

Parallel Session: Semiconductor and Applied Physics

Morning Session:

Date: **October 21, Tuesday**

chair	Kaili Jiang	
10:50-11:15	Feng Miao Nanjing Univ.	2D Materials for Future Computing (Keynote)
11:15-11:30	Ning Kang Peking Univ.	Correlated state in carbon nanotube arrays (invited)
11:30-11:45	Xiaoxiang Xi Nanjing Univ.	Gate tuning of coupled electronic and structural phase transition in atomically thin Ta ₂ NiSe ₅ (invited)
11:45-12:10	Peng Gao Peking Univ.	Visualization of heat transport at sub-nm scale (Keynote)

Date: **October 23, Thursday**

chair	Zhiwen Shi	
10:50-11:15	Zhiqin Chu Univ. of Hong Kong	Fabrication, Properties, and Applications of Versatile Diamond Membranes (Keynote)
11:15-11:30	Sheng Wang Wuhan Univ.	Probing microscopic structure-property- performance relationships of semiconductors by multimodal microscopy (invited)
11:30-11:45	Jing Liang Shenzhen International Quantum Academy	Non-volatile Tuning of 2D Excitons in 3R- MoS ₂ Through Sliding Ferroelectricity (invited)
11:45-12:10	Liang Qiao Univ. of Electronic Science and Technology of China	Exotic electronic states in nickelate-based superconducting thin films (Keynote)

Afternoon Session:

Date: **October 21, Tuesday**

chair	Zengfeng Di	
14:00-14:25	Peng Zhou Fudan Univ.	2D Semiconductors for IC Manufacturing (Keynote)
14:25-14:50	Lixing You Shanghai Institute of Microsystem and Information Technology CAS	Superconducting strip photon detectors and application (Keynote)
14:50-15:05	Jiangtao Wang Peking Univ.	Electrostatic repulsion enabled advanced transfer for integration of van der Waals materials (invited)
15:05-15:30	Yuan Liu Hunan Univ.	High density 3D integration of 2D transistors via van der Waals lamination (Keynote)
15:30-16:00	Break	
chair	Pingheng Tan	
16:00-16:25	Wang Yao Univ. of Hong Kong	Hybrid moire excitons in twisted bilayer TMDs (Keynote)
16:25-16:50	Hai-Zhou Lu Southern University of Science and Technology	Nonlinear transport theory at the order of quantum metric (Keynote)
16:50-17:05	Miao-Ling Lin Institute of Semiconductors, CAS	Raman scattering in a phonon-optical cavity (invited)
17:05-17:20	Xiaoxia Yang National Center for Nanoscience and Technology	Infrared Polaritons in Low-dimensional Nanomaterials (invited)
17:20-17:35	Songtai Lv East China Normal Univ.	Many-body computing on Field Programmable Gate Arrays (contributed)

Date: **October 22, Wednesday**

chair	Xiaoxia Yang	
14:00-14:25	Junwei Luo Institute of Semiconductors, CAS	Physics of ultimate Si transistors (Keynote)
14:25-14:50	Dawei Di Zhejiang Univ.	Perovskite LEDs and Lasers (Keynote)
14:50-15:05	Haiding Sun Univ. of Science and Technology of China	GaN-based Integrated Optoelectronic Devices and Systems (invited)
15:05-15:30	Lei Shi Fudan Univ.	Vectorial lasing based on quasi-bound-states-in-continuum of photonic crystal slabs (Keynote)
15:30-16:00	Break	
chair	Kaihui Liu	
16:00-16:25	Wei Yang Institute of Physics, CAS	Multiband superconductivity in a moire flatband (Keynote)
16:25-16:50	Zhiwen Shi Shanghai Jiao Tong Univ.	Low-dimensional Carbon Materials for High-performance Nanoelectronics (Keynote)
16:50-17:05	Sihan Zhao Zhejiang Univ.	Strongly Hybridized Phonons in One-Dimensional van der Waals Crystals (invited)
17:05-17:20	Can Liu Renmin Univ.	Interfacial Engineering for Two-dimensional Material Growth (invited)
17:20-17:35	Li Wang Institute of Physics, CAS	Precise Growth and Property Regulation of Two-Dimensional Boron Nitride Crystals (invited)

Date: **October 23, Thursday**

chair	Qing Shen	
14:00-14:25	Xiaodan Zhang NanKai Univ.	Inorganic Perovskite/Silicon Tandem Solar Cells (Keynote)
14:25-14:50	Yong Zhou Nanjing Univ.	Artificial Photosynthesis: Photoconversion of CO ₂ into Renewable Hydrocarbon Fuels (Keynote)
14:50-15:05	Zhilong Zhang South China	Exciton Delocalization in Quantum Dots and The Implications (invited)

	Univ. of Technology	
15:05-15:30	Jin Chang Nanjing Tech Univ.	Crystallization Regulation and Defect Suppression for Efficient Tin-based Perovskite LEDs (Keynote)
15:30-16:00	Break	
chair	Jin Chang	
16:00-16:25	Wanli Ma Soochow Univ.	Quantum Dot Solar Cells (Keynote)
16:25-16:50	Jianjun Tian Univ. of Science and Technology Beijing	Efficient cadmium-free quantum dot light-emitting diodes (Keynote)
16:50-17:05	Guohua Wu Harbin Engineering Univ.	Design, Synthesis, and Application Research of Opto-Electro-Magnetic Functional Materials (invited)
17:05-17:20	Yaohong Zhang Northwest Univ.	Research on semiconductor quantum dots for stealth camouflage applications (invited)
17:20-17:35	Yuxin Yang Eastern Institute of Technology	Overcoming asymmetric carriers injection in III-nitride LEDs through defect engineering (contributed)