PROGRAM

DAY1: THURSDAY OCTOBER 29 (Online Conference)

8:50-9:30
Open

9:30-9:40
Opening Remarks

Kyota Uda
Student Chair, Yamagata University, Japan

9:40-9:50
ECS description

Yuya Harada
ECS Yamagata Student Chapter Chair, Yamagata University, Japan

Moderator: Hiroki Arai, Yamagata University, Japan

9:50-10:00
CL-1 Hydrogel Eyeball Actuator for Soft-Robot "Gel HACHI"

Fumiya Shiga, Yosuke Watanabe, MD Nahin Islam Shiblee, Ajit Khosla, Jun Ogawa, Masaru Kawakami and Hidemitsu Furukawa
Yamagata University, Japan

10:00-10:10
CL-2 Food 3D Printing with Starch Suspension

Kosuke Aiso, Masaru Kawakami, Yosuke Watanabe, MD Nahin Islam Shiblee, Ajit Khosla, Jun Ogawa and Hidemitsu Furukawa
Yamagata University, Japan

10:10-10:20
CL-3 Gel Deformation Sensor with 3D Printed Microchannels

Ikuma Sudo, Yosuke Watanabe, MD Nahin Islam Shiblee, Ajit Khosla, Jun Ogawa, Masaru Kawakami and Hidemitsu Furukawa
Yamagata University, Japan
10:20-10:45  Break (25 min)

Moderator: Tatsuki Sasaki, Yamagata University, Japan

10:45-10:55

CL-4  Novel Soft Materials with Mechanical Anisotropy using 3D Printed Lattice Structures

Tomoharu Mori, Masaru Kawakami, Yosuke Watanabe, MD Nahin Islam Shibblee, Ajit Khosla, Jun Ogawa and Hidemitsu Furukawa
Yamagata University, Japan

10:55-11:05

CL-5  Novel Soft Materials with Nonlinear Mechanical Response

Takanori Sato, Masaru Kawakami, Yosuke Watanabe, MD Nahin Islam Shibblee, Ajit Khosla, Jun Ogawa and Hidemitsu Furukawa
Yamagata University, Japan

11:05-11:15

CL-6  Develop of Self-Deformation-Robot with Regular Icosahedron Structure Using Bending-Type-Artificial-Muscle

Naoya Ishiguri, Riku Tanaka and Hiroki Tomori
Yamagata University, Japan

11:15-11:25

CL-7  Development of Unit for Super Redundant Manipulator using Bending Type Pneumatic Rubber Artificial Muscle

Hiromitsu Nishikata, Kiichi Uchiyama and Hiroki Tomori
Yamagata University, Japan

11:25-11:35

CL-8  Microencapsulation of Protein with Natural Ester Resin for Oral Drug Delivery Systems

Shinichi Tokunaga, Kento Ono, Miyuki Nakamura, Tanjina Sharmin, Aida M. Taku and Kenji Mishima
Fukuoka University, Japan

11:35-13:00  Lunch (1h 25min)
Moderator: Eri Oishi, Yamagata University, Japan

13:00-13:30

IL-1 Room-Temperature Superionic Conduction in Complex Transition Metal Hydrides with High Hydrogen Coordination

Shigeyuki Takagi
Institute for Materials Research, Tohoku University

13:30-13:40

CL-9 Superionic Conductivity of Silver Iodide Solid Solution

Kento Uchida and Yuta Matsushima
Yamagata University, Japan

13:40-13:50

CL-10 Solar-Powered Redox Flow Battery System

Satoshi Chubachi, Shiyori Okada, Tsukasa Yoshida
Yamagata University, Japan

13:50-14:00

CL-11 Method of Polyethylene Foam Molding Based on Baking Process of Rice Bread

Naoya Takahashi, Tomonori Koda, Taichi Nishio and Akihiro Nishioka
Yamagata University, Japan

14:00-14:25 Break (25min)

Moderator: Keiichiro Sato, Yamagata University, Japan

14:25-14:35

CL-12 Synthesis and Biological Evaluation of Glucose Conjugated Phthalocyanine as a Second-Generation Photosensitizer

Nozomi Hara, Yoshiyuki Uruma, Keita Sakamoto, Yuki Kato, Ping-Shan Lai, Kunishige Onuma and Futoshi Okada
National Institute of Technology, Yonago College

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14:35-14:45

**CL-13** Radical Polymerization of Deep Eutectic Acrylamide Derivatives

Ayaka Torii and Hideharu Mori  
Yamagata University, Japan

14:45-14:55

**CL-14** Ionic Conductive Hybrids Based on Tertiary/Quaternary Ionic liquid-Containing Silsesquioxane Nanoparticles

Yuta Maeda, Yusuke Sasaki and Hideharu Mori  
Yamagata University, Japan

14:55-15:05

**CL-15** Synthesis and Characterization of Indocyanine Derivatives with Different Conjugation Lengths

Sayuri Kimura, Ryohei Yamakado and Shuji Okada  
Yamagata University, Japan

15:05-15:30  **Break (25min)**

Moderator: Yuya Harada, Yamagata University, Japan

15:30-15:40

**CL-16** Experimental Study on Laminar Flow Forced Convective Heat Transfer of Al₂O₃-Water Nanofluids

Tomonori Agatsuma and Masato Akamatsu  
Yamagata University, Japan

15:40-15:50

**CL-17** The Effective Viscosity Measurements of Al₂O₃-Water Nanofluids by the Tuning Fork Vibro Viscometers

Ryuya Otaka and Masato Akamatsu  
Yamagata University, Japan
15:50-16:00

CL-18  Laminar Flow Forced Convective Heat Transfer Characteristics of Al₂O₃-Water Nanofluids in a Horizontal Tube Cooled Isothermally

Kanji Suzuki and Masato Akamatsu
Yamagata University, Japan

16:00-16:10

CL-19  Optically Filtered VSB Modulation for Data-center Networks

Yamagata University, Japan

16:10-16:20

CL-20  Harmonics Mitigation by Parallelization of Optical SSB Modulators for High Capacity Communications

Takanori Sato, Kenji Nozawa, K. I. Amila Sampath, and Katsumi Takano
Yamagata University, Japan

16:20-16:45  Break (25min)

Moderator: Kyota Uda, Yamagata University, Japan

16:45-17:15

IL-2  DNA in Organic Electronic Devices

Cigdem Yumusak
Linz Institute for Organic Solar Cells (LIOS), Physical Chemistry, Johannes Kepler University, Austria

17:15-17:25  Announcement

Kyota Uda
Student Chair, Yamagata University, Japan
DAY 2: FRIDAY OCTOBER 30 (Online Conference)

8:50-9:30
**Open**

9:30-9:40
**Announcement**

*Kyota Uda*
*Student Chair, Yamagata University, Japan*

Moderator: Erika Saito, Yamagata University, Japan

9:40-9:50
**CL-21** Analysis of Ear Hole Acoustic Feature by Method of Spreading Measurement Errors over a Wide Frequency Range

*Kousuke Ibaraki*, Shohei Yano and Naoki Wakui
*National Institute of Technology, Nagaoka College, Japan*

9:50-10:00
**CL-22** Relationship between Separation and Slice Interval in Similarity Comparison of Ear Canal

*Riki Kimura*, Shohei Yano, Naoki Wakui and Yoshitaka Ito
*National Institute of Technology, Nagaoka College, Japan*

10:00-10:10
**CL-23** Verification of the Relation between Clustering of Environmental Sounds and Accuracy in Ear Acoustic Authentication

*Ryo Yuki*, Shohei Yano and Naoki Wakui
*National Institute of Technology, Nagaoka College, Japan*

10:10-10:20
**CL-24** Verification of Ear Canal Obstruction in Ear Acoustic Authentication

*Pham The Thao*, Takayuki Arakawa, Takafuki Koshinaka, Shohei Yano and Naoki Wakui
*National Institute of Technology, Nagaoka College, Japan*
10:20-10:30

**CL-25**  Effect of Non-equilibrium Flow on Adsorption of Single Aβ Molecule on Lipid Membrane

*Akane Iida* and *Hideki Nabika*
*Yamagata University, Japan*

10:30-10:55  **Break (25min)**

Moderator: *Tomoka Suzuki*, Yamagata University, Japan

10:55-11:25

**IL-3**  Coarse-Grained Simulations on Reaction-Induced Phase Separation

*Yutaka Oya*, *Yoshinori Tomiyoshi*, *Toshihiro Kawakatsu* and *Tomonaga Okabe*
*Tohoku University, Japan*

11:25-11:35

**CL-26**  Effects of Conformer Distribution on Properties of Amorphous Organic Semiconductor Films

*Yoshihito Sukegawa*, Kaito Sato, Wataru Fujiwara, Hiroshi Katagiri and Daisuke Yokoyama
*Yamagata University, Japan*

11:35-11:45

**CL-27**  All-Atom Models of Polyethyleneimine Based Materials Interfaces for OLED Applications: A Molecular Dynamics Study

*Rikuo Suzuki*, Antonio De Nicola, Giuseppe Milano and Junji Kido
*Yamagata University, Japan*

11:45-11:55

**CL-28**  Automatic Detection and Classification of the "ima" Kanji in Wasan Documents

*Toya Suzuki*, Yago Diez, Marius Vila, and Katsushi Waki
*Yamagata University, Japan*

11:55-13:20  **Lunch (1h 25min)**

**Luncheon Seminar:** *Takayuki Kira* and *Motoki Miura*
*Department of City Life Studies, Utsunomiya Kyowa University*
IL-4  Metal-Organic Frameworks for New Polymer Chemistry

Takashi Uemura
Department of Advanced Materials Science, Graduate School of Frontier Sciences, The University of Tokyo, Japan

13:50-14:00

CL-29 Direct Synthesis of Thermally-Stable Semi-Aromatic Polyamides by Bulk Polycondensation Using Aromatic Diamine and Aliphatic Dicarboxylic Acid Compounds

Taiki Endo and Tomoya Higashihara
Yamagata University, Japan

14:00-14:10

CL-30 Highly Transparent and High Refractive Index Polymers by Radical Polymerization of Vinyl Sulfide Derivatives Containing Aromatic Heterocycles

Ibuki Watanabe, Yugo Sato and Hidcharu Mori
Yamagata University, Japan

14:10-14:20

CL-31 Etherification and Disproportionation Using Heterogeneous Catalyst and Application to Synthesis of Heavy Ether

Megumi Matsuda, Yasunobu Egawa, Yoshiharu Miyashita and Misato Kobayashi
Yamagata University, Japan

14:20-14:30

CL-32 Synthesis and Thermal Properties of Semi-Aromatic Polyimides with Long Alkylene and Substituted Phenylene Spacers

Akira Shimoda, Ryohei Ishige, Shinji Ando and Tomoya Higashihara
Yamagata University, Japan

14:30-14:55  Break (25min)
14:55-16:25
Poster Session (Breakout Rooms)

16:25-16:35
Review Comments and Award Ceremony

Takuya Komoda and Atsushi Miyabo
Yamagata University, Japan

16:35-16:45
Closing Remarks

Bungo Ochiai
Chair, Yamagata University, Japan
POSTER SESSION

PO-1 Development of Microcapsules for Thermal Storage Containing Phase Change Materials

Akito Honda, Ryota Takahashi and Toshinori Makuta
Yamagata University, Japan

PO-2 Synthesis of All-Conjugated N-Type Multiblock Copolymers and its Application to All-Polymer Solar Cells

Aoto Kato, Chu-Chen Chu and Tomoya Higashihara
Yamagata University, Japan

PO-3 In-situ Observation of Pouring a High-Viscosity liquid

Chisa Miyazawa, Koichi Sakagami, Naoki Konno and Yoshimune Nonomura
Yamagata University, Japan

PO-4 Preparation of Cu2SnS3 Thin Films by Co-Evaporation and Annealing for Solar Cells

Daiki Mota
National Institute of Technology, Nagaoka College, Japan

PO-5 Preparation of Biodegradable Capsules Containing Juvenile Hormone Analogues by PGSS Method

Hiroki Sakai, Tanjina Sharmin, Taku M. Aida, Miyuki Nakamura and Kenji Mishima
Fukuoka University, Japan

PO-6 Low-Temperature Atomic Layer Deposition of Fe₂O₃ Using Bis(N-N’ Diisopropyl Propion Amidinate)Iron and Plasma-Excited Humidified Argon

Issei Nagata, Kentaro Saito, Kensaku Kanomata, Kazuki Yoshida, Masanori Miura, Bashir Ahmmad, Shigeru Kubota and Fumihiko Hirose
Yamagata University, Japan

PO-7 Nanooxide Coated ZnS Inorganic EL by Using Room Temperature Atomic Layer Deposition

Keishi Nakazawa, Kazuki Yoshida, Masanori Miura, Kensaku Kanomata, Bashir Ahmmad, Shigeru Kubota and Fumihiko Hirose
Yamagata University, Japan
PO-8  Operation Mechanism of TiO$_2$ Nanochannel Thin Film Transistor for UV and Gas Sensing

**Keito Sogai**, Bashir Ahmmad, Shigeru Kubota and Fumihiko Hirose
*Yamagata University, Japan*

PO-9  Optical Property Controls of DUV-Plasmon Using Micro-Actuated Diaphragms

**Kenji Takahashi**, Nobuhiro Chizawa, Kazune Ikeda and Hiroaki Nishiyama
*Yamagata University, Japan*

PO-10  Preparation of Microcapsules Using Pickering Emulsion

**Koichiro Shibata**, Shinichi Tokunaga, Tanjina Sharmin, Taku Aida and Kenji Mishima
*Fukuoka University, Japan*

PO-11  Tree Top Detection and Classification Using Computer Vision and Deep Learning Techniques

**Koma Moritake**, Yago Diez, Ha Trang Nguyen, Sarah Kentsch and Maximo Larry Lopez-Caceres
*Yamagata University, Japan*

PO-12  The Effective Thermal Conductivity of Al$_2$O$_3$-Water Nanofluids

**Kyohei Oyama** and Masato Akamatsu
*Yamagata University, Japan*

PO-13  Micro-Coating of SiO$_2$ Particles with PCL10000 Using PGSS Process

**Mamoru Yata**, Hiroki Sakai, Tanjina Sharmin, Taku M. Aida and Kenji Mishima
*Fukuoka University, Japan*

PO-14  NIR-driven Deformation of PNIPAM Microgels Using Plasmonic Focusing Effects

**Masaki Nakajima**, Wataru Tabata, Shun Odasima, Akihiro Abe and Hiroaki Nishiyama
*Yamagata University, Japan*

PO-15  Micro-Domain Structure Change in Polyurethanes with Various Polyols

**Masanari Kondo** and Go Matsuba
*Yamagata University, Japan*
PO-16  Curing Behavior, Adhesion, and Decomposition Properties of Cured Products Obtained by Curing of Bifunctional Glycidate with Anhydrides

Miharu Yashima, Yoshimasa Matsumura and Bungo Ochiai  
Yamagata University, Japan

PO-17  Design, Synthesis, and Biological Evaluation of a Highly Water-Soluble Psoralen-Based Photosensitizer

Miyu Eda, Yoshiyuki Uruma, Keita Sakamoto, Yuki Kato, Ping-Shan Lai, Kunishige Onuma and Futoshi Okada  
National Institute of Technology, Yonago College, Japan

PO-18  Friction Dynamics of Human Hair Treated with Cationic Surfactant

Momoka Sano and Yoshimune Nonomura  
Yamagata University, Japan

PO-19  Extraction of Functional Components from Perilla Frutescens Leaves Using Liquid Carbon Dioxide

Ren Akiyama, Hiroki Sakai, Tanjina Sharmin, Taku Aida, Miyuki Nakamura and Kenji Mishima  
Fukuoka University, Japan

PO-20  Micro Coating of Antibacterial Agent with Polymer Using PIPS Method

Ryo Goto, Tanjina Sharmin, Taku M. Aida and Kenji Mishima  
Fukuoka University, Japan

PO-21  Fabrication of Tactile Display Using Arrayed SMA Actuator on Si TSV Substrate with Individually Conducting Diode

Ryo Saito, Yusuke Kimura, Jiale Xu and Takashi Mineta  
Yamagata University, Japan

PO-22  Synthesis and Characterization of Novel Triazine-Based Poly(Phenylene Sulfide)s with Pendent Sulfur-Containing Aromatic Groups

Ryosuke Takahashi and Tomoya Higashihara  
Yamagata University, Japan

PO-23  Study on Plasma-Enhanced Chemical Vapor Deposition of DLC Thin Films at Atmospheric Pressure

Ryota Nishimura and Hiroyuki Yoshiki  
National Institute of Technology, Tsuruoka college, Japan
PO-24 Preparation of Cu$_2$GeS$_3$ Thin Films by Co-Evaporation and Annealing for Solar Cells

**Ryota Ohashi**, Daiki Motai, Yoji Akaki and Hideaki Araki
National Institute of Technology, Nagaoka College, Japan

PO-25 The Effect of Hydrophilicity on Phase Separation and Crystallization of Blends of Fluorine Resin and PMMA

**Ryota Sato**, Go Matsuba, Shuhei Yamaguchi, Masaji Komori and Akiyoshi Yamauchi
Yamagata University, Japan

PO-26 Development of Lanthanide Nanoparticle Included Near-Infrared Compatible Photosensitizer

**Seiya Endo**, Yoshiyuki Uruma, Yuki Kato, Keita Sakamoto, Ping-Shan Lai, Kunishige Omura and Futoshi Okada
National Institute of Technology, Yonago College, Japan

PO-27 Study on Structural Analysis of Ethylene Ionomer Containing Two Kinds of Metal Ions

**Shunsuke Murayama** and Go Matsuba
Yamagata University, Japan

PO-28 A Study on Extraction of Ear Canal Shape Using MRI

**Shunsuke Tanaka**, Shohei Yano, Naoki Wakui and Naoki Kodama
National Institute of Technology, Nagaoka College, Japan

PO-29 Versatile Direct Laser Writing of Non-Photosensitive Materials Using Multi-Photon Reduction Reduction-Based Assembly of Nanoparticles

**Takashi Omori**, Kan Umetsu, Kaito Kimura and Hiroaki Nishiyama
Yamagata University, Japan

PO-30 Room-Temperature Atomic Layer Deposition of Silica and Aluminosilicate Multiple Layers and its Application for Ion Sorption

**Takeru Saito**, Yoshiharu Mori, Bashir Ahmad, Shigeru Kubota and Fumihiko Hirose
Yamagata University, Japan

PO-31 Egg White Processing of Using Ultrasonically Generated Microbubbles

**Takeshi Takita** and Toshinori Makuta
Yamagata University, Japan
PO-32  Electrical Conductivity Modulation in PCBM-doped Lipid Bilayer by Parallel Electric Field to the BLM Surface

Yusuke Yamaki, Daisuke Ishikawa, Kensaku Kanomata, Ayumi Hirano-Iwata, Fumihiko Hirose
Yamagata University, Japan

PO-33  Electrochemical Nano-Turing Pattern of ZnO/Rhodamine B Hybrid Thin Film

Hana Kudo, Tensho Nakamura, Kyota Uda, Yuki Tsuda, Lina Sun, and Tsukasa Yoshida
Yamagata University, Japan