

Paper Number	Title	Track	Decision
1570489416	Thermoelectric Properties of CrI <sub>3</sub> Monolayer	2D Materials and Devices	Oral
1570502014	Benzimidazole/reduced graphene oxide based field effect transistor for mercury ion detection in water	2D Materials and Devices	Oral
1570502623	Comprehensive Computational Modelling Approach for Graphene FETs	2D Materials and Devices	Oral
1570488515	Facile in-situ preparation of few-layered reduced graphene oxide - niobium pentoxide composite for non-enzymatic glucose monitoring	2D Materials and Devices	Oral
1570498583	High-performance ultraviolet detector employing out-of-plane rGO/MoS <sub>2</sub> PN heterostructure	2D Materials and Devices	Oral
1570500295	Tin disulphide based electrochemical sensor for lead ions detection in water	2D Materials and Devices	Oral
1570501526	MD Simulation of Elastic Field at an Inhomogeneity in Graphene	2D Materials and Devices	Oral
1570501997	Majorana states in one-dimensional sidewall modes of a three dimensional topological insulator	2D Materials and Devices	Oral
1570502061	Stoichiometry effect on device Performance of 1L-MoS <sub>2</sub> - FET	2D Materials and Devices	Oral
1570502244	Broadband absorption in Au nanoparticle decorated Chlorophyll b for biophotonic applications	2D Materials and Devices	Oral
1570502323	Controlled growth of vertically standing WS <sub>2</sub> flakes with morphology and stoichiometry desired as a catalyst in hydrogen evolution reaction	2D Materials and Devices	Oral
1570502578	Long term aging studies of Graphene/Surlyn encapsulated organic photovoltaic devices	2D Materials and Devices	Oral
1570502652	Role of surface processes in growth of monolayer MoS <sub>2</sub> for device applications	2D Materials and Devices	Oral
1570489266	Performance Evaluation of Germanium-Tin Nanowire PFETs: Impact of Mole Fraction, Orientation and Doping	Emerging Logic, Memories and Neuromorphic Devices	Oral
1570489328	Memory and Logic soft error improvement using phase transition material assisted transistors	Emerging Logic, Memories and Neuromorphic Devices	Oral
1570489367	Effect of Annealing on Resistive Switching Behavior of PMMA Based RRAM	Emerging Logic, Memories and Neuromorphic Devices	Oral
1570489404	Effect of Antisolvent Method on the Performance of HOIP based Memristive Devices	Emerging Logic, Memories and Neuromorphic Devices	Oral
1570499399	Skyrmionic implementation of Spike Time Dependent Plasticity (STDP) enabled Spiking Neural Network (SNN) under supervised learning scheme	Emerging Logic, Memories and Neuromorphic Devices	Oral
1570501368	SEU Sensitivity of a 14-nm SOI FinFET eDRAM Cell under Heavy-ion Irradiation	Emerging Logic, Memories and Neuromorphic Devices	Oral
1570501540	Retention Enhancement through Architecture Optimization in Junctionless Capacitorless DRAM	Emerging Logic, Memories and Neuromorphic Devices	Oral
1570502090	Demonstration of Charge Trap Flash Bit-Cell in 180nm CMOS Logic Foundry	Emerging Logic, Memories and Neuromorphic Devices	Oral
1570502285	Robust Unsupervised Two Layered Network with RRAM Synapses for Image Recognition	Emerging Logic, Memories and Neuromorphic Devices	Oral
1570502327	Compact Modeling of Differential Spin Orbit Torque based MRAM	Emerging Logic, Memories and Neuromorphic Devices	Oral
1570502349	Oscillatory 2-neuron sub-network design and performance based on sub-threshold CMOS operation	Emerging Logic, Memories and Neuromorphic Devices	Oral
1570502521	Epitaxial BaTiO <sub>3</sub> on Si (001) for memory applications	Emerging Logic, Memories and Neuromorphic Devices	Oral
1570502539	HfO <sub>2</sub> based MIS type RRAM as an Electronic Synapse	Emerging Logic, Memories and Neuromorphic Devices	Oral
1570489035	Effect of TIPS-Pentacene:Polystyrene Blend Ratio on Electrical Performance and Stability of Solution Processed Organic Field-Effect Transistors	Flexible Electronics	Oral
1570500950	Hexylthiophene based Conjugated Polymer Metal-ion Sensor	Flexible Electronics	Oral
1570502042	Flexural and bending fatigue studies of perovskite solar cells on willow glass substrates	Flexible Electronics	Oral
1570502079	PDMS-Ni coated flyash cenosphere composite for broadband microwave absorption	Flexible Electronics	Oral
1570502645	An Analytical Approach to Model the Effects of Diffusion in Space-Charge-Limited Current in Organic Semiconductor Films	Flexible Electronics	Oral
1570501586	Alternative transparent conducting electrode for flexible optoelectronics	Flexible Electronics	Oral
1570502099	Reduced Graphene oxide strain gauge sensor for dynamic pressure sensing	Flexible Electronics	Oral
1570502105	Development of New Blue-Light Emitting PPV Block Copolymer: Synthesis, Characterization and Electro-Optical Studies	Flexible Electronics	Oral
1570502119	The role of Na <sup>+</sup> , Zn <sup>2+</sup> cations on the mechanical, thermal and moisture permeation behaviors of poly(vinyl butyral) based ionomeric films	Flexible Electronics	Oral
1570502137	Controlling the Morphology and Conductivity of Thiophene Nanofibers using Electrospinning for Flexible devices	Flexible Electronics	Oral
1570502410	Optically assorted electrospun nanofiber mats of electroactive blends for flexible electronics	Flexible Electronics	Oral
1570503466	Low EOT MoS <sub>2</sub> FET for Efficient Photodetection and Gas Sensing	Late News Papers	Oral
1570504020	Interlayer Engineering in GeSn Gate Stacks for Advanced CMOS	Late News Papers	Oral
1570504146	Tunable as-grown graphene contacts to semiconducting transition metal dichalcogenides	Late News Papers	Oral
1570504149	GaN Growth Process by MOCVD Revisited: TEM study of Microstructural Evolution Presented	Late News Papers	Oral
1570487615	An Efficient Surface Functionalized Silicon Nanoporous Membrane as a Platform for Dialysis	MEMS and NEMs	Oral
1570489368	Analytical model for monitoring of AFM tip wear through resonance frequency measurements	MEMS and NEMs	Oral
1570489427	Micro Electrolithography System Development	MEMS and NEMs	Oral
1570500557	Experimental Investigation of Dynamic Characteristics of Metal Coated Buckled Micro-Beams with Electrothermal Modulation of Residual Stress	MEMS and NEMs	Oral
1570501585	Design and Fabrication of FET Biosensor for Detection of Glutathione	MEMS and NEMs	Oral
1570502032	Energy Based Design And Validation of Latch MEMS g-Switch	MEMS and NEMs	Oral
1570502605	Optimization of platinum thin film as a bottom electrode for aluminum nitride thin films using Plackett-Burman statistical approach	MEMS and NEMs	Oral
1570489658	A Simple Charge and Capacitance Compact Model for Asymmetric III-V DGFETs Using CCDA	Modelling and Simulations	Oral
1570501945	Compact Modeling of Drain Current in Double Gate Negative Capacitance MFIS Transistor	Modelling and Simulations	Oral
1570489236	Charge Based Compact Modeling of Gate Leakage Mechanism in AlGaIn/GaN HEMTs	Modelling and Simulations	Oral
1570489257	Incident Flux Based Monte Carlo Simulation of Silicon and GaAs FETs in Quasi-Ballistic regime	Modelling and Simulations	Oral

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1570489384	Simulation of Self-Heating and Bulk Trapping Effects on Drain Current Static and Transient Characteristics of AlGaIn/GaN HEMTs	Modelling and Simulations	Oral
1570500331	A Physics Based Model for DC Self-Heating in Nanowire-FET Considering Lattice Temperature	Modelling and Simulations	Oral
1570502056	Intensity Distribution and Trapping Potential of a Defocused Optical Tweezer	Modelling and Simulations	Oral
1570502602	On the design challenges of drain extended FinFETs for advance SoC applications	Modelling and Simulations	Oral
1570502626	Impact of Linear Intergranular Variation in Remnant Polarization on Negative Capacitance Field Effect Transistor	Modelling and Simulations	Oral
1570500371	Hierarchical structures and multiscale optical coupling for improved photodetectors	Photonics	Oral
1570489412	Photothermal effects in mobile nanotweezers	Photonics	Oral
1570501887	Selective dewetting of metal films for fabrication of atomically separated nanoplasmonic dimers	Photonics	Oral
1570501998	Fabrication of large area flexible dielectric metasurfaces	Photonics	Oral
1570502033	A simple high-efficiency forward-pumped Raman fiber laser	Photonics	Oral
1570502037	Observation of visible light flashes in high power near infrared narrow linewidth polarization maintained fiber laser caused by Stimulated Brillouin Scattering triggered cascaded Raman Scattering	Photonics	Oral
1570502038	Simultaneous generation of laser sources in S, C and L bands through four-wave mixing of electro-optic frequency combs	Photonics	Oral
1570502215	Bistability and Self-Pulsation in Free-carrier Driven Optical Microcavities with All Nonlinear Losses	Photonics	Oral
1570502546	Silicon Slot Waveguide Mach-Zehnder Using Fixed Electron Beam Moving Stage Patterning Technique	Photonics	Oral
1570502548	Increasing the efficiency of a fixed-wavelength cascaded Raman resonator for a non-resonant pump by using a reflector	Photonics	Oral
1570502641	Silicon Nitride assisted SU8 Grating for Polymer Waveguide Coupling	Photonics	Oral
1570502656	Offset Locking of an Optical Carrier to a Frequency Comb generated in Silicon based modulators for Optical Frequency Synthesis	Photonics	Oral
1570486537	Enhanced broad band photoresponse of horizontal array of Silicon microstructures lithographically fabricated on Silicon On Insulator wafers	Photovoltaics and Energy Harvesting	Oral
1570488981	Laser Crystallization of amorphous Ge thin films using Pulsed Nd YAG	Photovoltaics and Energy Harvesting	Oral
1570489066	Mapping of bulk diffusion length and effective back surface recombination velocity in silicon solar cells	Photovoltaics and Energy Harvesting	Oral
1570489260	Transport properties of RF-magnetron sputtered AZO thin films: the effect of processes parameters during and post deposition	Photovoltaics and Energy Harvesting	Oral
1570489350	Screen Printed Phosphorus Dopant Paste Diffusion Optimization for Solar Cell Applications	Photovoltaics and Energy Harvesting	Oral
1570489425	Optimization of controlled two-steps liquid phase crystallization of Ge-on-Si	Photovoltaics and Energy Harvesting	Oral
1570489429	SIMS characterization of TiN diffusion barrier layer on steel substrate	Photovoltaics and Energy Harvesting	Oral
1570500868	Polydispersed Metal Nanoparticles at the Interface for Improved Optoelectronic Properties in Perovskite Photovoltaics	Photovoltaics and Energy Harvesting	Oral
1570501962	Optimizing device efficiency of P3HT/P3HT:PCBM interlayer organic solar cell: Annealing dependent study	Photovoltaics and Energy Harvesting	Oral
1570502021	Effect of Fluorination on the D-A-D type Hole Transporting Materials for Perovskite Solar Cells	Photovoltaics and Energy Harvesting	Oral
1570502055	Control of Conductivity in Manganese Vanadium Oxide	Photovoltaics and Energy Harvesting	Oral
1570502071	Effect of meso substituent on Optoelectronic Properties in BODIPY based donor acceptor Copolymers	Photovoltaics and Energy Harvesting	Oral
1570502108	Synthesis of Cu <sub>2</sub> ZnSnSn <sub>4</sub> nanoparticles for solar cell applications	Photovoltaics and Energy Harvesting	Oral
1570502245	Simulation Based Analysis of Grain Boundary in IBC Perovskite Solar Cells	Photovoltaics and Energy Harvesting	Oral
1570502334	Tuning the Band Structure of Nickel Oxide for Efficient Hole Extraction in Perovskite Solar Cells	Photovoltaics and Energy Harvesting	Oral
1570502646	Enhancement in Open-Circuit Voltage of Semi-transparent, stable MAPbI <sub>3</sub> -xBr <sub>x</sub> perovskite solar cells by methyl amine treatment and optimal Hole Transport Layer	Photovoltaics and Energy Harvesting	Oral
1570501305	Back-illuminated Al <sub>0.40</sub> Ga <sub>0.60</sub> N p-i-n UV detector with 67% zero-bias external quantum efficiency	Wide Band Gap Semiconductors	Oral
1570501519	Investigation of Trap Induced Gate Lag Phenomenon in AlGaIn/GaN High Electron Mobility Transistors	Wide Band Gap Semiconductors	Oral
1570502583	Physics Based Computational Modeling Strategy for AlGaIn/GaN HEMTs	Wide Band Gap Semiconductors	Oral
1570489422	Study of interface traps for GaN-based MIS-HEMTs with high pressure oxidized aluminium as gate dielectric	Wide Band Gap Semiconductors	Oral
1570489439	Surface kinetics modeling: A predictive approach to growth of high crystalline quality AlN epilayers	Wide Band Gap Semiconductors	Oral
1570497384	Impact of post deposition annealing of ZrO <sub>2</sub> insulating layer on the performance of GaN metal-semiconductor-metal ultraviolet photodetectors	Wide Band Gap Semiconductors	Oral
1570501340	Hybrid $\beta$ -Ga <sub>2</sub> O <sub>3</sub> /AlGaIn Schottky Barrier Diodes for broadband deep-ultraviolet optoelectronics	Wide Band Gap Semiconductors	Oral
1570501863	Normally-Off AlGaIn/GaN HEMT on 200 mm Silicon with ON-Current 500 mA/mm and V <sub>th</sub> > 5V	Wide Band Gap Semiconductors	Oral
1570501937	A Surface-Potential Model for n-Polar GaN/AlN/AlGaIn MIS-HEMTs	Wide Band Gap Semiconductors	Oral
1570501960	MBE grown Self-Powered $\beta$ -Ga <sub>2</sub> O <sub>3</sub> MSM Deep-UV Photodetector	Wide Band Gap Semiconductors	Oral
1570502081	Improvement in Self-Powered GaN-based Symmetric Metal-Semiconductor-Metal Ultraviolet Photodetectors by Using Phenol-Functionalized Porphyrin Organic Molecules	Wide Band Gap Semiconductors	Oral
1570502564	Normally off AlGaIn/GaN FinFET devices on Si substrate	Wide Band Gap Semiconductors	Oral
1570502581	On the Trap Assisted Stress Induced Safe Operating Area Limits of AlGaIn/GaN HEMT	Wide Band Gap Semiconductors	Oral
1570502636	Impact of surface morphology on performance parameters of III-nitride UV photodetectors on Si (111) and their application in solar-UV monitoring	Wide Band Gap Semiconductors	Oral