

PROGRAM

**THURSDAY OCTOBER 10 (MIRAI Hall, Frontier Center for Organic Materials
(Building 11) in Yamagata University)**

9:00-9:30

Open

9:30-9:40

Opening Remarks

Kohei Takahashi

Student Chair, Yamagata University, Japan

Moderator: Kohei Takahashi, Yamagata University, Japan

9:40-10:10

IL-1 3D Printing of Electrically Conductive Multi-Functional Materials for Structural Applications

Vipin Kumar and Vlastimil Kunc

*Material Science and Technology Division, Manufacturing Demonstration Facility
(MDF), Oak Ridge National Laboratory (ORNL), USA*

10:10-10:20

CL-1 Physical Property Modification of Regenerated Cellulose Fiber by New Dyeing Technique

Kazuki Ohta, Go Matsuba and Hidemi Aita

Yamagata University, Japan

10:20-10:30

CL-2 The Effects of Crystal Morphology for Polyphenylene Sulfide and Polyamide Blends

Genta Mase, Go Matsuba and Akio Sakai

Yamagata University, Japan

10:30-10:40

CL-3 Comparative Study of Indica and Japonica Amorphous Rice Flour Made by Using the Shear and Heat Milling Machine

Yu Kanke, Hiroko Yano, Ken Miyata, Tomonori Koda, Taichi Nishio, Chukwan

Techakanon, Somwang Lekjing and Akihiro Nishioka

Yamagata University, Japan

10:40-10:50 **Coffee Break (10 min)**

Moderator: Tatsuki Sasaki, Yamagata University, Japan

10:50-11:00

CL-4 Preparation of Biodegradable Material from Tapioca Starch and Cellulose Nanofibers

Apakorn Thongmeepech, Ken Miyata, Tomonori Koda, Taichi Nishino and Akihiro Nishioka
Yamagata University, Japan

11:00-11:10

CL-5 Effect of Crystallinity of Rice Flour on Rheological and Baking Properties

Marin Abiko, Hiroko Yano, Ken Miyata, Tomonori Koda, Taichi Nishio and Akihiro Nishioka
Yamagata University, Japan

11:10-11:20

CL-6 Relationship between Gelatin Solution Viscosity and the Size of Vesicles Formed by the Droplet-Shooting Method

Kanako Adachi, Kazunari Yoshida, Masato Makino, Masaru Kawakami and Hidemitsu Furukawa
Yamagata University, Japan

11:20-11:30

CL-7 Mechanical Properties of Food Materials Suitable for 3D Printing and Effect of Internal Structure on the Compression Fracture

Shunsuke Suzuki, Ryo Ishigaki, Masaru Kawakami, Jun Nango and Hidemitsu Furukawa
Yamagata University, Japan

11:40-11:50 **Photo Opportunity**

11:50-13:30 **Lunch**

Moderator: Chen Ying-Liu, Yamagata University, Japan

13:30-13:40

CL-8 3D Gel Printing with Low Cost Devices

Yosuke Sato, Azusa Saito, Masaru Kawakami and Hidemitsu Furukawa
Yamagata University, Japan

13:40-13:50

CL-9 Properties and Modeling of White Gel by 3D Gel Printer

Yuta Yamazaki, Azusa Saito, Masaru Kawakami, Jun Nango and Hidemitsu Furukawa
Yamagata University, Japan

13:50-14:00

CL-10 Development of Water Transpirable Mimetic Skin Using Hydrogels

Shuma Kanai, Masaru Kawakami and Hidemitsu Furukawa
Yamagata University, Japan

14:00-14:10

CL-11 Mimicking Human Emotions for Soft Matter Robotics

Takaaki Kameyama, Ikuma Sudo, Jun Ogawa, Kazunari Yoshida, Masaru Kawakami and Hidemitsu Furukawa
Yamagata University, Japan

14:10-14:20 **Coffee Break (10 min)**

Moderator: Keiichiro Sato, Yamagata University, Japan

14:20-14:50

IL-2 Synthesis and Self-Assembly of Oligosaccharide-Based Block Copolymers

Takuya Isono
Hokkaido University, Japan

14:50-15:00

CL-12 Synthesis of Tough Crosslinked Material by Photo-cyclopolymerization

Takumi Miyashita, Yoshimasa Matsumura and Bungo Ochiai
Yamagata University, Japan

15:00-15:10

CL-13 Ion Dynamics and Electrical Conductivity of M^+ (crown ether) TCNQ Complexes

Kohei Sambe, Norihisa Hoshino, Takashi Takeda, Takayoshi Nakamura and
Tomoyuki Akutagawa
Tohoku University, Japan

15:10-15:20

**CL-14 Copolymerization of Glycidyl Methacrylate with Acrylates Accompanied by
Carbonation with Carbon Dioxide and Thermal Properties of Resulting Polymers**

Kenta Kosugi, Yoshimasa Matsumura and Bungo Ochiai
Yamagata University, Japan

15:20-15:50

IL-3 How Does the "Techne" Use "us"

Ryosuke Kakinami
Yamagata University, Japan

15:50-16:00 **Coffee Break (10 min)**

16:00-17:30 **Poster Session**

18:00-20:00 **Banquet**

**FRIDAY OCTOBER 11 (MIRAI Hall, Frontier Center for Organic Materials (Building 11)
in Yamagata University)**

9:00-9:30

Open

9:35-9:40

Announcements

Hiroki Arai

Yamagata University, Japan

Moderator: Yuki Tsuda, Yamagata University, Japan

9:40-10:10

IL-4 Roll-to-Roll High Uniformity Flexible OLED Lighting Panels Using Transparent IZO-Ag Alloy-Nb₂O₅ Multi-Layers as Anode Electrode

Hsin Chu Chen, Chao-Feng Sung, Chien-Hung Lin, Hung-Yi Chang, Gerry Yi-Shu Chen, Yu-Lin Hsu, Cheng-Yi Chen, Story Kuo-Hsin Huang, Hsin-Yun Hsu and Benjamin Chih-Ming Lai
Industrial Technology Research Institute, Taiwan

10:10-10:40

IL-5 Tumor-on-a-Chip for Studying Effects of Flow Through a Vascular Network

Yuji Nashimoto
Tohoku University, Japan

10:40-10:50

CL-15 Electrochemical CO₂ Reduction Catalytic Activity Comparison of Polydopamine on Various N-doped Carbon Substrates

Yuya Harada, Nobuyuki Nishiumi, Philipp Stadler, Hidenobu Shiroishi and Tsukasa Yoshida
Yamagata University, Japan

10:50-11:00

CL-16 Electrodeposition of Zn-Terephthalate MOF Thin Films for Redox Batteries

Tensho Nakamura, Shotaro Ueda, Satoshi Chubachi, Kyota Uda, Yuki Tsuda, Yuji Hirai and Tsukasa Yoshida
Yamagata University, Japan

11:00-11:10

CL-17 Synthesis Alkane Viologen Cation/ Indanyl Anion and Property Evaluation

Erika Saito, Taichi Yasuhara, Shuji Okada, Ryohei Yamakado, Jun Matsui, Hiroshi Katagiri, Wataru Fujiwara, Akito Masuhara, Matthew White, Randall Headrick and Tsukasa Yoshida
Yamagata University, Japan

10:10-11:20 **Coffee Break (10 min)**

Moderator: Keiichiro Sato, Yamagata University, Japan

11:20-11:30

CL-18 Effect of Aromatic Ligands for Perovskite Nanocrystals and Their Optical Properties

Sasiphapa Rodbuntum, Kazuki Umemoto, Yuki Tezuka, Junya Enomoto, Takayuki Chiba, Satoshi Asakura and Akito Masuhara
Yamagata University, Japan

11:30-11:40

CL-19 Synthesis of Chain-End-Functionalized Poly(3-hexylthiophene)s Using a Zincate Complex

Shin Inagaki and Tomoya Higashihara
Yamagata University, Japan

11:40-11:50

CL-20 Development of Proton Conductive Materials for PEFC by Polymer Coated Cellulose Nanocrystals

Tomohiro Nohara, Keisuke Tabata, Kazuki Koseki, Toshihiko Arita and Akito Masuhara

Yamagata University, Japan

11:50-12:00

CL-21 Green Synthesis and Characterization of π -Conjugated Polymer Based on Aldol Polycondensation Reaction

Shingo Sato, Cheng-Liang Liu and Tomoya Higashihara
Yamagata University, Japan

12:00-13:30 **Lunch**

Moderator: Naoto Takagi, Yamagata University, Japan

13:30-14:00

IL-6 Machine Learning-based Augmentation of Creative Processes

Edgar Simo-Serra

Waseda University, Japan

14:00-14:10

CL-22 Automatic Detection System for Morphological- and Behavioral- Transition of Drosophila

Mayu Kudo, Ki-Hyeon Seong, Taishi Matsumura, Maki Otori, Hiroki Watanabe, Masaya Hata, Tetsuya Yuasa and Siu Kang
Yamagata University, Japan

14:10-14:20

CL-23 Interface Structure between TIPS-Pentacene and Polystyrene by Using Molecular Dynamics Simulation

Tomoka Suzuki, Giuseppe Milano, Hiroyuki Matsui and Antonio De Nicola
Yamagata University, Japan

14:20-14:30

CL-24 Molecular Dynamics Simulation on Phosphor Host Compounds Based on Lithium Aluminate

Joichiro Ichikawa, Chika Sato, Hiroko Kominami, Kazuhiko Hara, Massato Kakihana and Yuta Matsushima
Yamagata University, Japan

14:30-14:40

CL-25 Controlled Synthesis of Novel Amino Acid-Based Block Copolymers Using Polymerization Induced Self-Assembly

Kazunori Masuko and Hideharu Mori
Yamagata University, Japan

14:40-14:50

CL-26 Synthesis of High Refractive Index Benzothiazole-Based Block and Random Copolymers

Yugo Sato, Sadaki Samitsu, and Hideharu Mori
Yamagata University, Japan

14:50-15:00 **Coffee Break (10 min)**

Moderator: Hiroki Arai, Yamagata University, Japan

15:00-15:10

CL-27 One-Pot Synthesis of Luminescent Nanoparticles Using Aggregation-Induced Emission Block Copolymer

Masaki Furukawa, Kazuhiro Nakabayashi and Hideharu Mori
Yamagata University, Japan

15:10-15:20

CL-28 Adsorption Properties of CeO₂ Nanoparticles for Several Types of Gas Molecules

Keita Kanahara and Yuta Matsushima
Yamagata University, Japan

15:20-15:30

CL-29 Green Synthesis of Silver Nanoparticles using *Piper chaba* Stem Extracts and Investigation on Their Catalytic Activity

MD Mahiuddin, Prianka Saha and Bungo Ochiai
Yamagata University, Japan

15:30-15:40

CL-30 Biomolecule Decorated Nanoparticles of CdS Photocatalyst for Highly Efficient Hydrogen Production via Water Splitting

Fumiya Tojo, Shieru Kubota, Fumihiko Hirose and Bashir Ahmmad
Yamagata University, Japan

15:40-15:50 **Coffee Break (10 min)**

Moderator: Hiroki Arai, Yamagata University, Japan

15:50-16:10

IL-7 Biocompatibility of Surface Modified Commercial Yttria Stabilized Zirconia

Gulsanarasathi Kazi

Yamagata University, Japan

16:10-16:20

Review Comments

Takuya Komoda and Hiroaki Kaneko

Yamagata University, Japan

16:20-16:30

Closing Remarks

Bungo Ochiai

Chair, Yamagata University, Japan

Poster Session

PO-1 Optimization of 3D Arrangement of Two Enzymes for an Electrochemical Biosensor

Kai Sasaki, Hiroyuki Furusawa, Kuniaki Nagamine and Shizuo Tokito
Yamagata University, Japan

PO-2 Canceled

PO-3 Flash-Evaporation of High Cu Content TiNiCu and TiNiCo Shape Memory Alloy Films

Masayuki Murakami and Takashi Mineta
Yamagata University, Japan

PO-4 Recognition Mechanism of Warmth-Like Tactile Feel: *Nukumori* feel

Taishu Kumagai, Maki Sakamoto and Yoshimune Nonomura
Yamagata University, Japan

PO-5 Fabrication of Mushroom-Shape Nano-Pillar Array on PDMS Diaphragm Using Casting MEMS Nano-Mold

Yuji Murakami, Hideyuki Mitui, Tubasa Sato and Takashi Mineta
Yamagata University, Japan

PO-6 Fabrication and Acoustic Examination for Porous Metals Using Ultrasonically Generated Microbubbles

Koyo Tamaki and Toshinori Makuta
Yamagata University, Japan

PO-7 Antimicrobial Behavior of 1,2-Alkanediol against Skin-resident *Staphylococci*

Minako Okukawa, Takamasa Watanabe, Maki Miura, Hiroyuki Konno, Shigekazu Yano and Yoshimune Nonomura
Yamagata University, Japan

PO-8 Development of Micro Bubble Generator Using Ultrasonic Horn Having the Through Flow Path

Hokuto Kataoka, Ryo Kameda and Toshinori Makuta
Yamagata University, Japan

PO-9 Preparation of Hollow Silica Particles Using Microbubbles Containing Tetraethyl Orthosilicate Vapor

Takaya Kajihara, Shunpei Tazaki, Tatsuya Makino and Toshinori Makuta
Yamagata University, Japan

PO-10 Ultraviolet Sensing with Wide Band Gap Semiconductor Films Prepared by a Sputtering Technique

Yuta Takeuchi, Daisuke Fukushima, Chiharu Onishi and Yuta Matsushima
Yamagata University, Japan

- PO-11 Deep-Red Luminescence of Cr³⁺ in Fluorine-Doped Lithium Aluminate**
Yuki Kamada, Hiroko Kominami, Kazuhiko Hara, Masato Kakihana and Yuta Matsushima
Yamagata University, Japan
- PO-12 Friction Dynamics of Oil-in-Water Emulsion on Gel Surfaces**
Kei Kikuchi, Hiroyuki Mayama and Yoshimune Nonomura
Yamagata University, Japan
- PO-13 Nanochannel TiO₂ Thin Film Transistors Fabricated by Room-Temperature Atomic Layer Deposition and Their Application for Sensors**
Keito Sogai, Ko Kikuchi, Bashir Ahmad, Shigeru Kubota and Fumihiko Hirose
Yamagata University, Japan
- PO-14 All Bio Composite Filler Composed of Cellulose Nanocrystal@Hydroxyapatite for New Inlays**
Ryota Sato, Tomohiro Nohara, Keisuke Tabata, Toshihiko Arita and Akito Masuhara
Yamagata University, Japan
- PO-15 Self-Organized Precipitation Patterns in Hydrogel with Density Gradient**
Masaki Itatani, Qing Fang, Kei Unoura and Hideki Nabika
Yamagata University, Japan
- PO-16 Mathematical Model for Self-Organized Pattern Formation with Polymerization Reaction**
Daisuke Sato, Yushiro Shimizu, Qing Fang, Kei Unoura, Jun Matsui and Hideki Nabika
Yamagata University, Japan
- PO-17 Single Molecule Observation of the Aggregation Behavior of Amyloid β Peptide under Non-Equilibrium Fluidic Condition**
Akane Iida, Kei Unoura and Hideki Nabika
Yamagata University, Japan
- PO-18 Multiferroic Properties of Gd and Pr Co-Doped BiFeO₃ Ceramics**
Naoto Kubota, M. K. Alam, F. A. Khan, Shigeru Kubota, Fumihiko Hirose and Bashir Ahmmad
Yamagata University, Japan
- PO-19 Histidine Decorated CdS@TiO₂ Core-Shell Nanocomposites Photocatalyst for Hydrogen Production via Water Splitting**
Hiroto Mai, Fumiya Tojo, Shigeru Kubota, Fumihiko Hirose and Bashir Ahmmad
Yamagata University, Japan
- PO-20 Influence of Core Size and Silanol Group on Proton Conductivity of Functionalized Filler for Polymer Electrolyte Membrane**
Kazuki Koseki, Tomohiro Nohara, Keisuke Tabata, Toshihiko Arita and Akito Masuhara
Yamagata University, Japan

PO-21 Green Synthesis of Wholly-Aromatic Polyamides by Direct Bulk Polymerization
Akihito Nojo and Tomoya Higashihara
Yamagata University, Japan

PO-22 Fabricating the Shell Thickness Controlled Core-Shell Type Nanoparticles for Polymer Electrolyte Membrane
Keisuke Tabata, Tomohiro Nohara, Kazuki Koseki, Ryota Sato, Toshihiko Arita and Akito Masuhara
Yamagata University, Japan

PO-23 Low Friction Material Using Liquid-Crystallinity Ionic Liquid
Ryusei Sato, Mari Aoyagi, Ryo Shomura, Gen Masuda and Takaya Sato
National Institute of Technology, Tsuruoka College, Japan

PO-24 Synthesis of Novel Ionic Liquid and Its Physico Chemical Properties
Naoya Maeta, T. Morinaga, R. Shomura, R. Satoh and T. Sato
National Institute of Technology, Tsuruoka College, Japan

PO-25 Local Synthesis of DLC Thin Films by Atmospheric Pressure Microplasma
Ryota Nishimura, Hiroyuki Yoshiki, Junki Sato and Kousuke Gando
National Institute of Technology, Tsuruoka College, Japan

PO-26 Ion Conductivity Evaluation of Proton Conductive Oxide Thin Film
Takashi Sato, Kenshin Narisawa and Kiyoshi Uchiyama
National Institute of Technology, Tsuruoka College, Japan

PO-27 Preparation of $\text{CuCl}_{1-x}\text{I}_x$ Thin Films by Spin Coating Method and Approach to Transparent Solar Cell Development
Yuhei Sato, Kunihiko Tanaka, Nobuo Saito and Katsuhiko Moriya
National Institute of Technology, Tsuruoka College, Japan

PO-28 A pH Dependence of Cu_2SnS_3 Thin Films Prepared by Chemical Bath Deposition
Kazuhiro Sugai, Takuya Tomono, Kunihiko Tanaka and Katsuhiko Moriya
National Institute of Technology, Tsuruoka College, Japan

PO-29 Preparation and Evaluation of Dextrin-Added Cu_2SnS_3 Thin Films by Wet Process
Takuya Tomono, Kunihiko Tanaka and Katsuhiko Moriya
National Institute of Technology, Tsuruoka College, Japan