

TGSW2024 セッション実施報告書 / TGSW 2024 Session Implementation Report

1. セッション番号 / Session No.	3-1
2. セッション名 / Session Title	第10回エネルギー材料に関する東南アジア共同国際会議/The 10th Southeast Asia Collaborative Symposium on Energy Materials (SACSEM 10th)
3. 実施日時 / Date and Time	2024 年 10 月 2-4 日
4. 実施場所 / Venue	☐ 対面 (大学会館) / Face-to-face (University Hall) ☒ ハイブリッド / Hybrid (☒ Zoom ☐ Webex ☐ Teams ☐ Others() ☐ オンライン / Online (☐ Zoom ☐ Webex ☐ Teams ☐ Others()
5. セッションオーガナイザー / Session Organizer	氏名 / Name: 山本洋平 所属 / Department: 数理物質系 職名 / Position: 教授
6. 参加者数 / Number of Participants	総数 / Total Participants: [104] (日本人 / Japanese Participants: [43] 外国人 / Foreign Participants: [61]) ● 発表者 / Speakers and Presenters: [口頭 42 名、ポスター32 名] ● オンライン参加者 / Online Participants: [10 名] ● スタッフ / Staff: [2 名]
7. 関連する SDGs Relevane to SDGs	
8. セッション実施概要 / Session Summary 1)セッション概要(200 文字以内)/Summary of the session (within 100 words) 東南アジア(インドネシア、マレーシア、タイ、フィリピン、ベトナム)、東アジア(中国)、ドイツ、オーストラリア、イタリア、および日本の材料科学者を招き、エネルギー材料に関する国際シンポジウム(SACSEM 10th)を行う。SACSEM は 2018 年以降に9回開催しており、記念すべき第10回をつくばで行う。エネルギー材料、環境材料、電子材料、および放射光による材料解析の研究者が一堂につくばに会し、最新の研究成果について議論すると共に、国際共同研究ネットワークの構築と、教員・学生の密な交流を行う。 2)プログラム/ Program	

DAY1 : Ocrtober 2nd, Wednesday

Time	No	Affiliation	Presenter	Title
13:00-13:15	OP	U. Tsukuba	Mitsuyasu Kato(Vice President)	Opening Remarks
		U. Tsukuba	Yohei Yamamoto	
13:15-13:40	I01	ITB	Brian Yulianto	Metal Organic Framework Based Biosensors for Point of Care Detection of Infectious Disease
13:40-14:05	I02	UKM	Azizan Ahmad	Natural Rubber-Based Polymer Electrolytes for Electrochemical Devices: Modification, Challenges, Advances and Perspectives
14:05-14:30	I03	KMUTT	Surawut Chuangchote	Flexible and Stickable Perovskite Solar Cells
14:30-14:55	I04	NIMS	Yu Denis	Suppressing Formation of Zn-Mn-O Phases by In-situ Ti Decoration of MnO ₂ for Long Lifespan MnO ₂ -Zn Battery
Break				
15:20-15:45	I05	Univ. Newcastle	Ajayan Vinu	Nanoporous carbon based materials for clean hydrogen production
15:45-16:10	I06	ECNU	Shaoqiang Chen	Ultrafast lasing properties of perovskite microcavities
16:10-16:35	I07	AIST	Hiroshi Aoki	Biomedical and Environmental Analysis Based on DNA Sensor Arrays for Nucleotide Biomarkers
16:35-17:00	I08	UTP	Khairulazhar Jumbri	In-Situ Coated MOF UiO-66-NH ₂ on Graphite for Improved Anode Performance in Lithium-Ion Batteries
17:00-17:25	I09	Univ. Trento	Narges Ataollahi	Transforming Waste PET Bottles into Proton Exchange Membranes for Electrochemical Applications
17:25-17:50	I10	U. Tsukuba	Masaki Hada	Local atomic motions in van der Waals heterostructures observed by complementary ultrafast probes
17:50-18:00		NIMS	Masanobu Naito	Introduction of STAM

Group Photo

19:00~ Welcome Dinner Hokkaido (close to Tsukuba Station)

DAY2 : October 3rd, Thursday

Time	No	Affiliation	Presenter	Title
9:30-9:45	S01	U. Tsukuba	Ziwei Hu	Synthesis of Terminal-Modified Semiconducting Polymers and Elucidation of the Effect of Terminal Groups
9:45-10:00	S02	ITB	Xorell Ivanov Monov	Ambient-air processed perovskite CsPbBr3 thin films for solar cell applications
10:00-10:15	S03	UKM	Chai Kai Ling	Synthesis and Characteristics of Non-Edible Jatropha Oil Based Polyurethane Acrylate (PUA) Gel Polymer Electrolyte For Dye
10:15-10:30	S04	UDE	Mohammed-Ali Sheik	Doped NaSICON-Type Solid Electrolytes for Sodium-Ion Batteries from Scalable Spray-Flame Synthesis
Break				
10:50-11:05	S05	U. Tsukuba	Wei-Sheng, Wang	Development of automatic synthesis system for materials research
11:05-11:20	S06	STTT-Bandung	Syahla Andini Putri	Study On A Potential Of PVA/AgNO3 Nano Fiber As Anti Bacterial Materials Prepared By Electrospinning For Medical Application
11:20-11:35	S07	U. Tsukuba	Natsumi Noguchi	Assessment of Hydrogen Desorption and Absorption Properties of MgH2-Ni/HB composites
11:35-11:50	S08	UDE	Mena-Alexander Kräenbring	Coherent Workflows for Sustainable Electrocatalytic Hydrogenation Reactions with Pentlandite Catalysts
11:50-12:00		Daihatsu	Hidetomo Horikawa	Introduction of Daihatsu company
Lunch				
13:00-14:00	Poster Session			
Break				
14:15-14:40	I11	U. Tsukuba	Hiroko Tokoro	Direct observation of Magnetic Domain and Magnetization Reversal on Prussian Blue-based magnetic film
14:40-15:05	I12	KMUTT	Patiya Kemacheevakul	Wastewater Treatment by Photocatalytic Process Using Photocatalyst-coated Materials
15:05-15:30	I13	UKM	Lee Tian Khoon	Assessing the Efficacy of Natural rubber based functional methyl methacrylate binder for Lithium-ion batteries
15:30-15:55	I14	NIMS	Tang Daimin	Chirality Engineering for Ultimate Carbon Nanotube Electronics
Break				
16:15-16:40	I15	KEK	Tetsuya Yokoo	Neutron Scattering as a Common Technique for Energy Material Researches
16:40-17:05	I16	STTT-Bandung	Resty Mayseptheny Hernawati	Natural Rubber Foam as Potential Blunt Trauma Pad for Soft Body Armor Application
17:05-17:30	I17	Kyushu Univ.	Junji Nakamura	Heterogeneous Catalysis Contributing to a Carbon-Neutral Society
17:30-17:55	I18	VAST	Nguyen Huy Dan	Research on manufacturing high coercivity hard magnetic materials

18:30~ Banquet Soup Factory

DAY3 : October 4th, Friday

Time	No	Affiliation	Presenter	Title
9:30-9:45	S09	U. Tsukuba	Kenji Hayashida	Activation mechanism of carbon catalyst for oxygen reduction reactio
9:45-10:00	S10	ITB	Miftahul Khoiri	Synthesis and Characterization of Nickel Cobalt Phosphate Electrode to Improve the Performance of Hybrid Supercapacitor
10:00-10:15	S11	Univ. Newcastle	Ayush Kumar	p-Nitrophenol reduction using transition metal supported zeolites
10:15-10:30	S12	UKM	Nurul Akmaliah	Graphene-Enhanced Lithium-Ion and Alternative Batteries: Pioneering Malaysia's National Green Economy
Break				
10:50-11:05	S13	U. Tsukuba	Muhammad Rezki	Enhancing Enzyme Electrode Performance Using Metal-Organic Frameworks for Advanced Biosensing Applications
11:05-11:20	S14	ECNU	Deyang Qin	High efficiency Sb ₂ (S, Se) ₃ thin-film solar cells by substrate-temperature-controlled vapor transport deposition method
11:20-11:35	S15	UDE	Adil Amin	Amorphous Silicon/Carbon Composite-Based Hierarchically Structured Supraparticles for Lithium-Ion Battery Anodes
11:35-11:50	S16	U. Tsukuba	Sota Nakayama	Near-unity angular anisotropy of circularly polarized luminescence from microspheres of monodispersed chiral conjugated polymer
11:50-12:05	S17	KMUTT	Kamonthip Singbumrung	Influence of Size and Shape of ZnO Photocatalysts in Natural Rubber Latex Foam on Antibacterial Applications
Lunch				
13:00-14:00	Poster Session			
Break				
14:15-14:40	I20	ITB	Arie Wibowo	Visible light-driven photocatalyst for synthetic dyes remediation
14:40-15:05	I21	UTP	Hayyiratul Fatimah Mohd Zaid	Molecular Interactions of Zinc-based Metal-Organic Framework Cluster and 1-Butyl-3-Methylimidazolium Chloride: Structural and
15:05-15:30	I22	NIMS	Yukari Katsura	Starrydata: A Data-Curation Project from Material Property Plots on Published Papers
15:30-15:55	I23	STTT-Bandung	Hendra	Micrometer-Scale Optical Web Made of Spider Dragline Fibers with Optical Gate Operations
15:55-16:20	I24	U. Tsukuba	Muneaki Hase	Diamond Nonlinear Photonics — Realizing Spatiotemporal Extreme Sensing Using Diamonds
16:20-16:30	Prize Announcement			
16:30-16:40	CL	U. Tsukuba	Muneaki Hase	Closing Remarks

17:30-19:00 Farewell Reception (Tsukuba Demi)

Poster Session

DAY2 : October 3rd, Thursday

	Presenter	supervisor	Affiliation	title
1	Sarita Manandhar	Lok Kumar Shrestha	Univ. Tsukuba	Nanoarchitectonics of Biomass Carbon for Energy Storage Technology
2	Chenxiao YE	Denis YU	Univ. Tsukuba	Enhancement of Reversibility and Capacity of Silicon Based Electrodes through Various Parameters
3	Sabina SHAHI	Lok Kumar Shrestha	Univ. Tsukuba	Energy Performance Advancement by Tuning Nano-space of Hollow Carbon Spheres
4	Sabrina Schleich		UDE	Synthesis and characterization of high entropy oxide nanoparticles
5	Novi Dwi Widya Rini	Lok Kumar Shrestha	Univ. Tsukuba	3D Printed Scaffold using Polycaprolactone/Fullerene (C60) Nanorod for Bone Tissue Engineering
6	Yui Iwasaki	Masaki Hada	Univ. Tsukuba	Observing electronic dynamics in the conduction band of 2H-MoTe2 by using double-excitation ultrafast electron diffraction
7	YANG LUOTING		ECNU	T Perovskite photonic crystal of CsPbBr3 on patterned substrates and its laser properties
8	Sundas Rani	Yohei Yamamoto	Univ. Tsukuba	Chiral Gels of Polymer for the Fabrication of Organic Electrochemical Transistors
9	Mads Nybo Sørensen	Takashi Nakamura	Univ. Tsukuba	Synthesis and Properties of Azobenzene Containing Salen Based Macrocycles and Molecular Cages
10	Nurfauzi Abdilllah	Takashi Suemasu	Univ. Tsukuba	Carrier Properties and The Possible Cause for Low Donor Activation of As-doped BaSi2 Thin Films
11	PEI ZHENHAO	Cheng Xiaohong	ECNU	Manganese-doped perovskite microcavities are used in laser resonators
12	Leon Müller		UDE	Spray-Flame Synthesis of Mn and V Substituted Perovskite-Type LaCoO ₃
13	Rabindra Nath Acharyya	Lok K. Shrestha	Univ. Tsukuba	Carbon Composites from Novel Metal Organic Framework on Fullerene Assemblies (MOF@C) for Energy Conversion Application
14	Toni Subagja	Sepehri Amin Hosseini	Univ. Tsukuba	Influences of Co on the coercivity of (Sm _{0.8} Zr _{0.2})(Fe _{1-x} Cox) _{0.5} -based magnets
15	Shunya Aoyagi	Yohei Yamamoto	Univ. Tsukuba	Highly dopable Excited-State Intramolecular Proton Transfer molecule-based microsphere WGM laser
16	Riku Seiki	Hiroko Tokoro	Univ. Tsukuba	Relationship between Heat Storage Properties and Crystallite Size of Lambda-Type Titanium Pentoxide
17	Zhichao Wei	Yasuo Norikane	Univ. Tsukuba	Effect of Alkyl Chain Length on Photoinduced Crystal-Liquid Phase Transition in Para-Alkoxy Azobenzenes

DAY3 : October 4th, Friday

	Presenter	supervisor	Affiliation	title
18	Ammara Firdous	Takashi SUEMASU	Univ. Tsukuba	Computational Insights into Schottky barrier height of vertical Graphene and Borophene with XSi ₂ N ₄ (X= Mo, W) monolayers
19	MARYAM HASSAN		UKM	Flower-like Cu ₂ ZnSnS ₄ (CZTS) Transition Metal Sulphides (TMS) as a Micro-structured Electrode in Lithium Rechargeable Battery
20	KARIANA KUSUMA DEWI	Yohei Yamamoto	Univ. Tsukuba	Monodispersed Organic Microcavities from Inkjet Printer as Biological Optical Probes
21	Anmol Sharma	Takao Mori	Univ. Tsukuba	Enhanced Thermoelectric Properties of PANI/ZnSb nano nanocomposite flexible films
22	Makoto Okumura	Yohei Yamamoto	Univ. Tsukuba	Controlling the Rotational Behavior of Chiral Polymer Spheres with Optical Tweezers
23	Aamir Muhammad Fasih	Takao Mori	Univ. Tsukuba	Contact material optimization for the Mg ₃ (Sb,Bi) ₂ based thermoelectric compounds
24	SINGH RAVI	Takahiro Kondo	Univ. Tsukuba	Systematic study of structural effects for proton and oxygen transport on nitrogen-doped carbon catalysts
25	Syadza Aisyah Hermadanti	Isa Anshori	ITB	Development of Flower like-nanocomposite Based Mg(Ti _{0.99} Sn _{0.01})O ₃ Decorated on Reduced Graphene Oxide (rGO) as Supercapacitor Electrodes
26	LI WEIQI	Junpei Kuwabara	Univ. Tsukuba	Development of an efficient and air-stable Pd(II) precatalyst
27	Masato Kato	Yohei Yamamoto	Univ. Tsukuba	Electrically Switchable Organic Droplet Lasers for Laser Display
28	Xiong Tianya	Junpei Kuwabara	Univ. Tsukuba	Investigation of Regioselectivity and Reactivity in the Cross-Dehydrogenative Coupling Reaction of Disubstituted Benzenes with Polyfluoroarenes
29	Li Jinyu	Takahiro Kondo	Univ. Tsukuba	Exploration and evaluation of new elements of non-metallic substances r-BS by high-pressure synthesis
30	Valentinus Alphano Dabur	Arie Wibowo	ITB	the synthesis of visible-light-driven photocatalyst material using rGO/ZnO/Fe ₂ O ₃ derived from zinc dross for synthetic dye degradation
31	Kushal Mehrotra	Takao Mori	Univ. Tsukuba	Enhancing Thermoelectric and Mechanical Properties of YbMg ₂ (Bi,Sb) ₂ Zintl Phase through Anion site substitution
32	Angayarkanni Ramamurthy Dilipan	Sepehri-Amin Hosseini	Univ. Tsukuba	Combinatorial sputtering synthesis of TbCu ₇ -type Sm-Fe based compounds: A study on phase, composition, and extrinsic magnetic properties



The 10th Southeast Asia Collaborative Symposium on Energy Materials (SACSEM 10th)

October 2 – 4, 2024

University Hall at University of Tsukuba





University of Tsukuba

3) 発表・討論の内容 / Content(s) of presentation(s) and discussion

エネルギー材料、環境材料、電子材料、および量子ビームによる材料解析に関する招待講演 23 件、学生講演 17 件、学生ポスター講演 32 件を行った。また、スポンサーであるダイハツ工業株式会社の会社紹介および NIMS の機関誌である STAM の紹介が行われた。

4) 結論または成果 / Conclusion(s) or outcome

3 日間のインポジウムで、9 カ国 15 研究機関よりご参加頂き、盛会のうちに幕を閉じた。学生講演の中で、Daihatsu 賞 1 件、STAM 賞(口頭)3 件、STAM 賞(ポスター)4 件、および SACSEM 賞 3 件を選定した。スポンサーとなっていたダイハツ工業株式会社より 20 万円の寄付金を頂いた。

5) その他(あれば)/ Others (if applicable)

次回(SACSEM 11th)の開催はマレーシア(筑波大学マレーシア校、マレーシア国民大学、ペトロナス大学)。次々回(SACSEM 12th)の開催地はオーストラリア(ニューカッスル)で ICEAN2026 とのジョイント開催を予定。

使用言語 / Language used: 英語 / English (100%), 日本語 / Japanese (0%),
その他 / Other Language (0%)

9. 写真 / Photos



写真 1 / Photo 1

写真の説明 1 / 全体の集合写真



写真 2 / Photo 2

写真の説明 2 / 受賞者の集合写真



写真 3 / Photo 3

写真の説明 3 / 2 日の懇親会の写真



写真の説明 4 / シンポジウムの様子

報告者名 / Reported by : 山本洋平 (所属 / Department 数理物質系)