

## Day 1, 6 December 2024 (Friday)

Time	Event	Duration/ min	
0900 - 1000	Registration	60	
1000 - 1015	Opening Ceremony - Welcoming speech by Prof. Xiao Wei Sun (Chair) - Welcoming speech by Prof. Wang Hui-Qiong (Assistant President, Xiamen University Malaysia)	15	
1015 - 1105	Plenary 1 <b>Prof. Hoi Sing Kwok</b> <b>Chair: Prof. Xiao Wei Sun</b>  <b>Title:</b> Energy Saving Displays and VR	50	
1105 - 1120	<b>Tea break</b> <b>Talk from Our Sponsor: Gaia Science (M) Sdn Bhd</b>	15	
1120 - 1210	Plenary 2 <b>Prof. Takeo Furukawa</b> <b>Chair: Prof. Xiao Wei Sun</b>  <b>Title:</b> An overview and in-depth understanding of piezoelectric polymers as a functional soft matter	50	
1210 - 1230	<b>Photo session</b>	20	
1230 - 1345	<b>Lunch</b>	75	
Time	Parallel Session 1 Chair: Prof. Takeo Furukawa	Parallel Session 2 Chair: Assoc. Prof Tan Swee Tiam	Duration/ min
1345 - 1415	Keynote 1 <b>Prof. Kean Aw</b>  <b>Title:</b> Harvesting Energy from the Ocean	Keynote 2 <b>Prof. Hui Ying Yang</b>  <b>Title:</b> New Generation Low-dimensional Nanomaterials for Advanced Energy Storage	30
1415- 1435	Invited Talk 1 <b>Asst. Prof. Chong Su Sin</b>  <b>Title:</b> Harnessing biomimicry: ant-inspired innovations in distributed polymer fibre sensors	Invited talk 2 <b>Assoc. Prof. Aung Ko Ko Kyaw</b>  <b>Title:</b> Making “Soft” Perovskite Robust: Strategies Towards Stable Perovskite Solar Cells	20
1435 - 1455	Invited talk 3 <b>Prof. Dan Luo</b>  <b>Title:</b> Light-driven liquid crystal elastomer actuators: polarization manipulation and application in metasurface	Invited talk 4 <b>Assoc. Prof. Junjie Hao</b>  <b>Title:</b> Controlled synthesis of tadpole shaped CdSe/CdS nanocrystals	20
1455 - 1510	<b>Tea break</b> <b>Talk from Our Sponsor: Novatiq Scientific Sdn Bhd</b>		15

Time	Parallel Session 3 Chair: Prof. Dan Luo	Parallel Session 4 Chair: Assoc. Prof. Aung Ko Ko Kyaw	Duration/ min
1510 - 1530	Invited talk 5 <b>Assoc. Prof. Yanjun Liu</b>  <b>Title:</b> Electrically Tunable Liquid Crystal Microlens Arrays and Beam Deflectors	Invited talk 6 <b>Assoc. Prof. Hua Xiao</b>  <b>Title:</b> Microalgae Density Measurement Methods Based on Quantum-Dot Illumination	20
1530 - 1550	Invited talk 7 <b>Prof. Cheong Kuan Yew</b>  <b>Title:</b> Sustainable Bio-Organic Based Resistive Switching Memory: Design, Concern, and Opportunity	Invited talk 8 <b>Prof. Haitao Dai</b>  <b>Title:</b> Circularly polarized luminescence From Composites Assembly with the Cluster Film and Cholesteric Liquid Crystal	20
1550 - 1610	Invited talk 9 <b>Asst. Prof. Chong Woon Gie</b>  <b>Title:</b> Micro and macroscopic assemblies of novel carbon structures for rechargeable batteries	Invited talk 10 <b>Assoc. Prof. Abhishek Kumar Srivastava</b>  <b>Title:</b> Quantum Rods based Light-Emitting Diodes	20
1610 - 1630	Invited talk 11 <b>Assoc. Prof. Steve Cuong Dang</b>  <b>Title:</b> Enhanced Förster Resonance Energy Transfer and Long-Range Dipole Interactions via Bound State in the Continuum in Dielectric Metasurfaces	Invited talk 12 <b>Dr. Adam Febriyanto Nugraha</b>  <b>Title:</b> Exploring Cellulose-Based Membranes for Lithium-Ion Battery Applications	20
1630 - 1650	Invited talk 13 <b>Asst. Prof. Havid Aqoma Khoiruddin</b>  <b>Title:</b> Cost Analysis and Feasibility of Quantum Dot-Based Luminescent Solar Concentrators	Invited talk 14 <b>Assoc. Prof. Mohd Zamir Pakhuruddin</b>  <b>Title:</b> III-Nitrides for Next-Generation Photovoltaic Devices	20
1650 - 1710	Invited talk 15 <b>Dr. Mohd Marzaini Mohd Rashid</b>  <b>Title:</b> ZnO Quantum Dots as Electron Transport Layer in Perovskite Solar Cell	Invited talk 16 <b>Assoc. Prof. Haw Choon Yian</b>  <b>Title:</b> Harnessing Solar to Thermal Energy: Investigating Heat Propagation in Interfacial Photothermal Water Purification	20
1710 - 1730	Invited talk 17 <b>Assoc. Prof. Goh Boon Tong</b>  <b>Title:</b> Synthesis of Si-based Nanowires and Its Core-shell Nanowires for Energy Applications		20
1730 - 1930	<b>Break</b>		120
1930 - 2100	<b>Banquet Dinner</b>		90

Day 2, 7 December 2024 (Saturday)

Time	Event		Duration/ min
0930 - 1020	Plenary 3 <b>Prof. Hilmi Volkan Demir</b> <b>Chair: Prof. Kean Aw</b>  <b>Title:</b> Emerging Semiconductor Optoelectronics of Colloidal Quantum Wells: Pushing the Limits, Breaking Records		50
1020 - 1035	Tea break		15
1035 - 1125	Plenary 4 <b>Prof. Chengkuo Lee</b> <b>Chair: Prof. Kean Aw</b>  <b>Title:</b> Progress in AI Sensors – From MEMS and Flexible Sensors to Nanophotonic Sensors		50
1125 - 1240	Lunch		75
Time	Parallel Session 5 Chair: Prof. Haitao Dai	Parallel Session 6 Chair: Assoc. Prof. Steve Cuong Dang	Duration/ min
1240 - 1310	Keynote 3 <b>Prof. Ong Wee-Jun</b>  <b>Title:</b> Engineering two-dimensional (2D) photo/electro-catalysts for clean hydrogen production and carbon dioxide conversion	Keynote 4 <b>Dr. Philip Anthony Surman</b>  <b>Title:</b> The Challenge of Naked-eye 3D Display	30
1310 - 1330	Invited talk 18 <b>Asst. Prof. Ng Boon Junn</b>  <b>Title:</b> Breaking Barriers in Soft Photocatalysis: Leveraging Excitonic Effects and Optoelectronic-Kinetic Synergy for Overall Water Splitting	Invited Talk 19 <b>Asst. Prof. Yvonne Choo</b>  <b>Title:</b> Nature-Inspired Stimuli-Responsive Polymers: From Dynamic Bonds to Emerging Applications	20
1330 - 1350	Invited Talk 20 <b>Assoc. Prof. Kai Lin Woon</b>  <b>Title:</b> Defying the Convention: From Ultra-Broad Glow to Narrowband Emission in Purely Organic Emitters	Invited talk 21 <b>Asst. Prof. Mong Guo Ren</b>  <b>Title:</b> Microwave Pyrolysis on Industrial Sludge under CO2 Atmosphere	20
1350 - 1405	Tea break		15

Time	Parallel Session 7 Chair: Asst. Prof. Braedan Foo Chuan Yi Judges: (1) Prof. Cheong Kuan Yew (2) Prof. Dan Luo	Parallel Session 8 Chair: Asst. Prof. Ng Boon Junn Judges: (1) Assoc. Prof. Mohd Zamir Pakhuruddin (2) Assoc. Prof. Aung Ko Ko Kyaw	Duration/ min
1405 - 1420	Contributed Talk 1 <b>Wong Chang Jian</b>  <b>Title:</b> Investigating Charge Transfer Mechanisms Dynamics in Microalgae during Photosynthesis: A Triboelectric Spectroscopy	Contributed Talk 2 <b>Ee Zhi Yin</b>  <b>Title:</b> Instant Disinfecting Face Masks Utilizing Electroporation Powered by Respiration-Driven Triboelectric Nanogenerators	15
1420 - 1435	Contributed Talk 3 <b>Kam Jia Yan</b>  <b>Title:</b> Fabrication of stable dendrite-free composite Zinc anode enabled by CuZn5 rich alloy network-modulated zinc deposition interface	Contributed Talk 4 <b>Ng Sue Faye</b>  <b>Title:</b> Engineering 2D carbon nitride nanomaterials for enhanced multifunctional photocatalytic applications	15
1435 - 1450	Contributed Talk 5 <b>Xu Zhao</b>  <b>Title:</b> Study on the Effects of Elevated CO <sub>2</sub> and NH <sub>3</sub> Mass Fractions on Swirl Combustion Characteristics and Pollutant Emissions of NH <sub>3</sub> /Biogas	Contributed Talk 6 <b>Zheng Xi</b>  <b>Title:</b> Recombination Mechanism and Spectral Broadening Effect of GaN-Based Red Micro-LEDs Revealed by Microscopic Hyperspectral Imaging	15
1450 - 1505	Contributed Talk 7 <b>Yong Jun Kiat</b>  <b>Title:</b> Numerical Analysis of Low-cost Hole Transport Layers for Efficient Perovskite Quantum Dot Solar Cells	Contributed Talk 8 <b>Wei-Kean Chong</b>  <b>Title:</b> Single-Component Particulate Photocatalyst for Solar-Driven Overall Water Splitting	15
1505 - 1520	Contributed Talk 9 <b>Lee Jiale</b>  <b>Title:</b> Engineering Lead-Free Halide Perovskite for Efficient CO <sub>2</sub> Conversion: Innovations for Green Energy	Contributed Talk 10 <b>Steven Kok Hao Wan</b>  <b>Title:</b> Innovative Design of Bismuth-Enriched Oxychloride Photocatalysts: A Pathway Toward Enhanced Photodriver Ammonia Synthesis for Sustainable Energy Solutions	15
1520 - 1535	Contributed Talk 11 <b>Jocelyn Lim</b>  <b>Title:</b> Computational Analysis of Integrating Nanocellulose into State-of-the-Art Emerging Photovoltaics	Contributed Talk 12 <b>Shawn Siu Lun Loo</b>  <b>Title:</b> Integrating Photothermal-Responsive Shape Memory and Self-Healing Polymers in 4D-Printed Thermally Comfortable Smart Wearables	15
1535 - 1550	Contributed Talk 13 <b>Yiang Wen Jie</b>  <b>Title:</b> From restacked to resilient: TaS <sub>2</sub> conductive spacers optimize ion transport and electron transfer, supercharging Ti <sub>3</sub> C <sub>2</sub> MXene for high-performance supercapacitors	Contributed Talk 14 <b>Lim Kok Loong</b>  <b>Title:</b> Illuminating the 2D to 3D Evolution of PDA Functionalized Carbonized Palm Fiber for Highly Energy Efficient Solar Steam Generation	15
1550 - 1635	<b>Visit to XMUM</b>		45
1635 - 1720	<b>Durian Feast</b>		45