

ICPMAT

1-4 December
Chiang Mai, Thailand

19th International Conference on the Physical Properties
and Application of Advanced Materials (ICPMAT2025)

Chiang Mai Marriott Hotel, Thailand

Programme Book

Organized by





Programme at a Glance

1 December 2025

13.00-17.30	Registration and Poster setup (Foyer, 4 th Floor)
17.30-19.00	Welcome reception (Terrace, 3 rd Floor)

2 December 2025

Time/Room	SUTHEP HALL				
08.00-08.30	Registration (Foyer, 4 th Floor)				
08.30-09.15	Opening Ceremony				
09.15-10.00	PL01 Removal of Fe and Si from Aluminum via Extraction and Phase Separation Using Sn bath, Prof. Hideki ONO , University of Toyama, Japan Chair: Distinguished Prof. Dr. Torranin Chairuangsrri				
10.00-10.15	Morning Break				
Room	PASSAGE	EXPEDITION	JOURNEY	VOYAGE	EXCURSION
Parallel Sessions	Structural Materials (S1)	Materials Processing and Engineering (S3)	Materials Processing and Engineering (S3)	Other Topics Related to Materials and Nanotechnology (S5)	Consortium* (S6)
Chairs	Dr. Enzo LIOTTI	Dr. Dongting Wu Dr. Narin Jantaping	Assoc. Prof. Dr. Nam Nguyen Duong	Prof. Daniel C.W. Tsang	Assoc. Prof. Dr. Kedsarin Pimraksa Assoc. Prof. Dr. Thapanee Sarakonsri
10.15-10.35	S1_IV01, S1_01, S1_02, S1_06, S1_09, S2_03, T01	S3_IV01, S3_IV02, S3_01, S3_02, S3_03, S3_05	S3_IV04, S3_011, S3_013, S3_014, S3_016, S3_017, T02	S5_IV01, S5_02, S5_03, S5_04, S5_06, S6_07, T03	IT01, IT02, IT03
12.00-13.00	Lunch				
13.00-13.45 SUTHEP HALL	PL02 The Effect of Grain Boundary Structure on Nucleation and Growth of Theta (CuAl2) Precipitates in Al-5 wt% Cu Prof. Gary J. SHIFLET , University of Virginia, USA Chair: Dr. Anchalee Manonukul				
Parallel Sessions	Advanced Materials Characterization Techniques and Instrumentations (S2)	Materials Processing and Engineering (S3)	Materials Processing and Engineering (S3)	Other Topics Related to Materials and Nanotechnology (S5)	Consortium* (S6)
Chairs	Dr. Sarka MIKMEKOVA Prof. Pengchao Si	Dr. Shuwei Duan	Prof. Malgorzata LEWANDOWSKA	Prof. Lishu Zhang	Asst. Prof. Dr. Chaiyasit Banjongprasert Dr. Suphitcha Moonngam
14.00-15.25	S2_IV01, S2_IV02, S2_01, S2_04, S2_05	S3_IV03, S3_06, S3_07, S3_08, S3_09	S3_IV05, S3_018, S3_019, S3_020, S3_023	S5_IV02, S5_08, S5_09, S5_010, S5_011	S6_09, S6_010, S6_012, S6_011, S6_04, S6_01
15.25-15.40	Afternoon Break				
Parallel Sessions	Advanced Materials Characterization Techniques and Instrumentations (S2)	Materials Processing and Engineering (S3)	Materials Processing and Engineering (S3)	Other Topics Related to Materials and Nanotechnology (S5)	Consortium* (S6)
Chairs	Prof. Ilona MÜLLEROVÁ Asst. Prof. Avala LAVAKUMAR	Dr. Anchalee Manonukul	Prof. Injoon SON	Asst. Prof. Dr. Yothin Chimupala	Assoc. Prof. Dr. Panchika Prangkio, Asst. Prof. Dr. Runglawan Somsunan
15.40-17.20	S2_IV03, S2_IV04, S2_06, S2_07, S2_09	S3_030, S3_033, S3_035	S3_IV06, S3_024, S3_025, S3_026	S5_012, S5_013, S5_014	S6_02, S6_08, S6_05, S6_03, S6_013, S6_07, S6_06
17.00-18.30	Poster Session (4 th Floor)				
18.30-21.00	Banquet (SUTHEP HALL, 4 th Floor)				

3 December 2025

Time/Room	SUTHEP HALL				
08.30-09.00	Registratioin (Foyer, 4 th Floor)				
09.00-10.00	PL03 In situ Electron Microscopy - Data Analytics, Prof. Mitsuhiro MURAYAMA , Virginia Tech, USA Chair: Asst. Prof. Dr. Chaiyasit Banjongprasert				
10.00-10.15	Morning Break				
10.15-10.35	Chair: Asst. Prof. Dr. Chaiyasit Baanjongprasert S3_IV07 Research Project on Recycling of Aluminum in Toyama - Joining of Recycled Aluminum Alloy, Prof. Toshiya SHIBAYANAGI				
10.35-10.55	S2_IV05 Investigating the solidification of 'dirty' recycled aluminium alloys with X-ray imaging and artificial intelligence, Dr. Enzo LIOTTI				
10.55-11.15	S2_IV06 Filtered Secondary Electron Imaging: Energy- and Angle-Resolved Contrast in SEM, Dr. Sarka MIKMEKOVA				
11.15-12.00	Closing Ceremony				
12.00-13.30	Lunch				

*Consortium for Nurturing High-Performance Postdoctoral and Postgraduate Researchers in Materials Science and Technology to Drive Thailand to BCG Economy Year 3(S6)

Programme: 2 December 2025, Parallel Sessions

Time/Room	Room: PASSAGE, 3rd Floor
Session:	Structural Materials (S1) Chairs: Dr. Enzo LIOTTI
10.15–10.35	S1_IV01 High-Entropy Oxide Spinel s as Functional Coatings for SOFC Interconnects: Structure and Properties Prof. Miroslaw STYGAR
10.35–10.50	S1_01 Correlation Between Hardness, Tensile Properties and Microstructure in Cold-Rolled and Aged of Al-Mg-Si-Cu Alloy, Ngoc Hai Vu
10.50–11.05	S1_02 Precipitation behavior in natural aged of Al-Mg-Si alloy containing Silicon in excess at peak hardness SY QUAN TRAN
11.05–11.20	S1_06 Formation Mechanism and Microstructural Evolution of Mullite Engobe beneath Celadon Glazes from Rice Husk Ash for Stoneware Wall Tiles Asst. Prof. Dr. Nophawan Dechboon
11.20–11.35	S1_09 Electron Microscopy of Unusual Phases in Cast Ni-Al Bronze, Distinguished Prof. Dr. Torranin Chairuang sri
11.35–11.50	S2_03 The relationship between hardness and microstructure in Zn/Mg ratio-controlled Al–Zn–Mg alloys aged at 200 °C, Wanlalak Sanphiboon
11.50–12.05	Technical talk: Microscope Applications in Materials Research, Wasapon Fuangsawat, Keyence (Thailand) Co., Ltd.
12.05–13.00	Lunch
13.00–13.45 SUTHEP HALL	PL02: Prof. Gary J. SHIFLET
Session:	Advanced Materials Characterization Techniques and Instrumentations Chairs: Dr. Sarka MIKMEKOVA, Prof. Pengchao Si
14.00–14.20	S2_IV01 Time-of-Flight Spectroscopy for Exploring Electron Scattering in 2D Materials and Ultrathin Films, Prof. Ilona MÜLLEROVÁ
14.20–14.40	S2_IV02 Nature of different deformation modes of a new metastable body-centered cubic Ti35Hf25Zr25Nb5Ta5Al5 high entropy alloy, Asst. Prof. Avala LAVAKUMAR
14.40–14.55	S2_01 Particle pushing and engulfment phenomenon in Al-TiC nanocomposites: Bridging experiments, physical models, and Cellular Automata-Finite Differences method, Dr. Ewa Olejnik
14.55–15.10	S2_04 Machine learning aided nanoscale visualization of grain boundaries using electron diffraction mapping, Asst. Prof. Dr. Shiro Ihara
15.10–15.35	S2_05 Effect of thermomechanical treatment on α -phase precipitation in Al-Cu-Mg alloys, Assoc. Prof. Seungwon Lee
15.35–15.40	Afternoon Break
Session:	Advanced Materials Characterization Techniques and Instrumentations Chairs: Prof. Ilona MÜLLEROVÁ and Asst. Prof. Avala LAVAKUMAR
15.40–16.00	S2_IV03 Lithium Nitrate Tailored Low-Temperature Electrolyte with a high voltage window over 5.5V and operation at wide-temperature-range, Prof. Pengchao Si
16.00–16.20	S2_IV04 Motivational Concepts for the Nobel Prize 2025: Development of Metal-Organic Frameworks (MOFs) Dr. Brij Mohan
16.20–16.35	S2_06 Effect of additive manufacturing method on the corrosion resistance of sintered materials produced by metal 3D printers, Kenta Makizaki
16.35–16.50	S2_07 Structural, magnetic and mechanical characterisation of Fe-Co-Ni-Mn-Ti medium-entropy alloys prepared by mechanical alloying, spark plasma sintering and arc-melting, Dr. hab. Lukasz Hawelek
16.50–17.05	S2_09 Infrared FEL-Induced Alteration of Zeta Potential in Electro-chemically Grown Quantum Dots: Insights into Ion Modification Asst. Prof. Dr. Sukrit Sucharitakul
17.00–18.30	Poster Session

Time/Room	Room: EXPEDITION, 3rd Floor
Session:	Materials Processing and Engineering (S3) Chairs: Dr. Dongting Wu, Dr. Narin Jantaping
10.15–10.35	S3_IV01 Friction Surfacing Deposition of High-Strength Aluminum Alloys: From Homogeneous Al-Cu-Li to Heterogeneous Al-Cu-Li/Al-Zn-Mg-Cu Structures Dr. Shuwei Duan
10.35–10.55	S3_IV02 Rethinking Metal Forming: Merging Old Wisdom with New Additive Technologies, Dr. Anchalee Manonukul
10.55–11.10	S3_01 Microstructural characterisation and hardness evaluation of bimetallic 316L/17-4PH stainless steel fabricated by filament-based material extrusion additive manufacturing Natthaphat Parsompech
11.10–11.25	S3_02 Manufacturing process and wear performance of metal matrix composites in the aspect of high temperature wettability Łukasz Szymański
11.25–11.40	S3_03 Effect of Infill Geometry and Density on the As-Printed Flexural Performance of 316L Specimens Fabricated by Material Extrusion Additive Manufacturing Pharadee Suwannak
11.40–11.55	S3_05 Enhanced Room-Temperature Formability of Mg-Zn-Zr Alloy through Texture Weakening by Reduction Rate Control Seoung-yoon Yu
11.50–13.00	Lunch
13.00–13.45 SUTHEP HALL	PL02: Prof. Gary J. SHIFLET
Session:	Materials Processing and Engineering (S3) Chairs: Dr. Shuwei Duan
14.00–14.20	S3_IV03 Microstructure and Properties of Nano-TiC Modified Mar-M247 Superalloy Processed by Wire Arc Additive Manufacturing, Dr. Dongting Wu
14.20–14.35	S3_06 The microstructure and corrosion behavior analysis of different aging Al-Zn-Mg-Cu alloys manufactured by additive friction stir deposition Dr. Fuqiang Guo
14.35–14.50	S3_07 Process Optimization in FCAW of High Manganese Steel: Evaluating Temperature and Layer Effects on Hardness and Heat-Affected Zone, Dr. Narin Jantaping
14.50–15.05	S3_08 Influence of extrusion ratio on dynamic recrystallization, microstructure, and tensile properties of Mg-5Bi-3Al alloy, Gun Woong An
15.05–15.20	S3_09 Effect of Ag addition on microstructure and properties of Al-Zn-Mg-Cu alloys, Qinghua Zhang
15.20–15.40	Afternoon Break
Session:	Materials Processing and Engineering (S3) Chairs: Dr. Anchalee Manonukul
15.40–16.00	S3_030 Effects of Process Parameters and Prior-Forming Process in Gaseous Ferritic Nitrocarburising of Low Carbon Steels Dr. John Thomas Harry Pearce
16.00–16.15	S3_033 A Self-Assembled Metal-Organic Framework Network-Reinforced Solid Electrolyte via In Situ Polymerization for Lithium Metal Batteries JianWei Qiu
16.15–16.30	S3_035 Improved High-Temperature Performance of Al-Ce-Ni Alloys via Mg Solid-Solution Strengthening Abid Abdu Mohammed
16.30–16.45	
17.00–18.30	Poster Session

Time/Room	Room: JOURNEY, 3rd Floor
Session:	Materials Processing and Engineering (S3) Chairs: Assoc. Prof. Dr. Nam Nguyen Duong
10.15–10.35	S3_IV04 Joining ultrafine grained materials using FSW and LBW techniques Prof. Malgorzata LEWANDOWSKA
10.35–10.50	S3_011 Effect of Ag Addition on the Morphology of the β -Phase in Al-Mg-Si Alloys Dr. ABRAR AHMED
10.50–11.05	S3_013 Microstructure observation of Al-7%Si-0.3%Mg cast alloy, Dr. Taiki Tsuchiya
11.05–11.20	S3_014 Initial oxidation properties of nickel-based Al-Cr-Fe-Ni high entropy alloys under thermal shock conditions Dr. Richard Gawel
11.20–11.35	S3_016 Influence of Laser Texturing on the Surface Properties of Magnesium Alloy Jirayu Hemwat
11.35–11.50	S3_017 Effect of Processing Parameters on the Densification of Magnesium Alloy Fabricated by Laser Powder Bed Fusion Khettawan Panchamat
11.50–12.05	Technical talk: In-Situ correlative Raman spectroscopy and SEM analysis from Renishaw, Dr. Tan See Hua, Its (Thailand) Co., Ltd.
12.05–13.00	Lunch
13.00–13.45 SUTHEP HALL	PL02: Prof. Gary J. SHIFLET
Session:	Materials Processing and Engineering (S3) Chairs: Prof. Malgorzata LEWANDOWSKA
14.00–14.20	S3_IV05 Recent Research on Electroplating Technologies for Reducing Gold Consumption Prof. Injoon SON
14.20–14.35	S3_018 Microstructure, mechanical properties and wear resistance of in-situ cast TiC/A356 composites Assoc. Prof Dr. Wojciech Maziarz
14.35–14.50	S3_019 Effect of TiC volume fraction on the mechanical response and structure and microstructure evolution of Al-based composites Prof. Robert Chulist
14.50–15.05	S3_020 Effect of Mo Addition on Microstructural Evolution of Al-Si alloys Containing High Iron Impurity Pongpat Phetchanasongkhram
15.05–15.20	S3_023 Determination of Interaction Coefficient of La with Cr in Molten Iron and Analysis on Formation of La Compounds in High-Chromium Steel Shinya Oba
15.15–15.40	Afternoon Break
Session:	Materials Processing and Engineering (S3) Chairs: Prof. Injoon SON
15.40–16.00	S3_IV06 Effect of post weld heat treatment on the microstructure and hardness distribution of TiG welded Ti-6Al-4V/Ti-CP joints Assoc. Prof. Dr. Nam Nguyen Duong
16.00–16.15	S3_024 Effects of Elemental Diffusion and Intermetallic Phases on the Microstructure, Mechanical Properties of Ti/Ti-6Al-4V Dissimilar Welding Kien Vu Trung
16.15–16.30	S3_025 Hierarchical Si@Ti-Nb ₂ O ₃ Core-Shell Confined within Conductive Carbon Nanofiber Scaffolds for High-Capacity Lithium-Ion Storage Yongtao Zhao
16.30–16.45	S3_026 Anion-Tailored Solvation Clusters in Methyl Acetate Electrolyte: Achieving Concurrent Low Temperature Operation and High Voltage Stability Dr. Jiaxuan Feng
17.00–18.30	Poster Session

Time/Room	Room: VOYAGE, 3rd Floor
Session:	Other Topics Related to Materials and Nanotechnology (S5) Chairs: Prof. Daniel C.W. Tsang
10.15–10.35	S5_IV01 Influence of Altermagnetism on the Orbital Hall Effect in RuO ₂ , Prof. Lishu Zhang
10.35–10.50	S5_02 Preparation and properties of polymer hydrogel from boric acid-crosslinked PVA for urea slow-release fertilizer Dr. Pattranuch Pongsuk
10.50–11.05	S5_03 Improved Efficiency and Stability in MAPbI ₃ Perovskite Solar Cells through Bulk Defect Passivation with Benzyl Trimethylammonium Tribromide Prof. Adel Najar
11.05–11.20	S5_04 Synthesis of Low Carbon Polymorph Belite Cement: A Comparison of Pure Oxides and Lignite Bottom Ash Chadapohn Tashingkam
11.20–11.35	S5_06 Application of Impurity Removal through Selective Extraction and Phase Separation to the recovery of Al from Cast Al alloy, Dr. Kengo Kato
11.35–11.50	S5_07 Investigation on Dehydroxylation Temperature of Clay Minerals Affecting Mechanical Properties of Limestone-Calcined Clay Cement, Ketsarin Ariya
11.50–12.05	Technical Talk: Material analysis techniques using XPS and EPMA (Material analysis techniques using XPS and EPMA), Praween Chaiya, Bara Scientific Co., Ltd.
12.05–13.00	Lunch
13.00–13.45 SUTHEP HALL	PL02: Prof. Gary J. SHIFLET
Session:	Other Topics Related to Materials and Nanotechnology (S5) Chairs: Prof. Lishu Zhang
14.00–14.20	S5_IV02 Porous Carbon for Sustainable Construction Materials, Prof. Daniel C.W. Tsang
14.20–14.35	S5_08 Influence of Short-Range Order and Precipitates on the Mechanical and Magnetic Properties of Multicomponent Alloys, Dr. Anna Wojcik
14.35–14.50	S5_09 Design of Porous Carbon/Organic Polymer Composites as Cathode Materials in Li-S Batteries Kittiputh Kunniyom
14.50–15.05	S5_010 Development of Anode from Zinc Powder with Polyvinyl Alcohol Binder for Solid-state Zinc-air Batteries Jinnapat Khemtong
15.05–15.20	S5_011 Removal of Impurities from Die-cast ADC12 Aluminum Alloy Via Molten Tin, Satoshi Iwasawa
15.20–15.40	Afternoon Break
Session:	Other Topics Related to Materials and Nanotechnology (S5) Chairs: Asst. Prof. Dr. Yothin Chimupala
15.40–15.55	S5_012 Enhanced Photocatalytic Activity of Zn-MOF and TiO2 Nanocomposite for Methyl Orange Removal Pemika Chaichana
15.55–16.10	S5_013 Magnesium removal from Al-Mg alloy through molten salt electrolysis using LiCl-KCl-MgCl2 at 723K Hikaru Fujioka
16.10–16.25	S5_014 Wear Behavior of Ti6Al4V Titanium Alloy Against Steel Balls Under Dry Sliding Conditions, Asst. Prof. Dr. Nutthanun Moolsradoo
17.00–18.30	Poster Session

Time/Room	Room: EXCURSION, 3rd Floor
Session:	Consortium for Nurturing High-Performance Postdoctoral and Postgraduate Researchers in Materials Science and Technology to Drive Thailand to BCG Economy Year 3(S6) Chair: Assoc. Prof. Dr. Kedsarin Pimraksa Assoc. Prof. Dr. Thapanee Sarakonsri
10.15–10.30	Open Consortium Ceremony
10.30–10.40	Group Photos
10.40–11.00	Industry Talk I: Dr. Sakprayut Sinthupinyo SCG Cement Co., Ltd.
11.00–11.20	Industry Talk II:
11.20–11.40	Industry Talk III:
11.40–12.00	
12.00–13.00	Lunch
13.00–13.45 SUTHEP HALL	PL02: Prof. Gary J. SHIFLET
Session:	Chair: Asst. Prof. Dr. Chaityasit Banjongprasert Dr. Suphitcha Moonngam
14.00–14.15	S6_09 Development of Antioxidant and Antibacterial PLA-Curcumin Composite Film with Dual Metal-Doped CuO Nanoparticles Dr. GOPINATH KASI
14.15–14.30	S6_010 Synthesis and Characterization of Durian Rind-Derived Carboxymethyl Cellulose for Hydrogel Films Development Kanticha Pratinthong
14.30–14.45	S6_012 Effect of Catalyst Loading and Argon Cold Plasma Treatment on Degree of substitution in Starch Esterification Dr. Pattraporn Changsuwan
14.45–15.00	S6_011 Modification of Smart Bio-Composite Cassava Starch/Carboxymethyl Cellulose/Sodium Carbonate Films Using Cold Plasma Treatment for Sustainable CO ₂ Capture Itchaya Thinnakorn
15.00–15.15	S6_04 Humidity-Sensitive ZnO-SnO ₂ Films and Correction Modeling for Reliable Low-Cost PM _{2.5} Monitoring Dr. Teerasil Kumpika
15.15–15.30	S6_01 Surface-Enhanced Sharp-Edged Gold Microneedles on Pencil Graphite Microelectrodes as an Efficient Electrochemical Platform for NADH Detection Dr. Arivazhagan Mani
15.30–15.45	Afternoon Break
Session:	Chair: Assoc. Prof. Dr. Panchika Prangkio, Asst. Prof. Dr. Runglawan Somsunan
15.45–16.00	S6_02 PEI-Capped Osmium Nanoclusters (Os NCs) for Dual-Mode Fluorescence and Electrochemical Detection of Cyanide: A Robust Platform for Environmental Sensing Dr. Raheel Akram
16.00–16.15	S6_08 Intelligent Point-of-Care Monitoring of 5-FU Using a Pseudorotaxane/MXene-Based Sensor Dr. Dulyawat Doonyapisut
16.15–16.30	S6_05 Utilization of Biomass for Nanostructured Silicon-Based Anodes Toward High-Efficiency Energy Storage Dr. Orapim Namsar
16.30–16.45	S6_03 Development of high-stability aluminum-air battery for next-generation energy storage system Dr. Jesada Punyafu
16.45–17.00	S6_013 Optimization of Laser Remelting Parameters for the Microstructure and Hardness of Arc-Sprayed Ni-Cr-Al-Mo Coating Sirinapa Shuecamlue
17.00–17.15	S6_07 Hydroxybenzaldehyde Derivatives as Dual-Functional Passivators for Efficient and Stable Perovskite Solar Cell SUKHANDHAN SINGH
17.15–17.30	S6_06 Understanding Ion Intercalation Behavior of Layered Materials in “Water-in-Salt” Electrolytes Dr. Sirintra Arayawate
17.00–18.30	Poster Session

Programme: 3 December 2025

Time/Room	Room: SUTHEP HALL 4th Floor
08.30-09.00	Registratioin
09.00-10.00	PL03 In situ Electron Microscopy - Data Analytics, Prof. Mitsuhiro MURAYAMA , Virginia Tech, USA Chair: Asst. Prof. Dr. Chaiyasit Baanjongprasert
10.00-10.15	Morning Break
	Chair: Asst. Prof. Dr. Chaiyasit Baanjongprasert
10.15-10.35	S3_IV07 Research Project on Recycling of Aluminum in Toyama - Joining of Recycled Aluminum Alloy, Prof. Toshiya SHIBAYANAGI
10.35-10.55	S2_IV05 Investigating the solidification of 'dirty' recycled aluminium alloys with X-ray imaging and artificial intelligence, Dr. Enzo LIOTTI
10.55-11.15	S2_IV06 Filtered Secondary Electron Imaging: Energy- and Angle-Resolved Contrast in SEM, Dr. Sarka MIKMEKOVA
11.15-12.00	Closing Ceremony
12.00-13.30	Lunch

Programme: 4 December 2025

Time	
08.30-09.00	Registratioin
09.00-16.00	Technical tour/Excursion

Poster list

Session: Structural Materials (S1)

Code	Topic
S1_P1	Age-hardening behavior of the BCC Ti-20Fe alloy, Sayori Fujimura, Takuya Ishimoto, Kazuhisa Sato, Masato Fukushima, Takayoshi Ishimoto, Tomoyo Manaka
S1_P2	Proposal of a strengthening approach for Ti-TRIP alloys through the introduction of Chemical Boundaries, Shion Shimizu, Takuya Ishimoto, Tomoyo Manaka
S1_P3	Influence of Zr and Hf substitution for Ti solvent on the mechanical properties of Ti-6Al-4V, Yusuke Nomura, Tomoyo Manaka, Abrar Ahmed, Taiki Tsuchiya, Kenji Matsuda, Takuya Ishimoto
S1_P4	Effects of La ₂ O ₃ on the Structure and Durability of Alkali Zirconium Silicate Glasses, A. Denprawat, P. Kidkhunthod, N. Laorodphan, and W. Thiemsorn
S1_P5	Comparison of Cutting Performance for a Bulk Metallic Glass Blade via AFM Analysis, Sejin Jang, Seong-Hoon Yi
S1_P6	Phosphorus-Enhanced Fe-Based Amorphous Catalysts for Green Hydrogen Production, Moosung Kim, Juneyoung Lee, Seonghoon Yi
S1_P7	Enhanced Corrosion Resistance of Fe-based Amorphous Catalysts by Chromium Addition, JuneYoung Lee, Moosung Kim, Seonghoon Yi
S1_P8	Enhancement of Magnetic Properties through Control of Heat Treatment Conditions in Fe-Based Soft Magnetic Amorphous Alloys, Jongil Lee, Seonghoon Yi
S1_P9	Soft Magnetic Properties of High C Amorphous Alloys, Mingyo Jeong, Moosung Kim, Seonghoon Yi
S1_P10	TSV filling using Ag through Electroplating to Improve Electrical Conductivity, J.Y. Shin, I.J. Son
S1_P11	Microstructure, Wear, and Fatigue of Iron Alloy and Nickel Alloy Coatings on Rail Steel via Laser Cladding and High Velocity Oxygen Fuel Thermal Spray Techniques, Korn Pongthiya, Nunticha Wiratpruk, Suphatchagon Phongteerasirikul, Hataipat Koiprasert, Chaiyasit Banjongprasert

Session: Advanced Materials Characterization Techniques and Instrumentations (S2)

Code	Topic
S2_P1	TEM observation of two step aged Al-Mg-Ge alloy, Yusuke Ishiguro, Seungwon Lee, Taiki Tsuchiya, Abrar Ahmed, Susumu Ikeno, Kenji Matsuda
S2_P2	Effect of Combined Fe and Cu Additions on the Mechanical Properties and Microstructure of 6000 Series Al Alloys, Yukito Suzuki, Yuto Nakagawa, Seungwon Lee, Taiki Tsuchiya, Abrar Ahmed, Toshiya Shibayanagi, Susumu Ikeno, Kenji Matsuda
S2_P3	Evaluation of rust preventative performance using water screen test in the AZ91D magnesium alloy/water-soluble cutting oil system, Masahiko Hatakeyama, Kenta Makizaki, Takuya Morita, Mochisuke Kume, Satoshi Sunada
S2_P4	Effect of Mo addition on the pitting corrosion resistance of martensitic steels in 0.5 M H ₂ SO ₄ + 0.5 M NaCl solution, Masahiko Hatakeyama, Kenta Makizaki, Ryodai katayama, Daichi Nakato, Satoshi Sunada, Takahiro Onoe, Kazunari Tanii
S2_P5	Effect of Inclusions and δ-Ferrite on the Corrosion Behavior of SUS316L Stainless Steel Fabricated by Electron Beam Powder Bed Fusion, Masahiko Hatakeyama, Kenta Makizaki, Shota Otaki, Yoshino Fukui, Tatsuya Yamamoto, Satoshi Sunada, Ryotaro Yamamoto, Manabu Noguchi, Hiroaki Nakamoto
S2_P6	In-situ SEM Heating for Correlative Microscopy of Steels, Ondřej Ambrož, Petr Horodyský, Jan Čermák, Šárka Mikmeková
S2_P7	Enhanced Hydrogen Evolution by Exsolved Ag Nanoparticles on AgNbO ₃ , Gyeongbok Yang, Seonhwa Park and Yuho Min
S2_P8	Enhanced Depolymerization of Polyethylene Terephthalate via Glycolysis Using CaO-Modified CoFe ₂ O ₄ Magnetic Catalysts, Chanyeong Lee, Seonhwa Park and Yuho Min
S2_P10	Study of Corrosion Behavior of Rust Layers in Weathering Steels Grade 3Ni and Q420NH, Kanyanat Srisom, Chaiyasit Banjongprasert, Pranpreeya Wangjina, Benjawan Moonsri, Wanida Pongsaksawad
S2_P11	The Role of Iron oxide in the Color and Stability of blue-green Heritage Thai Glass Mosaic Mirrors, S. Deechob, S. Noikae, S. Poolprasroed, K. Pengpat, S. Eitssyeam, A. Kraipok, P. Intawin, S. Panyata, E. Meechoowas, T. Disayathanoowat, P. Kidkhunthod, P. Pakawanit, J. Padchasri, M. Kamnoy, T. Srichoompong, T. Tunkasiri

Poster list

Session: Materials Processing and Engineering (S3)

Code	Topic
S3_P2	Synthesis and thermoelectric characterization of Fe ₃ GeTe ₂ , Hyojin Jun, Hyoju Son, Joseph Ngugi Kahiu, Suhyeon Woo, Samuel Kimani Kihoi, Ho Seong Lee
S3_P3	A Model for Formation of Interfacial Structure in Dissimilar A1070 Aluminum and TP340 Titanium Joint during Disc Friction Joining, Miyu Yamazaki and Toshiya Shibayanagi
S3_P5	Hydrogen Reduction of Black Mass Recovered from NCM-based Spent Lithium-ion Batteries, Jae-Ho Hwang, Sang-Yeop Lee, Ho-Sang Sohn
S3_P6	Reduction Behavior of NCM-Based Lithium-Ion Battery Black Mass in CO Atmosphere, Sang-Yeop Lee, Jae-Ho Hwang, Ho-Sang Sohn
S3_P7	Structural, magnetic and spin-reorientation of Nd-doped ErFeO ₃ polycrystalline ceramics, Ashwini Kumar, Poorva Sharma, Fujun Qiu, Jin Cui, Yong Gong
S3_P8	Structural, optical, and magnetic properties of Nb-doped YbFeO ₃ polycrystalline ceramics, Poorva Sharma, Ashwini Kumar, Fujun Qiu, Jin Cui, Yong Gong
S3_P9	Green Aerogel-Enhanced Chitosan/Mung Bean Composite Films: Miscibility and Potential as Solid Polymer Electrolytes, Aunchisa Buasuk, Manat Jaimasith, Wanrudee Kaewmesri
S3_P10	Effect of Cu Addition on the Thermal Stability and High-Density SPS Consolidation of Fe-Based Amorphous Alloy, Seongjun Kim, Seonghoon Yi
S3_P11	Enhanced Thermoelectric Characteristics and Performance of Bi ₂ Te ₃ Modules via Ni-P Electroless and Ag Electrodeposition, Anh Doan Tien, Khanh Dang Quoc, Son Injoon
S3_P12	Influence of Holding Time on the Properties of Porous Alumina Fabricated by Pulse Electric Current Sintering, Anh Duc Hoang Chu, Hong Minh Duong, Dung Phuong Thi Nguyen, Truong Xuan Truong, Khanh Quoc Dang
S3_P13	Cloisonné Using Blue Laser with Heater Assistance, Shuntaro Arakawa, Takashi Hashizume, Atsushi Saiki, Shoto Isizaki
S3_P14	Microstructure of Al-Sn and Al-Sn-In Alloys Produced by Severe Plastic Deformation for Anode Applications, Pornpan Wanna and Chaiyasit Banjongprasert

Session: Computational Materials Science (S4)

Code	Topic
S4_P2	First Principles Study of L12-Type Al ₃ Zr Precipitates in Aluminum Alloys, Yuma Matsuzaki, Norio Nunomura
S4_P3	First-principles calculation of electron transport influenced by Fe adsorption on graphene nanoribbons (GNRs), T. Yoshida, N. Nunomura

Session: Other Topics Related to Materials and Nanotechnology (S5)

Code	Topic
S5_P1	Towards Safer, Reproducible and Smarter Metallographic Sample Preparation through Collaborative Robotics and Computer Vision, J. Čermák, O. Ambrož, Š. Mikmeková
S5_P2	Effect of Double-Diffusive Convection on the Solidification Microstructure in the Solidification of Molten Al-Si Alloys, Kensuke Shimode, Takeshi Yamane, Toshiya Shibayanagi
S5_P3	Si Removal from Molten Al-Mg-Zn Alloy through the Precipitation of Intermetallic Compounds, Mikoto KOJIMA, Kengo KATO, Hideki ONO
S5_P4	High-Quality Graphene for Advanced Applications in Electron Microscopy, Ivo Konvalina, Lukáš Průcha, Eliška Materna Mikmeková
S5_P5	Rational Interface Design of Zinc Powder Anodes with rGO and PAA for High-Performance Aqueous Zinc-Ion Batteries, Jinhyeong Yoon, Jihong Kim, Hak-Sung Kim, Heejoon Ahn
S5_P6	Sonochemical-assisted deposition synthesis and characterization of metallic Au nanoparticles modified thin Bi ₂ WO ₆ nanoplates for enhanced visible-light-driven photocatalytic reaction, A. Phuruangrat, Yothin Chimupala, B. Kuntalue, T. Thongtem and S. Thongtem
S5_P7	Changes in Battery Capacity Due to the Application of a Magnetic Field to Lithium-Ion Batteries, Yoshiki YAMASHITA, Takashi HASHIZUME, Atsushi SAIKI, Ryusei TANIMOTO, Ren Sato
S5_P8	Properties of Corn Stalk Rind Compressed Pads, Seephapa Siriprakaikoon, Linda Thiraphattaraphun
S5_P9	High-Density Amorphous Compacts with High B and Gd Contents for Neutron Shielding, Hyeseong Choi, Seong-Hoon Yi
S5_P10	Void-Free TSV Filling by Copper Electroplating with Thioflavin T Additive, Nayoung Kim, Injoon Son
S5_P11	Eye doses measurement with BeO in nuclear medicine, Natch Rattananungruangchai, Busayakorn Na ranong, Tossawat Autila, Hasana Laewoharn, Waraporn Sudchai
S5_P12	Study on Hardness and Microstructure of The Electroplated Silver-Antimony Alloy Layer, Injoon Son
S5_P13	Study on the improvement of heat generation performance of aluminum powder by forming Self-Assembled Monolayers (SAMs) using thiol-based substances, Seoyoung An, Injoon Son

Session: Consortium for Nurturing High-Performance Postdoctoral and Postgraduate Researchers in Materials Science and Technology to Drive Thailand to BCG Economy Year 3 (S6)

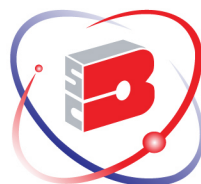
Code	Topic
S6_P1	Development of Biodegradable Medical-Grade PLA Monofilaments for 3D Printing in Compliance with ISO 13485, M. Namhongsas, T. Mekpothi, T. Chiwan, D. Daranarong, K. dung-u-kos, A. chaitan, G. M. Ross, S. Ross, and W. Punyodom
S6_P2	Superconcentration Electrochemistry Reveals Halide Redox Control over Water Splitting Kinetics, Sagar Ingavale, Pawin lamprasertkun
S6_P3	Electrochemical Creatinine Sensor Based on Bimetallic Cu@Co-on-Graphene, P. Sawatmuenwai, K. Kaewket, T.C.Roland Outrequin, S. Deepaisarn, J. Wijitsak, P. Sunon, K. Ngamchuea
S6_P4	Non-invasive electrochemical sensors for guanosine and guanine analyses, Jinnapat Wijitsak, Bunrat Tharat, Suwit Suthirakun, Kamonwad Ngamchuea
S6_P5	Optimization of Plasma-Activated Hydrogel by Factorial Design for Enhanced Antimicrobial Efficacy on Animal Skin, Kochakon Moonsub, Phisit Seesuriyachan, Wassanai Wattanutchariya
S6_P6	Development of a Rapid and Sensitive Electrochemical Immunosensing of TNF-α for Personalized Medicine Applications, Napolean Bonaparte Thanapaul, Polina Istomina, Thae Thae Min, Piyanut Pinyou, Montarop Yamabhai
S6_P7	Competitive Electrochemical Immunosensor toward Signal Amplification via Electrocatalytic Reaction for Insulin Detection, Siriporn Anuthum, Jaroon Jakmune, Kontad Ounnunkad
S6_P8	Electrochemical Competitive Aptasensor for Alpha-Fetoprotein via Electrocatalytic Signal Amplification, S. Chanarsa, Methawut Sirisom, J. Jakmune, K. Ounnunkad

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