Program

July 28th (Mon.)		
16:00-17:00	Registration; at Tokyo Denki University Building 1, 2F, Room 1204	
17:00-18:00	move time	
18:00-20:00	Welcome reception; at World Beer Museum Tokyo Skytree Town Solamachi Store, Members & non-members (except students)	
July 29th (Tue.), Building 1, 2F Room 1204 (Main ROOM)		
Chair: Profs. Yukihiro SAKAMOTO and Yohan YOON		
08:40-08:45	Opening remark	Mitsuya MOTOHASHI, Tokyo Denki University, Japan
08:45-08:50	Congratulatory address	Yoon Kee KIM, Hanbat National University, Republic of Korea
08:50-09:25	1.Plenary	Mesoscopic Structures and Their Dislocations, Mitsuya MOTOHASHI, Tokyo Denki University, Japan
09:25-10:00	2.Plenary	Materials design of low-latency/low-loss dielectric substrates exploiting silicate ceramic nanofillers, Do-Kyun KWON, Korea Aerospace University, Republic of Korea
10:00-10:10	Photograph of all participants	
10:10-10:30	Coffee break	
Chair: Profs. Yasushi INOUE and Chang Kyu JEONG		
10:30-10:55	3. Invited	Laser-Assisted Fabrication of Nanomaterials in Liquid for Photocatalytic Applications, Sergei A. KULINICH*, * Tokai University, Research Institute of Science and Technology, Japan
10:55-11:20	4. Invited	Possible Strategies to Overcome Linear Scaling Relation, Yoon Kee KIM, Kihyun SHIN*, Hanbat National University, Republic of Korea
11:20-11:45	5. Invited	Synthesis of inverse opal TiO_2 thin film with a pseudo-single-crystal framework for enhanced photocatalytic activity, Rikuto UCHIDA, Takaharu KIUCHI, Norihiro SUZUKI, Tokyo Denki University, Japan
11:45-12:10	6. Invited	Strategies for the Advanced Electrocatalysts to Enhance the Oxygen Evolution Reaction in Water Electrolysis, Sungwook MHIN[1,*], Hayun JEON[2], Minju KIM[2], [1]Dongguk University, [2]Kyonggi University, Republic of Korea

12:10-13:30	Lunch	
Chair: Profs. Yoichi KAMIHARA and Jiwon JUNG		
13:30-15:00	Poster	
15:00-15:10	Coffee break	
Chair: Profs. Shigeto HIRAI and Jaeyeong HEO		
15:10-15:35	7. Invited	Control of Microstructure and Micropatterning of Carbon-based Functional Materials for Soft Electronics, Jung Woo LEE*, Pusan National University, Republic of Korea
15:35-16:00	8. Invited	Deposition of Amorphous Silicon Carbon Nitride Films Using High-Density Plasma with Duty-Ratio-Controlled Substrate Temperature, Ippei TANAKA*, Yuki HATAE*, Yasunori HARADA*, University of Hyogo, Japan
16:00-16:15	9. Contributed	Influences of Electrode Geometry on Electrochromic Properties of InN, Yuto ARAKI*, Yasushi INOUE*, Osamu TAKAI**, *Chiba Inst. Technol., **Surf. Superatom. Adv. Mater. Eng., Japan
16:15-16:40	10. Invited	Chemical Resistance Property of Electroless Deposited Ni -Sn -P Layers Having High Sn Content, Futoshi MATSUMOTO*, Manato MIZUSHINA**, Akimasa KAWAI**, Mika FUKUNISHI*, *Kanagawa University, **Sun Industry Co.,LTD., Japan
16:40-17:05	11. Invited	3D-printed plastic UWB antenna metalized with conductive paint, Satoshi KOUYA and Mitsuya MOTOHASHI, Tokyo Denki University, Japan
17:05-17:30	12. Invited	Enhancing mixed gas discrimination in e-nose system: Sparse recurrent neural networks using transient current fluctuation of SMO array sensor Sooncheol KWON*, Dongguk University-Seoul, Republic of Korea
17:30-18:30	move time	
Chair: Profs. Mitsuya MOTOHASHI and Byung-Koog JANG		
18:30-20:30	Banquet & ceremony; at Asakusa View Hotel All participants including students	

Program

July 29th (Tue.), Building 1, 2F Room 1205 (2nd ROOM)		
Chair: Profs. Ryosuke WATANABE and YongJoo KIM		
10:30-10:55	13. invited	Electrochemical and Electronic Modification of the Catalytic Surface for Highly Active and Durable Oxygen Evolution Catalysts, Shigeto HIRAI*, Jeevan Kumar PADARTI*, Tomoya OHNO*, *Kitami Institute of Technology, Japan
10:55-11:20	14. invited	Active learning approach in designing entropy alloy nanocatalyst, YongJoo KIM*, *Korea University, Republic of Korea
11:20-11:45	15. invited	Surface-Engineered Metal Oxide Nanomaterials for Room-Temperature NO_2 Detection via Flame Chemical Vapor Deposition, Myung Sik CHOI*, Kyungpook National University, Republic of Korea
11:45-12:10	16. invited	Biomass-Derived Functional Carbons as Electrodes for Next-Generation Energy Storage, Tirto PRAKOSO, Bandung Institute of Technology, Faculty of Industrial Technology, Graduate School of Chemical Engineering, Indonesia
12:10-13:30	Lunch	
Chair: Profs. Yoichi KAMIHARA and Jiwon JUNG		
13:30-15:00	Poster	
15:00-15:10	Coffee break	
Chair: Profs. Mitsuya MOTOHASHI and Kihyun SHIN		
15:10-15:35	17. invited	B-doped CVD diamond electrodes for electrochemical applications, Yukihiro SAKAMOTO[1], [1] Department of Advanced Materials Science and Engineering, Chiba Institute of Technology, Japan
15:35-16:00	18. invited	Device simulation of resistance-based memories using phase-field method, Yongwoo KWON*, Hongik University, Republic of Korea
16:00-16:25	19 invited	Design of Plasma-engineered Chlorine-repulsive Electrocatalysts for Seawater Batteries and Electrolysis, Hyunsu YANG, Oi Lun Helena LI*, Pusan National University, Republic of Korea

16:25-16:50	20. invited	Influence of calcination conditions during the deposition of sol-gel alumina passivation layers for silicon solar cells, Ryosuke WATANABE*, Mizuho KAWASHIMA**, Yoji SAITO**, *Hirosaki University, **Seikei University, Japan
16:50-17:15	21. invited	Review on Thermoelectric properties of a mixed anion layered compound $LaCu_{1-\delta}S_{1-x}Se_xO$ as a wide-gap semiconductor, Yoichi KAMIHARA, Keio University, Japan
17:15-17:30	22. contributed	Synthesis of nickel deficient hexagonal perovskite $BaNi_{1-x}O_{3-y}$ and its oxygen evolution reaction activity, Taisuke KAIZUKA*, Yoichi KAMIHARA*, *Keio University, Faculty of Science and Engineering, Japan

July 29th (Tue.) Building 1, 2F ROOM1206 (Poster)	
Chair: Profs. Yoichi KAMIHARA and Jiwon JUNG	
P1	The Relationship between the Electronic State of Pt in Pt-Based Nanoparticle Catalysts and their Electrochemical Catalytic Activity in the Oxidation of Small Organic Compounds, Tamaki MATSUMURA*, Mika FUKUNISHI*, Futoshi MATSUMOTO*, *Kanagawa University, Japan
P2	Composite Matrix of Relaxor Ferroelectric Polymer for Piezoelectric Nanogenerators, Hyunseung KIM, Chang Kyu JEONG, Jeonbuk National University, Republic of Korea, Republic of Korea
P3	Enhanced Crystallinity and Energy Harvesting Performance of Piezoelectric Composite Films, HakSu JANG, Hyejeong CHOI, Dong Yeol HYEON, Kwi-Il PARK, Kyungpook National University, Republic of Korea
P4	Surface coating and morphological change of cathode material particles for improving battery performance of lithium-ion batteries, Dahan SUI*, Mika FUKUNISHI*, Futoshi MATSUMOTO*, *Kanagawa University, Japan
P5	Microstructure and Mechanical Properties of AA5052/AA6061 Sheet Fabricated by Cold Roll-Bonding and Subsequent Annealing Gi-Hyun LIM [1], Sang-Hyeon JO [2], Hyeon-Jun HEO [3], Seong-Hee LEE [1], Department of Advanced Materials Science and Engineering, Mokpo National University, Republic of Korea
P6	Improved Electrochemical Properties of Silicon Nanoparticles by Particle Downsizing and Porous Surface Structuring, Hidetaka NOMURA*, Keisuke SATO*, *Tokyo Denki University, Japan
P7	**Cancel**
P8	Relation between surface roughness and surface free energy of PEEK resin, Takeru KIDA*, Karori KIDA** , Hiroyuki SAITO*, *Tokyo Denki University , **KDA Corporation, Japan
P9	Stacked Modules based on Bismuth Telluride and Tin Telluride for Multiple-Temperature Workable Thermoelectric Energy Conversion, Hyejeong CHOI*,**, Cheol Min KIM*,**, Kwi-Il PARK*,**, Kyungpook National University, Republic of Korea
P10	Exploration of transparent semiconductor by synthesis of $Sr_2CuZnSO_{3-\delta}$, Daiki FUJII*, Haruyoshi SUZUKI*, Kazuto FUKUDA*, Yoichi KAMIHARA*,**, Masanori MATOBA*,**., *Department of Applied Physics and Physico-Informatics Faculty of Science and Technology Keio University, Japan, **Center of Spintronics Research Network (CSRN), Keio University, Japan

P11	Comparative Antibacterial Evaluation of Green-Synthesized Silver Nanoparticles and Metal-Doped Carbon Quantum Dots, Seulah YANG[1], Hyojin JEONG[2], Uk SIM[3], Jinhyeok KIM[4], Sooim SHIN[1,2,5]*, [1] Department of Biotechnology and Bioengineering, College of Engineering, Chonnam National University, Gwangju, 61186, Republic of Korea, [2] Department of Biomaterials Convergence, College of Engineering, Chonnam National University, Gwangju, 61186, Republic of Korea, [3] Hydrogen Energy Technology Laboratory, Korea Institute of Energy Technology (KENTECH), Naju 58330, Republic of Korea, [4] School of Materials Science and Engineering, College of Engineering, Chonnam National University, Gwangju, 61186, Republic of Korea, [5] Department of Biomaterials Convergence, College of Engineering, Chonnam National University, Gwangju, 61186, Republic of Korea
P12	Zinc-tin Oxide Nanomaterial Produced by Laser Processing for Chemiresistive Gas Sensors, Ranyi ZHENG*, Sergei A. KULINICH**, Masaki HASHIDA**, Satoru IWAMORI**, *Graduate School of Engineering, Tokai University, **Research Institute for Science and Technology, Tokai University, Japan
P13	Plasma-Engineered PtRu / Nitrogen-Doped Carbon as Advanced Cathode Catalyst for High Performance and Durability in PEMFCs, Je-won LEE, LI Oi Lun Helena*, Pusan Nation University, Republic of Korea
P14	Leather Surface Modification by oxygen plasma and AOS treatment via UV lamp, Adel SANTO*, Masaki HASHIDA**, KLINICH A. Sergey**, Satoru IWAMORI**, *Tokai University Graduate School of Engineering, **Tokai University Research Institute of Science and Technology, Japan
P15	FeCoS-doped Conductive Polymer Hybrid Catalyst as Efficient Oxygen Evolution Reaction for Direct Seawater Electrolysis, Aye Myint Myat KYAW, Youri HAN, Oi Lun LI*, Pusan Nation University, Republic of Korea
P16	Improving Cell Adhesion of Poly (ether ether) Ketone, Takuto SUGO*, Masaki HASHIDA**, KLINICH A. Sergey**, Satoru IWAMORI**, *Tokai University Graduate School of Engineering, **Tokai University Research Institute of Science and Technology, Japan
P17	Synergistic Effects of Pt-Ni Nanoalloy and Nitrogen-Doped Graphene Oxide for Electrocatalytic Oxygen Reduction and Hydrogen Evolution Reaction, Seung Geun JO, Jung Woo LEE*, Pusan Nation University, Republic of Korea
P18	Influence on the Cell Adhesion of Polyimide by Ultraviolet Light Excitation Reaction Oxygen Species Treatment with Ethanol Addition, Junki MURAMATSU*, Masaki HASHIDA**, Sergei A. KULINICH**, Satoru IWAMORI**, *Tokai University Graduate School of Engineering, **Tokai University Research Institute of Science and Technology, Japan

P19	Enhancement of Heterojunction Interface Properties Using Tin - Phosphate Glass with Low-Temperature Glass Formation, Hyo-Min KIM*, Ye-Ji SON*, Seung-Wook KIM*, Dae-Yong JEONG*, *Program in Semiconductor Convergence, Department of Materials Science and Engineering, Inha University, Republic of Korea
P20	Effect of Oxidants in Electrolytic Sulfuric Acid on Anodic Oxidation of Aluminum Alloys, Masaaki TSUTSUMI*, Yukihiro SAKAMOTO**, Graduate school Chiba Institute of Technology, Japan
P21	Optimizing Magnetic Performance of Fe-Based Amorphous Alloy Powders by Coating a Uniform Glass Layer, Ye-Ji SON*, Seung-Wook KIM*, Hyo-Min KIM*, Dae-Yong JEONG*, *Program in Semiconductor Convergence, Department of Materials Science and Engineering, Inha University, Republic of Korea
P22	Effects of Substrates on Electrical Resistance and Optical Properties of BDD Synthesized using Mode Conversion Type MWPCVD, Chinatsu KATO*, Yukihiro SAKAMOTO**, *Graduate school, Chiba institute of technology, **Chiba institute of technology, Japan
P23	Electrochemical Urea Electrolysis with NiCoFeMnV Catalyst for Efficient Hydrogen Production, Chanmin JO[1], Minseo JEON[1], Gyoung Hwa JEONG[1], Uk SIM[1,2]*, [1]Korea Institute of Energy Technology (KENTECH), [2]Research Institute, NEEL Sciences, INC., Republic of Korea
P24	Characteristics of electroless Ni plating using hydrazine as a reducing agent, Takahiro SASAKI*, Mika FUKUNISHI*, Futoshi MATSUMOTO*, Tomoyuki FUJINAMI**, *Kanagawa University, **EEJA Ltd., Japan
P25	Preparation of black Cr-C electroplating films from chromium(III) sulfate bath, Ryudo TABATA*, Mika FUKUNISHI*, Futoshi MATSUMOTO*, *Kanagawa University, Japan
P26	Proposal for a Language-Integrated Chemistry Teaching Method Using an Organic Synthesis Experiment as Teaching Material, Akiko KIDO*, Mitsuya MOTOHASHI*, *School of Engineering, Tokyo Denki University, Japan
P27	Morphology and Electrochromic Properties of InN Thin Films Deposited by Glancing-angle Reactive Evaporation, Masaki WATANABE*, Yasushi INOUE*, Osamu TAKAI**, *Chiba Inst. Technol., **Surf. Superatom. Adv. Mater. Eng., Japan
P28	Optical Transparency of Ultra-hydrophobic SiO:CH Particle-deposited Films Fabricated by PECVD, Mayuki NISHIO*, Yasushi INOUE*, Osamu TAKAI**, *Department of Advanced Materials Science and Engineering, Chiba Institute of Technology, **Research Institute of Surface, Superatoms and Advanced Materials Engineering, Japan

P29	A Sample Approach to Teaching Science English with Simulations, Satomi TANAKA, Department of Natural Sciences, School of Engineering, Tokyo Denki University, Japan
P30	Comparison of LIPSS on Stainless Steel Using 515 nm Femtosecond and 355 nm Nanosecond Laser, Mikuru OKAZAKI*, Masaki HASHIDA, Satoru IWAMORI, Tokai University, Japan
P31	Exploring Biological Mechano-Electric Energy Harvesting Properties: Deep-Sea Tubeworm β-Chitin Nanofibrils Jimin KANG, Hyunseung KIM, Chang Kyu JEONG, Jeonbuk National University, Republic of Korea
P32	Fabrication of High-entropy-type metal chalcogenide thin films and evaluation of thermoelectric properties, Koki AMAGASA*, Aichi YAMASHITA*, Kota. MUROI*, Asato. SESHITA*, Yoshikazu. MIZUGUCHI*, *Tokyo Metropolitan University, Japan
P33	Irradiation resistance of high-entropy $REBa_2Cu_3O_{7-\delta}$ superconductors with multiple sites substitution Kota MUROI*, Aichi YAMASHITA*, Takuto KANEKO**, Yoshikazu MIZUGUCHI*, Naoko OONO**, Tamaki SHIBAYAMA***, *Tokyo Metropolitan University, **Yokohama National University, ***Hokkaido University, Japan

July 30th (Wed.), Building 1, 2F Room 1204 (Main ROOM)		
Chair: Profs. Aichi YAMASHITA and Myung Sik CHOI		
08:40-09:10	23. Plenary	JKMST's 10th Anniversary: Achievements and Future Prospects, Byung-Koog JANG, Kyushu University, Japan
09:10-09:35	24. invited	Disordered Anti-Fluorite Sulfide Cathode: Li_2S-CuS, Akira MIURA, Graduate School of Engineering, Hokkaido University, Japan
09:35-10:00	25. invited	Transmission Electron Microscopy-Based Microstructural Analysis of Hybrid Perovskite Solar Cells: From fundamental analysis to electron beam damage mitigation strategy, Tae Woong KIM*, Konkuk University, Republic of Korea
10:00-10:25	26.invited	Study on the Pre-Dispersion of Conductive Agent for Developing Thick Cathodes in Lithium-Ion Batteries, Jiwon JUNG*, Konkuk University, Republic of Korea
10:25-10:45	Coffee break	
Chair: Profs. Satoru IWAMORI and Do-Kyun KWON		
10:45-11:10	27. invited	Functionality and physical property of High-entropy-type thin films, Aichi YAMASHITA*, *Tokyo Metropolitan University, Japan
11:10-11:35	28. invited	Material engineering strategies towards higher reaction selectivity, Hyunah KIM*, Korea Aerospace University, Republic of Korea
11:35-12:00	29. invited	**Cancel**
12:00-12:15	30. Introduction of TDU Analysis Center	Policy and operation of measuring equipments at Tokyo Denki University, Takayuki SUZUKI, TDU Analysis Center, Tokyo Denki University, Japan
12:15-13:00	Lunch	
13:00-14:00	Excursion-I: Lab Tour of Analysis Center, TDU All participants including students	
14:00-17:30	Excursion-II: Free tours to art galleries, museums, and zoo in Ueno Park All participants including students	
17:30-18:00	move time	

18:00- 20:00	JKMST2025 executive committee dinner at Delirium Cafe Ueno Members & non-members (except students)