinal Chemistry Letters, 47, 128195 (2021)

Critical evaluation of the human relevance of the mode of action for rodent liver tumor formation by activators of the constitutive androstane receptor (CAR)

T. Yamada, S. M. Cohen*¹, B. G. Lake*² (Environmental Health Science Laboratory, *¹ University of Nebraska Medical Center, *² University of Surrey)
Critical Reviews in Toxicology, 51(5), 373 (2021)

Metabolism of pyrethroid insecticide momfluorothrin in lettuce (*Lactuca sativa* L.)

K. Matsushima, D. Ando, Y. Suzuki, T. Fujisawa (Environmental Health Science Laboratory)
Journal of Agricultural and Food Chemistry, 69(22), 6156 (2021)

Photodegradation of anilide fungicide inpyrfluxam in water and nitrate aqueous solution

T. Adachi, Y. Suzuki, T. Fujisawa (Environmental Health Science Laboratory)
Journal of Agricultural and Food Chemistry, 69(44), 12966 (2021)

Absorption, distribution, metabolism, and excretion of a new herbicide, epyrifenacil, in rats

K. Sakurai, J. Abe, K. Hirasawa, H. Takeuchi, S. Kitamoto (Environmental Health Science Laboratory)
Journal of Agricultural and Food Chemistry, 69(44), 13190 (2021)

Investigation of OECD 301F ready biodegradability test to evaluate chemical fate in a realistic environment

S. Takekoshi*^{1,2}, K. Takano*¹, Y. Matoba*¹, M. Sato*¹, A. Tachibana*² (*¹ Environmental Health Science Laboratory, *² Osaka City University)
Journal of Pesticide Science, 46(2), 143 (2021)

Researches on the evaluation of pesticide safety in humans using a pharmacokinetic approach

J. Abe (Environmental Health Science Laboratory)
Journal of Pesticide Science, 46(3), 290 (2021)

Acute toxicity and metabolism of pesticides in birds

T. Katagi, T. Fujisawa* (Bioscience Research Laboratory, * Environmental Health Science Laboratory)
Journal of Pesticide Science, 46(4), 305 (2021)

Comparative hepatotoxicity of a herbicide, epyrifenacil, in humans and rodents by comparing the dynamics and kinetics of its causal metabolite

K. Matsunaga, S. Fukunaga, J. Abe, H. Takeuchi, S. Kitamoto, Y. Tomigahara (Environmental Health Science Laboratory)
Journal of Pesticide Science, 46(4), 333 (2021)

Criterion for molecular size to evaluate the bioaccumulation potential of chemicals in fish

C. Miyata*^{1,2}, Y. Matoba*¹, M. Mukumoto*¹, Y. Nakagawa*², H. Miyagawa*² (*¹ Environmental Health Science Laboratory, *² Kyoto University)
Journal of Pesticide Science, 47(1), 8 (2022)

Establishing a ready biodegradability test system using OxiTop to evaluate chemical fate in a realistic environment

S. Takekoshi*^{1,2}, K. Takano*¹, Y. Matoba*¹, M. Mukumoto*¹, A. Tachibana*² (*¹ Environmental Health Science Laboratory, *² Osaka City University)
Journal of Pesticide Science, 47(1), 35 (2022)

Application of humanized mice to toxicologic studies: Evaluation of the human relevance of the mode of action for rodent tumor formation by activators of the constitutive androstane receptor (CAR)

T. Yamada (Environmental Health Science Laboratory)
Journal of Toxicologic Pathology, 34(4), 283 (2021)

Identification of the organic anion transporting polypeptides responsible for the hepatic uptake of the major metabolite of epyrifenacil, S-3100-CA, in mice

K. Sakurai, T. Kuroda, J. Abe, H. Toda, S. Kitamoto (Environmental Health Science Laboratory)
Pharmacology Research & Perspectives, 9(5), e00877 (2021)

Elucidation of the species differences of epyrifenacil-induced hepatotoxicity between mice and humans by mass spectrometry imaging analysis in chimeric mice with humanized liver

K. Matsunaga, J. Abe, K. Ogata, S. Fukunaga, S. Kitamoto (Environmental Health Science Laboratory)
The Journal of Toxicological Sciences, 46(12), 601 (2021)

Chimeric mouse with humanized liver is an appropriate animal model to investigate mode of action for porphyria-mediated hepatocytotoxicity

A. Eguchi, S. Fukunaga, K. Ogata, M. Kushida, H. Asano, S. M. Cohen*, T. Sukata (Environmental Health Science Laboratory, * University of Nebraska Medical Center)

Toxicologic Pathology, 49(7), 1243 (2021)

Club cells are the primary target for permethrin-induced mouse lung tumor formation

K. Ogata, Y. Liu, A. Ohara*1, K. Kawamoto, M. Kondo, K. Kobayashi, T. Fukuda*1, H. Asano, S. Kitamoto, B. G. Lake*2, S. M. Cohen*3, T. Yamada (Environmental Health Science Laboratory, *1 Bioscience Research Laboratory, *2 University of Surrey, *3 University of Nebraska Medical Center)

Toxicological Science, 184(1), 15 (2021)

Prediction of the human pharmacokinetics of eprifenacil and its major metabolite, S-3100-CA, by a physiologically based pharmacokinetic modeling using chimeric mice with humanized liver

K. Hirasawa, J. Abe, H. Nagahori, S. Kitamoto (Environmental Health Science Laboratory)

Toxicology and Applied Pharmacology, 439, 115912 (2022)

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

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

Japan Chemical Industry Association, Long-range Research Initiative (LRI) Annual Report 2020, 26 (2021)

Time-Course evaluation of hepatomegaly in mice using micro-CT and the aspect interfering toxicological interpretation

K. Kawamoto, K. Yamaguchi, Y. Shimotsuma, H. Asano, K. Miyata, T. Sukata (Environmental Health Science Laboratory)

The 48th annual meeting of the Japanese society of toxicology (Hyogo, Japan, Online), July 7 - 9, 2021

Challenge in evaluating human liver carcinogenicity of chemicals: Application of chimeric mice with human hepatocytes

T. Yamada (Environmental Health Science Laboratory)

The 48th annual meeting of the Japanese society of toxicology (Hyogo, Japan, Online), July 7 - 9, 2021

Evaluation of the human relevance of chemically induced liver carcinogenesis by using chimeric mice with human hepatocytes

K. Ogata, H. Asano, K. Miyata, T. Sukata, T. Yamada (Environmental Health Science Laboratory)

The 48th annual meeting of the Japanese society of toxicology (Hyogo, Japan, Online), July 7 - 9, 2021

Safety assessment for endocrine disruptors

T. Yamaguchi (Environmental Health Science Laboratory)

The 48th annual meeting of the Japanese society of toxicology (Hyogo, Japan, Online), July 7 - 9, 2021

Development of a short-term *in vivo* assay for thyroid hormone disrupting activity in maternal rats and their fetuses/pups as prescreening for potential developmental neurotoxicity: Propylthiouracil and phenobarbital examples. I. Findings in maternal rats and their fetuses

H. Suto, A. Sato*, K. Ogata, K. Minami, T. Kosaka*, H. Hojo*, N. Takahashi*, N. Tomiyama*, K. Iwashita, H. Aoyama*, T. Yamada (Environmental Health Science Laboratory, * The Institute of Environmental Toxicology)

The 48th annual meeting of the Japanese society of toxicology (Hyogo, Japan, Online), July 7 - 9, 2021

Development of a short-term *in vivo* assay for thyroid hormone disrupting activity in maternal rats and their fetuses/pups as prescreening for potential developmental neurotoxicity: Propylthiouracil and phenobarbital examples. II. Findings in maternal rats and their pups

A. Sato*, H. Suto, K. Ogata, K. Minami, T. Kosaka*, H. Hojo*, N. Takahashi*, N. Tomiyama*, K. Iwashita, H. Aoyama*, T. Yamada (Environmental Health Science Laboratory, * The Institute of Environmental Toxicology)

The 48th annual meeting of the Japanese society of toxicology (Hyogo, Japan, Online), July 7 - 9, 2021

Comparative thyroid assay: A short-term *in vivo* assay for thyroid hormone disrupting activity in maternal rats and their fetuses/pups as prescreening for potential developmental neurotoxicity

T. Yamada (Environmental Health Science Laboratory)

The 61st Annual Meeting of the Japanese Teratology Society (Online), August 7 - 8, 2021

Evaluation of the volatile compounds using the miniaturized Ames test

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

50th Anniversary Annual Meeting of the Japanese Environmental Mutagen and Genome Society (Kanagawa, Japan, Online), November 1 - 2, 2021

Analysis of reaction products of proficiency substances in ADRA (I)

K. Fujimoto, J. Abe, N. Horie, M. Fujita*1, Y. Yamamoto*1, T. Kasahara*1, T. Kawakami*2 (Environmental Health Science Laboratory, *1 Fujifilm Corporation, *2 National Institute of Health Sciences)

The 34th Annual Meeting of the Japanese Society for Alternatives to Animal Experiments (Okinawa, Japan, Online), November 11 - 13, 2021

Absorption, distribution, metabolism, and excretion of a new insecticide, oxazosulfil, in rats.

K. Sakurai, H. Takeuchi, J. Abe, H. Nagahori, S. Kitamoto (Environmental Health Science Laboratory)

The 46th Annual Meeting of the Pesticide Science Society of Japan (Okayama, Japan, Online), March 7 - 9, 2022

Safety engineering

Derivation of activation energy on auto-catalytic oxidation using isothermal analysis

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

54th Safety Engineering Research Annual Meeting (Online), December 2 - 3, 2021

Chemical plant materials engineering

Overview of Significance of Ms and Validation of Reference Stress Solution

Y. Ishizaki*1, T. Watanabe*2, T. Konno*3, S. Koyama (Production & Safety Fundamental Technology Center, *1 Idemitsu Kosan Co., Ltd., *2 Mitsubishi Chemical Corporation, *3 ENEOS Corporation)

Journal of High Pressure Institute of Japan, 59(6), 296 (2021)

Life science

Time-course changes in the ionic profiles of rice leaves and their application in growth stage prediction

M. Maeta, T. Kamiya*, T. Fujiwara*, D. Hirotsomi, H. Iwata* (Health & Crop Sciences Research Laboratory, * The University of Tokyo)

Crop Science, 61(6), 4239 (2021)

Application of zwitterionic polymer hydrogels to optical tissue clearing for 3D fluorescence imaging

C. Kojima*, T. Koda*, T. Nariai, J. Ichihara, K. Sugiura*, A. Matsumoto* (Bioscience Research Laboratory, * Osaka Prefecture University)

Macromolecular Bioscience, 21(9), e2100170 (2021)

Functional and molecular characterization of a non-human primate model of autism spectrum disorder shows similarity with the human disease

S. Watanabe*2, T. Kurotani*2, T. Oga*2, J. Noguchi*2, R. Isoda*2, A. Nakagami*2,3, K. Sakai*2, K. Nakagaki*2, K. Sumida*1, K. Hoshino*4, K. Saito, I. Miyawaki*4, M. Sekiguchi*2, K. Wada*2, T. Minamimoto*5, N. Ichinohe*2 (Advanced Materials Development Laboratory, *1 Bioscience Research Laboratory, *2 National Center of Neurology and Psychiatry, *3 Japan Women's University, *4 Sumitomo Dainippon Pharma Co., Ltd., *5 National Institutes for Quantum Science and Technology)

Nature Communications, 12, 5388 (2021)

Development of an efficient antimicrobial susceptibility testing method with species identification by Nanopore sequencing of 16S rRNA amplicons

Y. Kawai, N. Ozawa, T. Fukuda, N. Suzuki, K. Mikata (Bioscience Research Laboratory)

PLoS One, 17(2), e0262912 (2022)

Modulation of the innate immune system by lipopolysaccharide in the proventriculus of chicks inoculated with or without Newcastle disease and infectious bronchitis vaccine

Y. Yoshimura*, H. Kondo, K. Takamatsu*, Y. Tsugami*, T. Nii*, N. Isobe* (Bioscience Research Laboratory, * Hiroshima University)

Poultry Science, 101(4), 101719 (2022)

Modeling of diurnal changing patterns in airborne crop remote sensing images

D. Ma*, T. U. Rahman*, L. Zhang*, H. Maki, M. R. Tuinstra*, J. Jin* (Health & Crop Sciences Research Laboratory, * Purdue University)

Remote Sensing, 13(9), 1719 (2021)

Modeling of environmental impacts on aerial hyperspectral images for corn plant phenotyping

D. Ma*, T. U. Rahman*, L. Zhang*, H. Maki, M. R. Tuinstra*, J. Jin* (Health & Crop Sciences Research Laboratory, * Purdue University)

Remote Sensing, 13(13), 2520 (2021)