

Tuesday, 17 November 2026

	SESSION A	SESSION B
08:30 - 10:20	Registration	
10:20 - 10:40	Welcome remarks	
10:40 - 11:10	Phase Engineering of Nanomaterials (PEN): 2D Materials Prof. Hua Zhang	
11:10 - 11:40	Progress in Light-Matter Interactions in 2D Materials from the Near-Infrared and Beyond Prof. Jian-Bin Xu	
11:40 - 12:10	Light manipulation in multilayered transition metal dichalcogenides Prof. Su-Hyun Gong	
12:10 - 13:30	Lunch	
	QUANTUM DEFECTS AND OPTICAL PROPERTIES 1	ELECTRONIC PROPERTIES
13:30 - 14:00	Improving single photon emission from van der Waals materials via atomic engineering Prof. Shengxi Huang	Switching the Superconducting Symmetry of FeSe by Exfoliation Prof. Kenneth Burch
14:00 - 14:20	Deterministic positioning of nearly identical high-purity single-photon emitters with laser etching of graphite/hBN heterostructures Mr Dmitrii Litvinov	Ferroelectric Transistors with Molybdenum Disulfide Enabling Fast and Energy-efficient Neuromorphic Computing Mr Seungguan Lee
14:20 - 14:40	Optically Addressable Spin Defects in Heavily Carbon-Doped hBN Dr Kento Sasaki	Surface Engineering of WSe ₂ via Selective Electron-Beam Irradiation for High-Performance All-2D CMOS Integration Mr Chi-Chun Cheng
14:40 - 15:00	Evolution of quantum defects through pressure-induced phase changes Dr David Broadway	Probing Electronic Structure Using Double Tunnel Barrier Heterojunction Ms Liza Jain
15:00 - 15:20	Optical Signature of Valley-polarized Bose-Fermi Insulating State in a Twisted WSe ₂ /WS ₂ Heterobilayer Mr Jinjae Kim	Molecular Excitons in Two-Dimensional Organic Crystals Prof. Sunmin Ryu
15:20 - 16:00	Afternoon Tea	
	FUNCTIONAL MATERIALS 1	QUANTUM PHENOMENA
16:00 - 16:30	2D Semiconductors with Ferroelectric Functionality toward Light-Controlled Electronics Prof. Yann-Wen Lan	Two-Dimensional Materials for High-Efficiency, Fully Stretchable OLEDs Tae-Woo Lee
16:30 - 16:50	Systematic Tuning of Lattice Dynamics and Carrier Transport in the Layered Type-II Dirac Semimetal NiTe _{2-x} Se _x Dr Ankush Saxena	Influence of defects and doping in Ge-based penta-2D materials: A first-principles study Dr Rachana Yogi
16:50 - 17:10	CVD-Grown Twisted Graphene Layers with a Graphene Spacer Dr Daria Belotcerkovtceva	Excitonic properties, Electron-phonon coupling and Spin fluctuations in 2D Quantum Materials Dr Suvadip Das
17:10 - 17:30	Anomalous reverse mechanical polarization switching in negative piezoelectric CuInP ₂ S ₆ Dr Lei Wang	Graphene-capped bismuthene on SiC as a platform for correlated quantum spin Hall edge states Dr Huu Thoai Ngo
17:30 - 17:50	3D Hierarchical MoS ₂ as a Durable Friction Layer for High-Power Triboelectric Nanogenerators Ms Euna Jung	Interlayer excitons in InSe-based heterostructures Dr Jiong Yang
18:00 - 20:00	Welcome Reception	

Wednesday, 18 November 2026

incl. AM2D — Advanced Manufacturing with 2D Materials Symposium

	SESSION A		SESSION B
09:00 - 09:30	Functional 2D materials for neuromorphic devices and neural interfacing Prof. Andrea Capasso		
09:30 - 10:00	2D TMD Neuromorphic and Optoelectronic Transistors Prof. Saurabh Lodha		
10:00 - 10:30	Morning Tea		
	SESSION A		SESSION B — AM2D SYMPOSIUM
	PHOTODETECTION AND OPTOELECTRONICS		PROCESSING AND MODIFICATION
10:30 - 11:00	Tailoring Photocarrier Lifetimes in 2D Materials and New Spectroscopic Methods for Wafer-scale Inspection Prof. Fengqiu (Frank) Wang	10:30 - 10:44	Low-temperature graphitization by amine-assisted combustion of graphite oxide Mr Olalekan Oluwole
11:00 - 11:20	2D Materials-based intelligent photodetectors Dr Haoran Mu	10:44 - 10:57	Unlocking Multifunctional Performance in Vitrimers via CNT-GNP Hybrid Networks Ms Chamalki Madhusha Molligoda Liyanage
11:20 - 11:40	A New Approach to THz Antenna Design for Ultrafast and Sensitive Room-Temperature Graphene Detectors Dr Elena Titova	10:57 - 11:10	Vitrimer-Engineered Styrenic Block Copolymer–Graphene Nanocomposites for Sustainable Elastomers Mr Justin Kappen
11:40 - 12:00	High-Sensitivity THz Detection Using PtX ₂ /Graphene Heterostructures Dr James Lourembam	11:10 - 11:23	Woolly-Candy-Like Glucose–Ga–2D Carbon Material Composite Ms Masoomah A. Laskoukalayeh
12:00 - 12:20	Moiré-Engineered Graphene Systems for FIR and MM-Wave Detection Mr Leonid Elesin	11:23 - 11:36	Dual Dynamic Network Engineering of 3D printable Styrenic Block Copolymer Vitrimers with Tailored Performance Mr Vihanga Kularatne
12:20 - 13:30	Lunch		QUALITY
	GROWTH AND DEVICES 1		
13:30 - 14:00	Transformation of confined-space photonics into industrial-level applications Prof. Qiaoliang Bao	11:36 - 11:46	Advancing the Analytical Toolbox for Reliable Functional Group Characterisation of Graphene-Related Materials Dr Pei Lay Yap
14:00 - 14:20	Oxygen-assisted transport CVD growth of high-κ a-axis-oriented α-MoO ₃ thin films on r-plane sapphire from a bulk Mo source Dr Yui Ogawa	11:46 - 11:56	Microwave-Driven Carbon Formation in Biomass-Derived Hard Carbon: Mechanistic Understanding and Machine Learning-Guided Process Optimization Mr Niroshan Manoharan
14:20 - 14:40	Van der Waals Epitaxy of crystalline and ultrathin aluminum oxide on Transition Metal Dichalcogenide Mr Po-Sen Mao	11:56 - 12:06	Pathway to scalable Quality Control and Standardization of Graphene Oxide: Quantification of Functional Groups Ms Gimhani Danushika
14:40 - 15:00	Transfer-free directly sulfurized air-suspended Janus WSe ₂ trampolines Mr Louis Smet	12:06 - 12:20	Panel - Quality
15:00 - 15:20	Thermoradiative Diodes Using Black Phosphorus van der Waals Materials Mr Yuchen Sun	12:20 - 13:30	Lunch
15:20 - 15:50	Afternoon Tea		ENERGY
	GROWTH AND DEVICES 2		
15:50 - 16:20	When Diamond Meets 2D: Engineering Diamond Surfaces for Diamondtronics Prof. Dongchen Qi	13:40 - 13:54	Graphene Oxide–Silica Microcapsules Containing Phase Change Materials for Thermal Energy Storage Ms Jo Yee Wong
16:20 - 16:40	BEOL-Compatible Site-Selective Growth of Single-Crystal MoS ₂ for Advanced Logic and Memory Integration Prof. Ching Yuan Su	13:54 - 14:08	Host phase-driven HER stability in MoS ₂ /CoS ₂ heterostructures Mr Francis Prashanth
16:40 - 17:00	Interfacial oxide-stabilized molten Fe-B for wafer-scale single-crystal hBN film	14:08 - 14:22	Volumetrically Efficient Graphene Supercapacitors Dr Petar Jovanovic

SESSION A		SESSION B	
	Dr Hayoung Ko		SENSORS
17:00 - 17:20	Recent progress in inorganic 2D material liquid crystals and applications Prof. Bilu Liu	14:22 - 14:36	Advanced 2D Material-Based Sensors: Challenges, Hybrid Strategies, and Future Opportunities Dr Tung Tran
		14:36 - 14:46	Flexible Graphene-Based Chipless RFID Sensor for Wireless Multimodal Deformation Monitoring Mr Shadhon Chandra Mohonta
		14:46 - 14:56	Graphene-Like Carbon Dots as Dual-Mode Optical Nanoprobes for Cu ²⁺ and Pb ²⁺ Detection Mrs Jimyl Cruz
		14:56 - 15:06	MoS ₂ -CuBTC Hybrid Nanostructures for Room Temperature Rapid and Highly-Responsive Hydrogen Sensing Mr Md Abdul Jalil
		15:06 - 15:20	Panel - Sensors
		15:20 - 15:50	Afternoon Tea
			COATING
		15:50 - 16:03	Electrochromism of Nb ₂ O ₅ nanorod Ms Mahnaz Jazi
		16:03 - 16:16	Phytate-Functionalized Graphene Oxide as an Eco-Friendly Corrosion Inhibitor for Mild Steel Mr Kosala Purasinhala
			WATER
		16:16 - 16:26	Anomalous Ion Transport in 2D Graphene Oxide Nanochannels Enabled by Hydration Mimicry with Confined Amino Acids Mr Muhammed Afnas Vilayatteri
		16:26 - 16:36	Graphene oxide membranes for real-world PFAS remediation: scalable fabrication and matrix-resilient performance Dr Sally El Meragawi
		16:36 - 16:46	Repurposing PTFE Microplastics as contact electrocatalysis for Water Treatment in Coiled Flow Inverter (CFI) Ms Rabia Sabir
		16:46 - 17:00	Panel - Water
17:30 - 19:00	Joint Poster Session		

Thursday, 19 November 2026

	SESSION A	SESSION B
09:00 - 09:30	Probing Atomic Defects in 2D Semiconductors with Light-Coupled STM Prof. Bruno Schuler	
09:30 - 10:00	Many-body effects on nonlinear optics and excited-state dynamics of 2D semiconductors Prof. Diana Y Qiu	
10:00 - 10:30	Morning Tea	
	SUPERCONDUCTIVITY AND TOPOLOGICAL PHENOMENA	MOIRÉ AND HETERO-STRUCTURES
10:30 - 11:00	2D superconducting materials for fundamental science and technology Prof. Mandar M Deshmukh	The Interlayer as a Nanoreactor: Intercalation, Confinement, and Atomic-Scale Synthesis Dr Yung-Chang Lin
11:00 - 11:20	Spontaneous Non-Abelian Topological Phases and Skyrmionic Textures in Rhombohedral Graphene Mr Taketo Uchida	Signature of lattice reconstruction in near-zero and small angle twisted double bilayer graphene (TDBG) Ms Xinyu Wang
11:20 - 11:40	Terahertz linear photogalvanics probe of quantum geometry and ground states in magic angle twisted bilayer graphene Dr Mikhail Kravtsov	Inversion symmetry breaking in marginally twisted bilayer MoS ₂ Dr Pablo Resendiz-Vazquez
11:40 - 12:00	Strain controlled superconducting diode effect in a van der Waals superconductor Dr Yuki Itahashi	Intermingled TMDC Nanodiscs/Graphene Heterostructure Nanohybrids for High-Performance Photodetectors Dr Samar Ghopry
12:00 - 12:20	Machine-Learned Structure Search for Silicene Grown by Segregation through Au Thin Films on Si(111) Prof. Yuji Hamamoto	Moiré-induced ferromagnetism in double bilayer CrSBr Dr Mirko Bacani
12:20 - 14:00	Lunch + Poster viewing	
	MOIRÉ MATERIALS AND QUANTUM PHENOMENA	QUANTUM DEFECTS AND OPTICAL PROPERTIES 2
14:00 - 14:20	Acoustoelectric Probing of Fractal Energy Spectra in Graphene/hBN Moiré Superlattices Mr Wenqing Song	Polaritonics and optoelectronic devices based on 2D materials Prof. Qingdong Ou
14:20 - 14:40	Electrically tunable moiré hybridization in twist-with-a-spacer structures Prof. Alexey Berdyugin	Valley Polarization Modulation in Monolayer WS ₂ under Directional Uniaxial Strain Dr Jyun-Yan Siao
14:40 - 15:00	MOCVD-Grown 3D Hierarchical MoS ₂ for Ultra-Sensitive, Broad-Range Piezoresistive Pressure Sensing Ms Jeongin Song	Grating-Assisted Far-Field Mapping of Geometry-Tuned Guided Polaritonic Modes in MoS ₂ δ -Waveguides Mr Youngjun Chung
15:00 - 15:20	Inducing Proximity Superconductivity into Moire Rhombohedral Graphene Ms Olga Popova	Enhancement and Preservation of Valley-Polarized Optical Responses in Monolayer WS ₂ Coupled with Mie Resonant Silicon Nanospheres Mr Shuto Oh Oh
15:20 - 15:50	Afternoon Tea	
	ELECTRONIC DEVICES AND QUANTUM PHENOMENA	LIGHT-MATTER INTERACTIONS
15:50 - 16:20	Interface Engineering for High-performance p-type 2D Transistors Prof. Chul-Ho Lee	Skyrmions and Phase Transitions in Twisted Bilayer Graphene Prof. Vidya Kochat
16:20 - 16:50	Many-body correlations and interlayer coupling in twisted bilayer graphene systems Prof. Dongkeun Ki	Lightwave valleytronics based on a meta-waveguide optoelectronic chip Dr Haoran Ren
17:30 - Late	Gala Dinner Cruise (6:00 PM Start)	

	SESSION A	SESSION B
	TOPOLOGICAL AND ELECTRONIC PHENOMENA	MATERIALS AND DEVICES
09:00 - 09:30	Engineering Topological Textures in 2D and Quasi-3D Heterostructures Prof. Mark T. Edmonds	Controlled Growth of 2D Iron Sulfides with Tunable Structural Phases Prof. Jieun Yang
09:30 - 10:00	Shot noise probing magic-angle twisted bilayer graphene Prof. Anundya Das	Post Substitutional Doping for TMDC Electronics Prof. Kosuke Nagashio
10:00 - 10:30	Giant Trion Modulation in Scalable Monolayer MoS ₂ using Plasmonic HfN Gates Prof. Yu-Jung Lu	Photosensing and neuromorphic computing image process based on 2D materials Prof. Linjun Li
10:30 - 11:00	Morning Tea	
	OPTOELECTRONIC DEVICES	FUNCTIONAL MATERIALS 2
11:00 - 11:30	Ultra-thin materials for next-generation electronics and optoelectronics technologies Prof. Sumeet Walia	Switching of magnetic polymorphs in 2D layered antiferromagnets Prof. Shiwei Wu
11:30 - 11:50	Optoelectronic devices and heterogeneous integration based on low-dimensional materials Prof. Shaojuan Li	Band Structure Engineering in Transition Metal Dichalcogenides via Gate-Defined Superlattices Dr Nikhlesh Mehta
11:50 - 12:10	Defect-Engineering in Low-dimensional Materials for Bioinspired Neuromorphic Vision Sensors Dr Taimur Ahmed	Effective Model for Moiré Electronic States in TMDC Nanoscrolls Dr Ikuma Tateishi
12:10 - 12:30	Controlled light-activated dedoping of wafer scale monolayer 2D TMDCs for next generation electronics Prof. Debjit Ghoshal	First-principles study of lattice relaxation effects in twisted bilayer graphene and electron-phonon coupling in the AA-stacked region Prof. Mei-Yin Chou
12:30-13:30	Lunch	
13:30 - 14:00	Discovery of 2D Materials for Piezoelectronics, Non-Linear Optics and Exciton Condensation Dr Su Ying Quek	
14:00 - 14:30	Van der Waals Materials for Photonic Devices Prof. Sejeong Kim	
14:30 - 15:00	Van der Waals confined 2D metals Prof. Guangyu Zhang	
15:00 - 15:30	Prizes and Closing Remarks	
15:30 - 16:15	Afternoon Tea	
	Departure	

Invited / Plenary Talk	Oral / Contributed Talk	Panel Discussion	Catering / Breaks	Social Event	Registration / Welcome
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