



HARDCOPY POSTER PROGRAM

Dedicated Poster Session  
Tuesday 24 September 2019  
1730 - 1900

POSTER NUMBERS	ABSTRACT NUMBER	PRESENTATION TITLE	THEME	PRESENTING AUTHOR
1	4	The reduced graphene-oxide as hole-transporting material to enhance photocatalytic performance of bismuth vanadium oxide photoanodes	A. Electronic and Optical Materials	Prof Chungjoong Kim
2	8	Morphology Driven by Molecular Structure of Thiazole-Based Polymers for Use in Field-Effect Transistors and Solar Cells	B. Energy and Environment Materials	Tae Kyu An
3	13	Elucidation Of Structures And Lithium Environments For An Organo-sulfur Cathode	G. Advanced Fabrication, Characterisation and Devices	Ms Lisa Djuandhi
4	20	Automating generation of nonpolar and stoichiometric slab-and-vacuum models; application to the normal spinel structure	F. Computational Materials	Yoyo Hinuma
5	36	Use of artificial intelligence to avoid biases and maximise efficiency in materials simulations	F. Computational Materials	Chris Feigl
6	45	What a battery can do for negative thermal expansion materials? New phases and modification the thermal expansion properties	B. Energy and Environment Materials	Mr Junnan LIU
7	47	An Integrated Computational Materials Engineering Framework for Designing Sintered Materials	F. Computational Materials	Tesfaye Molla
8	48	Structural solution of active materials in electrochemical devices via operando diffraction	G. Advanced Fabrication, Characterisation and Devices	Damian Goonetilleke
9	63	Electrochromic properties of reduced MoO <sub>3</sub> layers prepared by physical vapor deposition	A. Electronic and Optical Materials	Aram Arash
10	70	Effects of beta phase and intermetallic compound on deoxidation behavior in titanium alloy powders	E. Advanced Structured Materials	Jaewon Lim
11	71	Microstructures studies on Ag-TiO <sub>2</sub> thin films for self-cleaning solar panel application	B. Energy and Environment Materials	Dewi Suriyani Che Halin
12	97	Fabrication of ZnO-SnO <sub>2</sub> Thin Film Transistors on Flexible Substrates	A. Electronic and Optical Materials	Satoru KANEKO
13	104	High performance in rational design NiS <sub>2</sub> anode material for sodium-ion batteries.	B. Energy and Environment Materials	THI TRANG VU
14	105	Long Cycle Life Span Aqueous Rechargeable Zinc-Ion Battery at a Low Current Density	B. Energy and Environment Materials	Saiful Islam
15	106	Evaluating the thermoelectric performance of sintered Mg <sub>2</sub> Si co-doped with donor and isoelectric impurities	A. Electronic and Optical Materials	Shuntaro Shiiba
16	111	Analysis of the electronic states and the local structure of Mg <sub>2</sub> Si using synchrotron radiation	A. Electronic and Optical Materials	Tomoyuki Kadono
17	113	Broad Range Photodetectors Based on Few-layer $\alpha$ -In <sub>2</sub> Se <sub>3</sub> Nanosheets	A. Electronic and Optical Materials	Bin Tang
18	130	RTA and carbon co-implantation effect on dopant diffusion and activation in polycrystalline silicon substrate	G. Advanced Fabrication, Characterisation and Devices	Sung-Kun Park
19	131	Investigation of electrode-matrix interface stability for mid-temperature thermoelectric material of Mg <sub>2</sub> Si	A. Electronic and Optical Materials	Fuyuko Ikeda
20	133	Examination of the formation of electrodes for mid-temperature thermoelectric MnSi materials	A. Electronic and Optical Materials	Tomoya Kawamura
21	136	Stability of 4 metal oxide-based nanoparticles in acidic electrolytes for non-platinum cathode in PEFC	B. Energy and Environment Materials	Yuto Kitamura
22	138	Site-selective in situ grown carbonate micromodels with tunable geometry, porosity, and wettability	D. Advanced Functional Materials	Seung Goo Lee
23	139	Development of Nb-doped TiO <sub>2</sub> Supports using SiO <sub>2</sub> Coating as Non-carbon Supports for PEFC	B. Energy and Environment Materials	Yuta Inoue
24	143	Liquid Spreading on Bioinspired Textured Surfaces of Wharf Roach	C. Bio-Materials	Taro YAO
25	154	Factors affecting ORR activity of Carbon Nanotubes covered with Nb doped Titanium Oxide for PEFC cathodes	B. Energy and Environment Materials	Yoshinori Adachi
26	160	Quasi-solid-state zinc-ion battery based on $\alpha$ -MnO <sub>2</sub> cathode with husk-like morphology	B. Energy and Environment Materials	Dimas Yudianto Putro
27	161	Highly Stretchable and Sensitive Strain Sensor Based on Ag/CNT Composite with Screen Printing Process	G. Advanced Fabrication, Characterisation and Devices	XUE QI
28	162	K <sub>2</sub> V <sub>6</sub> O <sub>16</sub> ·2.7H <sub>2</sub> O cathode for aqueous Zn ion batteries: understanding cyclability deprivation	B. Energy and Environment Materials	Balaji Sambandam
29	166	Enhanced performance of perovskite solar cells by introducing a modified 2D perovskite layer	G. Advanced Fabrication, Characterisation and Devices	Jingsong Sun
30	167	Crystallization Inhibition of Indium Oxide on Tantalum Pentoxides in Thin Film Transistors Prepared via All Solution-Processing	A. Electronic and Optical Materials	Song Yi Park
31	174	Dynamic mechanism of intramolecular exchange via sequential deposition	G. Advanced Fabrication, Characterisation and Devices	Bin Li
32	176	Surface modification of over-lithiated oxides coated by vanadium phosphates as cathode materials for lithium ion batteries	B. Energy and Environment Materials	Seokhun Kim
33	179	Study of Oxygen Evolution Reaction on Binary Non-Precious Metal Oxides	B. Energy and Environment Materials	Kyogo Sumi
34	180	A stretchable reduced graphene oxide hydrogel for sensing application	D. Advanced Functional Materials	Le Thai Duy
35	181	A cost-effective and green n-p nanohybrid of nitrogen-doped graphene quantum dots and 2D graphene for high-performance UV detector	A. Electronic and Optical Materials	Le Thai Duy
36	190	Nanocrystalline Na <sub>3</sub> V <sub>2</sub> (PO <sub>4</sub> ) <sub>2</sub> F <sub>3</sub> embedded in carbon matrix as a cathode material for high - performance sodium - ion batteries.	B. Energy and Environment Materials	sohyun park
37	195	Pyro-Synthesis of Chromium doped Na <sub>3</sub> V <sub>2</sub> (PO <sub>4</sub> ) <sub>3</sub> as Cathode Material for Sodium batteries	B. Energy and Environment Materials	Jun Lee
38	202	Spectroscopic Ellipsometry Study of Transparent Conducting Indium Zinc Tin Oxide Thin Films	A. Electronic and Optical Materials	Hee Young Lee
39	204	Optimizing electrospun PLLA/PEG nanofibrous scaffold properties by visualizing distribution of PLLA with AIE probes	C. Bio-Materials	Samaneh Mirzaei
40	220	Scaleable, Green Synthesis of Colloidal CsPbBr <sub>3</sub> Perovskite Nanocrystals with High Yield	A. Electronic and Optical Materials	Chun Kiu Ng
41	221	Mechanistic insights into the phenomena of increasing capacity with cycle number: using pulse-laser deposited MoO <sub>2</sub> thin film electrodes	B. Energy and Environment Materials	Michael Fenech
42	228	PREPARATION OF MAGNESIUM OXIDE NANOPARTICLES OF VARIOUS MORPHOLOGIES FROM NESQUEHONITE ND HYDROMAGNESITE PRECURSORS	D. Advanced Functional Materials	Alaa Kamaludeen
43	238	Development of Electrolyte Membrane for PEFC using Protic Ionic-Liquids and Polymer Monoliths	B. Energy and Environment Materials	Ryoya Sano
44	241	Fabrication of conductive oxide films for a novel low-cost REBCO superconducting wires	D. Advanced Functional Materials	Shuhei Funaki
45	250	Combined performance of one selector one restive memory element (1S1R) in a hybrid crossbar based on vanadium dioxide and strontium titanium oxide.	A. Electronic and Optical Materials	Shruti Nirantar
46	252	Effect of plasma gas composition on ZnO nanowire growth using microwave torch at atmospheric pressure	D. Advanced Functional Materials	Goohwan Jeong
47	254	High-density growth of horizontally-aligned SWNTs in CVD	D. Advanced Functional Materials	Goohwan Jeong
48	256	The first switch, dynamic effects in the electrochemical switching of electrochromic materials	A. Electronic and Optical Materials	Stojan Neychev
49	260	Investigation of post-annealing Ga-doped ZnO films by flash lamp equipment	A. Electronic and Optical Materials	Rei Sugiura
50	262	Ga Amount Dependence of Electrical Properties for Ga doped ZnO Films	A. Electronic and Optical Materials	Yumika Yamada
51	264	Electron beam irradiation synthesis of non-platinum nitrogen doped carbon without high temperature for cathode of PEFC	B. Energy and Environment Materials	Kaito Homma
52	265	Oxygen Reduction Activity of Group 4 Metal Oxide-based Compounds Prepared by Arc Plasma Deposition	B. Energy and Environment Materials	Wataru Shimabukuro
53	274	Chitin nanofibers: a renewable functional material for green electronics and energy devices	D. Advanced Functional Materials	Jungho Jin
54	278	Surface Modification of Quartz Crystal Microbalance (QCM) Sensor for Bacterial Detection by using Diamond-like Carbon Coating	D. Advanced Functional Materials	Kosei Kudo
55	282	Crystallisation and phase stability in inorganic cesium lead halide perovskites	B. Energy and Environment Materials	Yen Yee Choo
56	283	Oriented attachment for microstructural evolution in chloride-derived hybrid perovskite thin films for high performance solar cells	B. Energy and Environment Materials	Wen Liang Tan
57	290	Hierarchical alignment of chitin fiber for energy storage and harvesting devices	B. Energy and Environment Materials	Seok Ju Kang
58	298	CdSe/CdS Core/Crown Nanoplatelets Based Light-Emitting-Diodes with Ultra-narrow Emission Linewidth	A. Electronic and Optical Materials	Xiao Wei Sun
59	300	Synthesis and Characterisation of High Entropy Alloy Containing Titanium	G. Advanced Fabrication, Characterisation and Devices	Candace Lang
60	301	Effects of edge functional groups on salt rejection by graphene oxide membranes.	F. Computational Materials	Ruosang QIU
61	306	Effect of thermal annealing on optical bandgap for nitrogen doped DLC films	D. Advanced Functional Materials	Akihiro Nomura
62	307	Screening highly active perovskites for hydrogen-evolving reaction via unifying ionic electronegativity descriptor	B. Energy and Environment Materials	Daqin Guan
63	327	Enhancing the Performance of Organic Solar Cells using Plasmonic Nanoparticles Anchored M13-Bacteriophage	D. Advanced Functional Materials	MISO LEE
64	328	Development of 2D-3D Multi-Dimensional Perovskite Solar Cells with Enhanced Efficiency and Stability	G. Advanced Fabrication, Characterisation and Devices	Hock Beng Lee
65	330	Spray Deposited NiO Layer for Efficient Cesium-Containing Triple Cation Perovskite Solar Cells	B. Energy and Environment Materials	Neetesh Kumar
66	333	High performance wearable asymmetric supercapacitor using CNTs and Ni(OH) <sub>2</sub> nanoparticles electrodes	B. Energy and Environment Materials	MANOJ MAYAJI OVHAL
67	335	Synthesis of CsPbBr <sub>3</sub> Perovskite Quantum Dots and Control of ligands Density for Light-Emitting Diodes	A. Electronic and Optical Materials	Siwei He
68	336	Compositional Engineering of Triple-Cation based Highly Reproducible Perovskite Solar Cells for Performance and Stability Enhancement	B. Energy and Environment Materials	BARKHA TYAGI
69	357	Aluminium-ion batteries - will they replace lithium?	B. Energy and Environment Materials	Thomas Nann
70	359	Novel electrolytes for low-cost redox flow batteries	B. Energy and Environment Materials	Thomas Nann
71	381	Electrospun cell-free nanofibrous scaffold for sustained delivery of dual miRNA targeting fibroblast for direct reprogramming of heart	C. Bio-Materials	PRIYADHARSHNI MUNIYANDI
72	383	Electrochemical Analysis of the NO-Releasing Property of a Macrocyclic Ruthenium Nitrosyl Complex	C. Bio-Materials	Joel Jorolan
73	398	Edge-Rich Graphene by Bimetallic Junction Coated on Highly Ordered Multi-Block Nanotubes for Anode in Lithium Ion Battery and Supercapacitors	B. Energy and Environment Materials	Sanghyun Cho
74	401	All Printed Semi-Transparent Perovskite Solar Cells for Perovskite/Silicon Four-Terminal Tandem Cells	B. Energy and Environment Materials	Won-Yong Jin
75	406	Optimal top electrodes for inverted polymer solar cells	A. Electronic and Optical Materials	Hye Rim Yeom

76	411	Phase change vanadium dioxide optical sensors: Photoresponse and size dependence	A. Electronic and Optical Materials	Sumaiya Kabir
77	413	Chemical Bath Deposition of ZnO Nanorods on Ion-plated Ga doped ZnO Seed Layers and Formation of PEDOT:PSS/ZnO Nanorods Heterostructures for UV Light Detection	A. Electronic and Optical Materials	Tomoaki Terasako
78	416	Photosensitization of Hierarchical ZnO Nanostructures with Polyaniline for Enhanced Photocatalytic Dye Degradation and PEC Water Splitting	B. Energy and Environment Materials	Surbhi Sharma
79	420	Structural and Electrical Properties of Undoped and Li Doped CuO Films Grown by Chemical Bath Deposition	A. Electronic and Optical Materials	Tomoaki Terasako
80	422	Crystalline/amorphous WO <sub>3</sub> nanochannel arrays with high electrochromic and capacitive performance	D. Advanced Functional Materials	Yingdi Shi
81	423	Magnetism of epitaxial copper doped bismuth ferrite ceramic thin films	D. Advanced Functional Materials	Tachgiss Jampreecha
82	425	Characterization and electrochemical properties of Ag <sub>2</sub> CuMnO <sub>4</sub> nanostructure for energy storage application	D. Advanced Functional Materials	Jessada Khajonrit
83	434	Reimagining the Scherrer equation - size-independent K factors and a new L <sub>0</sub> for turbostratic carbons	D. Advanced Functional Materials	Matthew Rowles
84	444	Synthesis and In Situ TEM Studies of Ti3C2 MXene	G. Advanced Fabrication, Characterisation and Devices	joel von treifeldt
85	445	Theoretical study of Sulfur-deficient MoS <sub>2</sub> -x promoted lithium polysulfides conversion in lithium-sulfur battery	F. Computational Materials	Qi Zhang
86	450	Small and Ultra Small Angle Scattering for Nano- and Micro-Structural Characterisation at ACNS, ANSTO	G. Advanced Fabrication, Characterisation and Devices	Jitendra Mata
87	452	On the use of in situ laboratory X-ray diffraction: The effect of impurities on the thermal behaviour of spodumene of the liberation of lithium	G. Advanced Fabrication, Characterisation and Devices	Matthew Rowles
88	456	Enhanced initial permeability in soft magnetic composite materials of Fe-Ni	A. Electronic and Optical Materials	JIEUN LEE
89	460	3D Printed PLA based filters for Terahertz Applications.	G. Advanced Fabrication, Characterisation and Devices	Praveen kumar Revuri
90	462	Optimization of Germanium Thin Films for Long Wave Infrared Wavelength Range Miniaturized Sensing and Imaging Systems	A. Electronic and Optical Materials	Gurpreet Singh Gill
91	464	Applications of RuCo <sub>2</sub> O <sub>4</sub> thin films for high performance supercapacitor	B. Energy and Environment Materials	do heyounng Kim
92	536	Flash-enabled micro-explosive reduction of graphene oxide for supercapacitor applications	B. Energy and Environment Materials	Huihui Zhang
93	539	Investigating the optical property of plasmonic nanoparticle using analytical models and numerical methods	A. Electronic and Optical Materials	Abu S. M. Mohsin
94	540	Probing the impact of nanoparticle on waste water treatment	A. Electronic and Optical Materials	Abu S. M. Mohsin
95	541	Emulsion-templated, hierarchical porous polymers for oil water separation	D. Advanced Functional Materials	Qipeng Guo
96	545	Chemically Cross-Linked Chitosan/Lignosulfonate (CS@LS) Amphiphilic Nanospheres: A "Green" Antimicrobial framework	C. Bio-Materials	Ravi Prakash Pandey
97	559	Determining the maximum working voltage of supercapacitors with different ionic liquid-based electrolyte concentration	B. Energy and Environment Materials	Shao Ing Wong
98	560	Computational studies of separation membrane based on carbonaceous nanomaterials for small gas molecules	D. Advanced Functional Materials	Marina Ionita
99	572	Manufacturing Straw-Mycelium Composites by Fermentation	C. Bio-Materials	PING YANG
100	573	Fermentation of mushroom laccase used for polymerization	C. Bio-Materials	WENXIA JIANG
101	584	Development and characterisation of mucoadhesive in situ nasal gelling system	C. Bio-Materials	Preeti Pandey
102	594	The role of cation and anion dopant incorporated in ZnO ETL for organic photovoltaics	B. Energy and Environment Materials	Dong Chan Lim
103	595	Self-sustainable organic photovoltaics for IoT devices under low-light indoor environments and its applications	G. Advanced Fabrication, Characterisation and Devices	Soyeon Kim
104	596	Heating Rate-Dependent Thermal decomposition of Microcrystalline Cellulose	C. Bio-Materials	MOHAMED RASHID AHMED MOHAMED