

# PS1: POSTER SESSION I

WEDNESDAY PM

Wednesday, June 24, 2020  
5:30 pm - 7:00 pm  
Poster Session Channel

Presenter	Paper #	Title
Jian Liu	PS1.01	(Student) <i>In Situ</i> AFM Characterization on Si-Based Anode for Li-Ion Battery
Xinwei Jiao	PS1.02	Cobalt-Free Spinel Cathodes for Next-Generation Lithium-Ion Batteries
Zongjian Fan	PS1.03	(Student) High Brightness Luminescence from Indirect Band Gap AlGaAs Double Heterostructure (DH) Grown by Liquid Phase Epitaxy (LPE)
Hongyu Peng	PS1.04	(Student) Characterization of Hazy Features on AlInP/GaAs Epitaxial Wafers Grown by Organometallic Vapor Phase Epitaxy
Sunghwan Lee	PS1.05	Vapor-Deposited Polymeric Thin Films on Fabrics for Breathable Wearable Device Application
Isaiah Abu Moses	PS1.06	(Student) Structural and Electronic Properties of a New Class of Nanoporous Organic Nanocrystals
Habib Ahmad	PS1.07	(Student) Be Doping of Semi-Insulating GaN without Surface Accumulation Using MME
Ayush Pandey	PS1.08	(Student) On the Origin of Efficiency Droop of AlGaIn Deep Ultraviolet Light Emitting Diodes
Chen Yang	PS1.09	Normally-off GaN Vertical-Channel Junction Field-Effect Transistors with Regrown p-GaN by MOCVD
Mostafa Abdelhamid	PS1.10	(Student) Device Quality $\text{In}_x\text{Ga}_{x-1}\text{N}$ Templates ( $0.07 < x < 0.10$ ) for Optoelectronic Applications
Fiaz Ahmed	PS1.11	(Student) Hybrid QD/Nitride Photo-Detector with Visible/Infrared Response
Alan H Chu	PS1.12	Hybrid Magneto Photonic Material Structure for Plasmon Assisted Magnetic Switching
Michael Barrow	PS1.13	(Student) High Selectivity and High Aspect Ratio GaAs/AlGaAs Reactive Ion Etching with $\text{HBr}/\text{SF}_6/\text{He}$ and $\text{BCl}_3/\text{SF}_6/\text{He}$
Seth Kurfman	PS1.14	(Student) Electric-Field Control of Strain-Driven Tuning of FMR in V[TCNE]x
Kevser Sahin Tiras	PS1.15	Identifying the Spin Mixing Mechanisms in Excitonic and Exciplex Organic Light Emitting Diodes
Benard D Kavey	PS1.16	(Student) Synthesis and Structural Characterization of Monodisperse Lanthanide Doped Titanium-Containing Perovskites for Optoelectronic and Thin-Film Applications
Jen-Chun Fang	PS1.17	Micro-/Nano-Voids Guided Two-Stage Film Cracking on Bioinspired Assemblies for High-Performance Electronics
Elena Cimpoiasu	PS1.18	Charge Scattering Mechanisms in Shallow InAs Quantum Wells
Deidra Hodges	PS1.19	Synchrotron and Optical Probing of Mixed Lead Halide Perovskites for Photovoltaics
Thomas Debesay	PS1.20	(Student) I2 Dopant Induced Charge Carrier Mobility Enhancement in Organic Field-Effect Transistors (OFETs)
Wafaa Farag Gebriel	PS1.21	(Student) Colloidal Quantum Dots Photodetectors and their Performance Enhancement with the Plasmonic Effect of Silver Nanoparticles
Benjamin Davis	PS1.22	(Student) Atomic Layer Deposited Metal Oxide Bilayers for Metal-Insulator-Semiconductor Photovoltaics
Ben M Garland	PS1.23	(Student) Exploiting Fixed Charge at Selective Contacts to Control Schottky Barrier Height for Silicon Photovoltaics
Mohadeseh A. Baboli	PS1.24	(LATE NEWS, Student) Toward III-V-on-Si Tandem-Junction Solar Cells Using Selective-Area Epitaxial Growth of GaAsP Nanowire Arrays

# PS2: POSTER SESSION II

THURSDAY AM

Thursday, June 25, 2020  
10:00 am - 11:15 am  
Poster Session Channel

Presenter	Paper #	Title
Dawoon Lee	PS2.01	(Student) High Performance Micro-Supercapacitor via Hybrid-Curable Ion-Gel Electrolyte and Laser-Reduced Graphene Electrode for Flexible Energy Storage Devices
Vinamrita Singh	PS2.02	Investigation of Two-Dimensional MoS <sub>2</sub> Based Ultra-Thin Solar Cells
Kishan LAL Kumawat	PS2.03	(Student) Solution Processed SnSe <sub>2</sub> -RGO Composite Hybrid Bulk Heterojunction for Self-Powered Visible IR Broadband Photodetection
Fenghongkang Pan	PS2.04	(Student) Atomic Fe-Ni Bimetallic Sites Boosting Electrocatalytic Oxygen Evolution Reaction
Habib Ahmad	PS2.05	(Student) Extensive Study of Ga-Coverage in UID Regrown GaN by MBE
Masakazu Kobayashi	PS2.06	Orientation Control of ZnTe Epilayers Using the Nano-Faceted and Tilted Sapphire Substrate
Jessica Hendricks	PS2.07	(Student) A Study of Defects in $\beta$ -Ga <sub>2</sub> O <sub>3</sub> Using Admittance Spectroscopy Techniques
Ilgyu Choi	PS2.08	(Student) Spatial Alignment of High-Crystalline InN Nanowires by Applying Magnetic Field
Masamichi Akazawa	PS2.09	Impact of Cap-Layer Materials Used in Long-Term Low-Temperature Annealing on Electrical Properties of Mg-Ion Implanted GaN
Nidhi Puri	PS2.10	(Student) Enhanced Thermoelectric Behavior in Fully Dense Hot Pressed Pellet of Nanostructured Calcium Cobalt Oxide
Alexandra M Boyadzhiev	PS2.11	(Student) High Quality Growth of Magnesium Aluminum Ferrite by Molecular Beam Epitaxy
Youngkyun Kim	PS2.12	(Student) Highly Transparent and Flexible Patterned Ion-Gel Based Triboelectric Nanogenerator for Tactile Sensing Application
Seohyun Maeng	PS2.13	(Student) Large-Area, Free-Standing and Transparent MoS <sub>2</sub> /Ion-Gel Hybrid Films for High-Sensitivity Low-Power Photodetection
Manjri Singh	PS2.14	(Student) Light Sensitive Resistive Memory Behaviour in ZnO/rGO Heterostructure Device
Edward Stockert	PS2.15	Van der Waals Epitaxy of Two-Dimensional Noble Metal Diselenides on III Nitride Semiconductors
Jung Suk Cha	PS2.16	(Student) Electrical Properties of High Barrier-Height Au/NiZn Solid Solution Schottky Contact on Semipolar [20-21] n-GaN for Electronic Devices
Samuel Kim	PS2.17	(Student) Thermal Management of $\beta$ -Ga <sub>2</sub> O <sub>3</sub> Current Aperture Vertical Electron Transistors
Philip M Jean-Remy	PS2.18	(Student) Thermodynamic Phase Diagram Calculations for the Chemical Vapor Deposition of Hexagonal Boron Nitride Using Triethylboron, Ammonia and Hydrogen
Corey L Arnold	PS2.19	(Student) Room Temperature Growth and Investigation of Electrical Properties of Amorphous Boron Nitride
Qi Wang	PS2.20	(Student) Resistive Memory with Perovskite Nickelates
Muhammad Shehzad Sultan	PS2.21	Superparamagnetic Properties of Metal-Free Nitrogen Doped Graphene Quantum Dots Synthesized by Pulsed Laser Ablation
Vamseedhara Vemuri	PS2.22	(Student) Al and Hf Based Metalcones—Inducing Porosity in Nano-Laminate Thin Films
Drake Austin	PS2.23	Laser-Writing of Electronic Circuitry in Thin-Film Molybdenum Disulfide
Makhes Kumar Behera	PS2.24	Low Powered Smart Window Device Based on a Stoichiometrically Downgraded Multi-Layer Structure from VO <sub>2</sub> Thin Films Grown Using Pulsed Laser Deposition