

Symposia – B04
Novel Optoelectronic Materials and Devices

Oct 15 (Sunday), 2023

Conference Room: 7105, -1#floor

8:40-10:30 Session I

Chair: Zhiyong Fan

8:40-08:50 Opening

8:50-9:20 (B04-01)

Bio-inspired Electronic Eyes Using Nanoscale Materials (Keynote)

Dae-Hyeong Kim, Seoul National University, South Korea

9:20-09:40 (B04-02)

Multi-material Nanoscale 3D Fabrication Based on Femtosecond Light Sheets (Invited)

Shih-Chi Chen, The Chinese University of Hong Kong, Hong Kong SAR, China

09:40-10:10 (B04-03)

Strategies for Improving the Performance of Sn-based Perovskite Solar Cells (Keynote)

Feng Yan, The Hong Kong Polytechnic University, Hong Kong SAR, China

10:10-10:30 (B04-04)

Tribo-photonics: an Emerging Field toward Fully-Self-Powered Wireless Sensing (Invited)

Yunlong Zi, the Hong Kong University of Science and Technology – Guangzhou (HKUST-GZ), China

10:30-10:40 Coffee Break

10:40-12:00 Session II

Chair: Guozhen Shen

10:40-11:10 (B04-05)

Low-dimensional Perovskites Materials for Efficient and Stable LEDs (Keynote)

Wallace C. H. Choy, The University of Hong Kong, Hong Kong SAR, China

11:10-11:30 (B04-06)

Heterointerface and Intragrain Microstructures of Perovskite Semiconductors (Invited)

Yuanyuan Zhou, The Hong Kong University of Science and Technology, Hong Kong SAR, China

11:30-11:50 (B04-07)

ACQ-Free Graphene Quantum Dot (Invited)

Seokwoo Jeon, Korea University, Seoul, Korea

11:50-12:00 Group photo taking

12:00-13:40 Lunch

13:40-15:30 Session III

Chair: Johnny C. Ho

13:40-14:10 (B04-8)

Stimuli-Responsive Micro/Nanostructured Materials for Electronic Skins (Keynote)

Hyunhyub Ko, Ulsan National Institute of Science and Technology, South Korea

14:10-14:30 (B04-9)

Optical Design for High-efficiency White Perovskite LEDs (Invited)

Hin-Lap Yip, City University of Hong Kong, Hong Kong, China

14:30-14:50 (B04-10)

2D Molecular Crystals and Their Polarized Photoelectric Detectors (Invited)

Rongjin Li, Tianjin University, China

14:50-15:10 (B04-11)

High-performance Photodetectors Based On Narrow Bandgap Two-Dimensional Materials and Van Der Waals Heterostructures (Invited)

Weida Hu, Shanghai Institute of Technical Physics, CAS, China

15:10-15:30 (B04-12)

Liquid Metal Patterned, Stretchable and Permeable Electronics (Invited)

Zijian Zheng, The Hong Kong Polytechnic University, Hong Kong SAR, China

15:30-15:40 Coffee break

15:40-17:45 Session IV

Chair: Hyunhyub Ko

15:40-16:00 (B04-13)

MXene-based Materials for Flexible Infrared Photodetectors (Invited)

Guozhen Shen, Beijing Institute of Technology, China

16:00-16:20 (B04-14)

Thin Film Fluorescent Sensor for Hazardous Vapor (Invited)

Yanyan Fu, Shanghai Institute of Microsystem and Information Technology, CAS, China

16:20-16:40 (B04-15)

Quantum Rods and Their Application in Displays and Lighting Devices (Invited)

Abhishek Kumar Srivastava, The Hong Kong University of Science and Technology, Hong Kong

SAR, China

16:40-17:00 (B04-16)

Photovoltaic Effect Optimization Strategy for Two Dimensional Material van-der-Waals PN Homojunction (Invited)

Zichao Ma, South China University of Technology, China

17:00-17:15 (B04-17)

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17:15-17:30 (B04-18)

Exciton Emission and Photoelectric Property Regulation in Low-dimensional Semiconductors

Xiujuan Zhuang, Hunan University, China

17:30-17:45 (B04-19)

Colloidal Quantum Wires: High-Precision Synthesis and Chirality Control

Yi Li, University of Science and Technology of China, China

17:45-18:00 (B04-20)

Thermal and Nonthermal Effects in Plasmon-Mediated Chemical Conversions at Nanostructured Ag Electrodes

Weihui Ou, Guangdong University of Technology, China

18:30 Symposium Banquet

Symposia – B04

Novel Optoelectronic Materials and Devices

Oct 16 (Monday), 2023

8:50-10:50 Session I

Chair: Yu-Lun Chueh

8:50-9:20 (B04-01)

Multi-functional Photoelectronic Devices Based on Two-dimensional Ferroelectric Semiconductor α -In₂Se₃ (Keynote)

Qing Chen, Peking University, China

9:20-9:50 (B04-02)

Advancements in Perovskite Nanocrystal LEDs for Bright, Efficient, and Stable Displays (Keynote)

Tae-Woo Lee, Seoul National University, South Korea

9:50-10:10 (B04-03)

Hybrid Perovskites: A Bright Frontier of Optoelectronics (Invited)

Tom Wu, The Hong Kong Polytechnic University, Hong Kong SAR, China

10:10-10:30 (B04-04)

Biomimetic Optoelectronic Devices with Nanostructures (Invited)

Zhiyong Fan, The Hong Kong University of Science and Technology, Hong Kong SAR, China

10:30-10:40 Coffee Break

10:40-12:00 Session II

Chair: Leilei Gu

10:40-11:10 (B04-05)

Ultra-low Power E-nose Using Micro-LED Based Monolithic Gas Sensors (Keynote)

Inkyu Park, Korea Advanced Institute of Science and Technology, South Korea

11:10-11:30 (B04-06)

Phase/Structure-Modulated 2D Materials by Plasma-Assisted Selenization Process Toward Innovative Nanoelectronics (Invited)

Yu-Lun Chueh, National Tsing-Hua University

11:30-11:50 (B04-07)

Multi-valued Logic Electronics Enabled by Mixed-Dimensional 1D/2D Anti-ambipolar Heterotransistors (Invited)

Johnny C. Ho, City University of Hong Kong, Hong Kong SAR, China

11:50-12:10 (B04-08)

Aluminum-Based Multiscale 3D Lithography: Concept, Strategy, and Applications (Invited)

Liaoyong Wen, Westlake University, China

12:10-13:30 Lunch

13:30-15:30 Session III

Chair: Daquan Zhang

13:30-13:50 (B04-09)

Optical Spectra Shaping in Optical Micro/Nano Fiber Systems (Invited)

Yaoguang Ma, Zhejiang University, China

13:50-14:10 (B04-10)

High-Performance Blue Perovskite Light-Emitting Diodes via Synergetic Interface Engineering (Invited)

Yanqing Li, East China Normal University, China

14:10-14:30 (B04-11)

Ferroelectric Field Effect Transistors for Optoelectronics (Invited)

Jianlu Wang, Fudan University, China

14:30-14:50 (B04-12)

Microfluidics Assisted Optics Manufacturing Technique (Invited)

Bo Dai, University of Shanghai for Science and Technology, China

14:50-15:10 (B04-13)

Wide Bandgap Cu-based Sulfide Thin Film Photovoltaic Materials and Devices (Invited)

Chang Yan, the Hong Kong University of Science and Technology – Guangzhou (HKUST-GZ), China

15:10-15:30 (B04-14)

Artificial Visual Systems with Nanowire Arrays (Invited)

Leilei Gu, Shanghai Jiao Tong University, China

15:30-15:40 Coffee break

15:40-17:40 Session IV

Chair: Daquan Zhang

15:40-16:00 (B04-15)

Low-dimensional Perovskite Nanostructures for Perovskite Light-Emitting Diodes (PeLEDs) (Invited)

Yu Fu, Sun Yat-Sen University, China

16:00-16:15 (B04-16)

Growth and Photodetection Application of Low Dimensional Perovskite Semiconductors

Ziqing Li, Fudan University, China

16:15-16:30 (B04-17)

Focused Ion Beam-assisted Nanostencil Lithography for Organic-Inorganic Hybrid Perovskite Optoelectronic Devices

Bin Han, Shaanxi University of Science and Technology, China

16:30-16:45 (B04-18)

Failure Mechanism, Structure Control and LED Application of Inorganic CsPbI₃ perovskite

Jingcong Hu, Beijing University of Technology, China

16:45-17:00 (B04-19)

Infrared Polarimetric Image Sensors Based on Ordered III-Sb NW Arrays

Kai Zhang, Institute of Physics, Chinese Academy of Sciences, China

17:00-17:15 (B04-20)

Split-Ring Structured All-Inorganic Perovskite Photodetector Arrays for Human-Machine Interaction

Bori Shi, Shanghai University, China

17:15-17:30 (B04-21)

Applications of Metal Oxide Nanofibers in Optoelectronic Devices

Fengyun Wang, Qingdao University, China

17:30-17:40 Closing

17:50 Dinner