

## IEEE NANO 2018 Programme: Poster Presentations, Tuesday 24th July

Poster Board No.	Presenting Author	Paper Title
T1	Junxue Fu	Nanorods Based Dielectrophoresis for Protein Concentration and Immunoassay
T2	Abdelkader Souifi	Ultrasensitive CMOS Electro-chemical Sensor Based on Fully Depleted SOI MOSFET
T3	Ning Luo	Improved pH Sensing Performance with Microarray ISFETS under Pulse AC Bias
T4	Zeineb Ben Abdallah	Study of morphological and electrical characteristics of screen printed electrochemical sensorchip used for agrifood applications
T5	Soon-Il Yun	PEDOT:PSS layered Au-Ag bio-nanocomposite modified electrode for electrochemical sensing of tryptamine and serotonin
T6	Luiza Wasiewska	Reagent-free electrochemical-based detection of silver ions in aqueous solutions using localized pH control
T7	Yineng Wang	Research of novel conductivity electrodes with grounded design and integrated microchip CE system.
T8	Ujjwol Barman	Simulation studies on ZnO nanoparticle based FET device for possible biosensing applications
T9	Xi Cao	Low Cost Electrodes Cell in Capacitively Coupled Contactless Conductivity Detector (C4D) for Microfluidic Chemical Analysis
T10	Libao An	The absorption of SO <sub>2</sub> molecules on Fe-doped carbon nanotubes: The first principles study
T11	Ausra Baradoke	Cyclic Voltammetry of Interdigitated Working/Counter Microelectrode Array
T12	Cathal Larrigy	Laser Induced Graphene: Fabrication and characterisation
T13	Uttam Kumawat	Enhanced Absorption in Organic Solar Cells by employing Plasmonic Nano-structures
T14	Uttam Kumawat	Plasmonic and dielectric nanostructures for improved performance of InGaN thin film solar cells
T15	Marco Fortunato	Graphene-Gold Electrodes for Flexible Nanogenerators Based on Porous Piezoelectric PVDF Films
T16	Biraj Shougaijam	Structural and Optical Properties Analysis of Au Nanoparticle assisted TiO <sub>2</sub> Nanowires for Solar Cell Applications
T17	Alexandra Erdt	Synthesis of bimetallic and hybrid platinum-tin nanocrystals for catalytic applications
T18	Sai Satyanarayana Reddy Seelam	A Novel Nanocomposite Polymer Electrolyte for Application in Solid State Lithium Ion Battery
T19	Andrea Notargiacomo	Laser and reactive ion etching treatments for nanoscale surface texturing of porous SiC
T20	Ming Sun	Large scale and flexible triboelectric nanogenerator based on roll-to-roll UV embossing fabrication
T21	Micheal Burke	CMOS compatible electrostatic supercapacitors fabricated within high surface area nanostructured templates
T22	Kota Moriuchi	Suppression of Cu <sub>2</sub> ZnSnS <sub>4</sub> Nanoparticle Based Film's Decomposition during the Selenization.
T23	Enkeleda Dervishi	Size dependence studies of graphene structures via Raman spectroscopy

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T24	Anastasiia Glushkova	Mechanism of lead halide perovskite nanowires growth
T25	Junga Ryou	Orbital Theory of Mo-Edge MoS <sub>2</sub> Nanoclusters: Stability in Five Periods and the Magic Numbers
T26	Andrei Pligovka	Electrophysical characteristics of niobia columnlike nanostructures
T27	Reza Nekovei	Ab-initio Calculation of Nonlinear Optical Susceptibilities in Germanium Quantum Dots
T28	Gioele Mirabelli	Capacitance-voltage characteristics of the Al <sub>2</sub> O <sub>3</sub> /MoS <sub>2</sub> structure: experiments and physics-based simulations
T29	Libao An	Study on Assembling Graphene by Dielectrophoresis and Reducing Its Contact Resistance using High Temperature Annealing
T30	János Mizsei	Thermal electronic logic circuit as neuromorphic element
T31	Vipin Sharma	Performance Evaluation of a FinFET-based Dual-Output Second Generation Current Conveyor
T32	Mohamed Kessi	Center Potential of Cylindrical Gate-All-Around (CGAA) MOSFET Incorporating the Influence of DeviceDesign Parameters
T33	Yoshiharu Ajiki	Schottky barrier modulation for electronic shutter operation of Si based IR photodetector
T34	Venkateswaran Selvaraju	Material and Electrical characterisation of CuTi and CuMn alloy self-forming barrier layers for future interconnects
T35	Amad Hassen	Synthesis of Compact Crossbars for in-Memory Computing using Dynamic FBDDs
T36	Mehadi Hasan Ziko	Theoretical and numerical investigations on Si based MEMS chevron type thermal actuator
T37	Farha Memon	CNT/CB-PDMS nanocomposite diaphragm pressure sensor for monitoring respiratory disorder
T38	Li Nannan	Ultra-low Voltage Electron Emission of Quasi-two-dimensional Electron System from Vertical Nanoscale Vacuum Channel
T39	Shashikant Patole	Effect of metal contact size on the metal–semiconductor junction characteristics
T40	Manoj Yadav	Colloidal Synthesis of Cobalt Nanoparticles for Application in Non Volatile Memory Device
T41	Ram Prasadh Narayanan	Design for Nano-Robots Exposing Cancer Cells
T42	Michael Nolan	Design of Photocatalysts for CO <sub>2</sub> Reduction from First Principles
T43	Rohan Ghosh	Simulation and Analysis of MEMS based Multistep Piezoelectric Actuator
T44	Simon Cowell	Effective conductances of Moore-Shannon hammocks
T45	Simon Cowell	Ordering series and parallel compositions
T46	Umberto Garlando	Design and Characterization of Circuits Based on Emerging Technologies: the MagCAD Approach
T47	Akshay Kale	Simulations of ultrasonic manipulation of dense suspensions in piezoceramic tubes
T48	N. Cucu Laurenciu	Non-Equilibrium Green Function-based Verilog-A Graphene Nanoribbon Model
T49	João Reis	Nano and micro-structured electrophysiological sensing electrodes: The effects of the geometry on signal quality
T50	Luca Pierantoni	Efficient and versatile multiphysics/multiscale 3D model of fullerene single electron device

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Poster Board No.	Presenting Author	Paper Title
T51	John David Gordon	Towards a Tuneable Thermal Conductivity Material via Low Voltage Ordering of CNT Networks
T52	Shuhao Si	Image Inverting, Topography and Feature Size Manipulation using Organic/Inorganic Bi-layer Lift-Off for Nanoimprint Template Fabrication
T53	Oluwaseyi Balogun	Cross-Plane Thermal Conductivity Measurements in Self Assembled Nanodielectric Heterostructures
T54	Sangho Choe	Stochastic analytical model of nanonetwork synchronization using quorum sensing
T55	Hamideh Ramezani	Analysis of Information Flow in MISO Neuro-spike Communication Channel with Synaptic Plasticity
T56	Dar-Bin Shieh	Modulation of Clostridium difficile infection by oral delivery of Fe <sub>3</sub> -dO <sub>4</sub> nanoparticles
T57	Andrew Eckford	Improving Receiver Performance of Diffusion-Based Molecular MIMO Communication
T58	Ghalib Alshammri	Sequential Training-Based Receiver for On-OFF Keying Diffusion-Based Molecular Communications
T59	Caroline Moore	Vibrational spectroscopy: Exploring the biological interaction and integrity of MoS <sub>2</sub> in human macrophages.
T60	Sumistha Das	Nanoparticle mediated RNAi in insects: A novel feeding assay based method for controlling insect pests
T61	Florence Hiu Ling Chan	Monitoring microinjection process of small and non-spherical living cells using electrical responses
T62	Jun Xu	Investigation of Work Function Variation for Heteromaterial gate Fin tunnel field effect transistors

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Poster Board No.	Presenting Author	Paper Title
W1	Rong Zhu	Zinc Oxide Nanorod Field-effect Transistor with Difference Frequency Detection
W2	Benjamin O'Sullivan	Electrochemical pH Control at Gold Nanowires
W3	Che An Lee	A Controlling Method of Nanowire Array Biosensor
W4	Aurelien Gimenez	Nano-substructured Periodic gold nanoarrays for SERS / MEF applications
W5	Anuj Dhawan	Hybrid SERS substrates for chemical and biological sensing
W6	James Rice	Incoherent ultraviolet irradiation enhanced SERS using a plasmonic nanoparticle and piezoelectric peptide nanotube template platform
W7	Hao Wu	A three-finger microgripper based on 3D-Packaging
W8	Lin Lin	Methods and Experimental Research of Eliminating the Pulse of Piezoelectric Micro-fluidic System
W9	Raminder Singh	Visualising Bacterial Colonization Dynamics Inside the Gut Using Upconverting Nanoparticles Luminescence Imaging
W10	Ajay Agrawal	Enhanced sensitivity of SPR biological sensors based on nanohole arrays in gold films
W11	Chun-Liang Lu	Sn/Ag Micro bump prepared by Electrochemical Deposition Method Application 3D Packing

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Poster Board No.	Presenting Author	Paper Title
W12	Yu-Sheng Lin	Metamaterial-based label-free chemical sensors for the detection of volatile organic solutions
W13	Dereje Seifu	Carbon Nanotubes and CoFe <sub>2</sub> O <sub>4</sub> Nanoparticles Composite for Nanomagnetic Sensors
W14	Zongxian Yang	Electricity Monitoring System with Interchangeable Piezoelectric Energy Harvesters and Dynamic Power Management Circuitry
W15	Kankana Paul	Design Optimization of Fully Integrated, MEMS Electromagnetic Energy Harvesting Devices using Patterned Micro-magnet Arrays
W16	Abrar Alhazmi	Electron Transport Performance of Germanium Selenide and Germanium Sulfide Field-Effect-Transistors in Dual Gates Configuration
W17	Dogyun Kim	Helical structure-based triple cylindrical triboelectric nanogenerator
W18	Yiguo Chen	An approach with electrostatic MEMS switch for environment energy harvesting
W19	Donald Lupo	All Printed Large Area E-field Antenna Utilizing Printed Organic Rectifying Diodes for RF Energy Harvesting
W20	Louise McGrath	High Energy Density Germanium as Lithium Battery Anodes in Organic and Ionic Liquid Based Systems
W21	Manoj Yadav	Microwave Aided Synthesis of Colloidal Nickel Nanoparticles for Memory Device Application
W22	Amitesh Kumar	Nano-scaled ZnO based Resistive Memory device fabricated by Dual Ion Beam Sputtering
W23	Mangal Das	Influence of Schottky interfaces in yttria-based Resistive memory devices
W24	Fabrizio Palma	CMOS Compatible, Low Temperature growth of Silicon Nanowires by Microwave nano-susceptors
W25	Xian Wu	Comparative Studies on Interface Properties of GaN Metal-Oxide-Semiconductor Devices with Non-polar and Polar Planes
W26	Kai Xia	Pt nanowires in-situ growth on patterned polydopamine film for Neural electrode application
W27	Antonio Maffucci	Electrothermal Characterization of the Electrical Resistance of Graphene Contacts for Packages
W28	Anita Brady-Boyd	Characterisation of Electroless Deposited Cobalt by Hard and Soft X-ray Photoemission Spectroscopy
W29	Frank Sill Torres	Synchronization of Clocked Field-Coupled Circuits
W30	Waldemar Kaiser	Impact of the Level and Orientation of Crystallinity on Charge Transport in Semi-Crystalline Organic Semiconductors
W31	Zdenka Kuncic	Emergent brain-like complexity from nanowire atomic switch networks: Towards neuromorphic synthetic intelligence
W32	Steffen Baehr	Data Reduction and Readout Triggering in Particle Physics Experiments Using Neural Networks on FPGAs
W33	Lijuan Xia	A Rodent Flash FPGA Control System for Closed-loop Optogenetic Stimulation to Suppress Seizures
W34	Olga Krestinskaya	Binary Weighted Memristive Analog Deep Neural Network for Near-Sensor Edge Processing
W35	Olga Krestinskaya	Approximate Probabilistic Neural Networks with Gated Threshold Logic
W36	Antonio Rios-navarro	Performance evaluation over HW/SW co-design SoC memory transfers for a CNN accelerator
W37	Irina Dolzhikova	Synaptic sampling in memristive crossbars

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W38	Alice Parker	Incorporating Astrocytes into Spiking Neuromorphic Designs using Dual-Gated Molybdenum Disulfide FETs
W39	Kunlong Yang	A photoelectrical artificial synapse for novel neuromorphic network
W40	Chao-yi Tai	Nano- Crystalization and Sintering of Ag Particles for Conducting Wires on Textiles
W41	Shohei Shiomi	Crystallite Growth and Sintering Property of Metallic Nanoparticle
W42	Li Li	Fabrication of period gradually-changed Au nanonetwork (AuNN) via superlens enhanced laser interference patterning (SELIP)
W43	Haibo Yu	Construction of Microenvironment Structures for the Study of Cell Behavior using DMD-based Optical Projection Lithography
W44	Ross Lundy	Automated nanolithography process control for rapid & well ordered molecular self-assembly
W45	Zhan Yang	Patterned Direct-nanowriting of Metal Nanowires by Using Electron Beam
W46	Lianqing Liu	Femtosecond-laser-based Fabrication of Micro-cavity Array in Hydrogel Material
W47	Srinivasu Puttaswamy	A Clear, Delicate, Biocompatible Optical Window for Brain Imaging
W48	Kiang Wei Kho	Fabrication and Optical Properties of Periodic Nanopore and Nanoparticle Arrays with Controlled Shape and Size
W49	Ritesh Bhardwaj	Spectral Photoresponse Tunability of MgZnO based UV Photodetectors
W50	Yuelin Wang	Irradiation Induced Phase Transition of Single V2O5 Nanowire under in situ TEM Tensile Testing
W51	Luke Jäppinen	Increasing Coercivity of Ferromagnetic Zinc Oxide with Thermal Acetylene Treatment
W52	Zhaohao Wang	Micromagnetic simulation of spin-orbit torque induced ultrafast switching of in-plane magnetization
W53	Dereje Seifu	Magnetic Properties of Fe/Topological Insulator/Fe Multilayer Films and Nano-columns
W54	Omar Paranaiba Vilela Neto	A Novel Crossing Device for in-plane Nanomagnetic Logic Circuits
W55	Neha Oraon	Stick diagram representation for nanomagnetic logicbased combinational circuits
W56	John-John Cabibihan	Graphene-filled PDMS Composite for Tactile Sensing of Surgical Graspers
W57	Fernando Diaz	Towards A Point-of-use Nanosensor System for On-Farm Disease Detection
W58	Julia Madden	Electrochemical sensing on single microband electrodes towards near-patient diagnostic applications
W59	Pranay Podder	Thin-film integrated transformer using amorphous CoZrTaB core with in-plane magnetic anisotropy
W60	Qi Cai	Spatial resolution of kinetic pathways for complex nanoparticles formation: A microfluidic approach