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19th International Microscopy Congress
9 - 14 September 2018

International Convention Centre, Sydney

POSTER LISTING - MONDAY 10 SEPTEMBER & TUESDAY 11 SEPTEMBER 2018



Poster
Numbers

Instrumentation and Techniques (IT1 - Instrumentation)

- 1 **Mr Tetsuya Akashi (Kyushu University, Hitachi, Ltd.) - 226:** Illumination semi-angle of 10⁻⁹ rad achieved in a 1.2-MV TEM
- 2 **Mr Hasan Ali (Applied Materials Science, Department of Engineering Sciences, Uppsala University) - 1013:** Setting up a streak camera for time resolved measurements in the TEM
- 3 **Dr Victoria Coleman (National Measurement Institute) - 766:** Does your scale bar measure up?
- 4 **Dr Masaki Morita (JEOL Ltd.) - 447:** Calculation factors for determining solid angle of EDS

Instrumentation and Techniques (IT2 - Computational methods for data acquisition, analysis and visualisation)

- 5 **Dr Alex Cavallaro (Future Industries Institute, University of South Australia, Australian Microscopy and Microanalysis Research Facility, South Australian Node) - 1172:** ToF-SIMS discrimination of inkjet printer inks on paper using inorganic and organic mapping

Instrumentation and Techniques (IT5 - In-situ, environmental and time-resolved microscopies)

- 6 **Mr Kimitaka Higuchi (Institute of Materials and Systems for Sustainably, Nagoya University) - 551:** Development of a specimen holder and specimen preparation for in-situ observation of SOFC's reaction by environmental HVSTEM
- 7 **Ms Teresa Weßels (Ernst Ruska-Centre for Microscopy and Spectroscopy with Electrons and Peter Grünberg Institute) - 577:** Towards imaging magnetisation dynamics with high spatial and temporal resolution in a transmission electron microscope
- 8 **Dr Xin-an Yang (Institute of Physics, Chinese Academy of Sciences) - 212:** Fabrication of an in-situ magnetic TEM holder with double tilt

Instrumentation and Techniques (IT7 - Multi-scale 3D imaging)

- 9 **Mr Gerry Shami (School of Medical Sciences, The Bosch Institute, The University of Sydney) - 336:** Silver filler pre-embedding to enhance resolution and contrast in multidimensional SEM - A nanoscale imaging study on liver tissue

Instrumentation and Techniques (IT8 - Phase-related imaging techniques)

- 10 **Prof Helmut Kohl (WWU Muenster) - 612:** Comparison of the Contrast Transfer Functions for Differential Phase Contrast with a Split, a Quadrant, and a Center of Mass Detektor
- 11 **Mr Colum O'Leary (Department of Materials, University of Oxford) - 1006:** PtychoSTEM: an open source platform to perform electron ptychography

Instrumentation and Techniques (IT9 - STEM and TEM imaging)

- 12 **Ms Xiaofen Tan (Monash University) - 134:** Structure of Coated Voids in Aluminium Alloys

Instrumentation and Techniques (IT10 - SEM, FIB, scanning probe and surface microscopy)

- 13 **Dr Barbara Armbruster (XEI Scientific Inc.) - 93:** Improved Pumpdown Times and Productivity in SEM/FIBs by means of Evactron Turbo Plasma Cleaning
- 14 **Ms Yuka Ito (Major in Electrical, Electronic and Mechanical Engineering, Osaka Institute of Technology) - 576:** Three-dimensional trajectory simulation of scattered electrons in scanning electron microscope specimen chamber
- 15 **Mr Kentaro Morimoto (Major in Electrical, Electronic and Mechanical Engineering, Osaka Institute of Technology) - 573:** Measurement of scattered electron current distribution in scanning electron microscope
- 16 **Ms Mari Sakaue (Hitachi High-Technologies Corp.) - 243:** Various SEM observation methods for Wet samples using ASEM and high vacuum SEM with ionic liquid IL1000
- 17 **Mr Masahiro Sasajima (Hitachi High-Technologies Corporation, Science System Product Div., Ibaraki, Japan) - 760:** Development of a novel detection system for high resolution analytical FE-SEM
- 18 **Prof Shigeyasu Tanaka (College of Life and Health Science, Chubu University) - 42:** Preparation of Biological Samples for SEM Observations using Ionic Liquid

Instrumentation and Techniques (IT11 - Optical Nanoscopy and Spectral Imaging Techniques)

- 19 **Dr Evangelia-Nefeli Athanasopoulou (LIG Nanowise Ltd) - 956:** Super-resolution optical imaging of nanostructures using SMAL(Super-resolution Microsphere Amplifying Lens)

Instrumentation and Techniques (IT12 - Spectroscopy – High energy excitations and local chemical analysis)

- 20 **Dr Masahiro Ohtsuka (Nagoya University) - 823:** Multiway hyperspectral data analysis of trace element/valence-state in W-type ferrite magnet by concurrent high-angular resolution electron channeling X-ray/electron spectroscopy

Instrumentation and Techniques (IT13 - Spectroscopy – Low energy excitations and ultrafast spectroscopy)

- 21 **Mr Hugo Lourenço Martins (Laboratoire de Physique des Solides) - 375:** Vibrational surface EELS probes confined phonon modes
- 22 **Prof Takumi Sannomiya (Tokyo Institute of Technology, JST PRESTO) - 386:** Interference of light emission in cathodoluminescence STEM

Life Sciences (LS-1 - Structure and Function of Cells & Organelles)

- 23 **Dr Nuanoi Chudapongse (School of Preclinical Sciences, Institute of Science, Suranaree University of Technology) - 33:** Chrysophyllum cainito stem bark extract induces HepG2 apoptosis and cell death by ROS generation
- 24 **Miss Kyung Hee Kim (Department of Biomaterials & Prosthodontics, Kyung Hee University Hospital at Gangdong, School of Dentistry, Kyung Hee University) - 150:** Controlled dual release of bone morphogenic protein-2 and insulin-like growth factor-1 using catecholfunctionalized adhesive polymer nano-particles on microgrooved titanium enhances the osteogenic activity of human mesenchymal stem cells
- 25 **Mr Behnam Lak (Institute of Biotechnology, University of Helsinki) - 45:** Functional subdomains of the endoplasmic reticulum in cultured mammalian cells
- 26 **Miss Oratai Weeranantanapan (School of Preclinical Sciences, Suranaree University of Technology) - 96:** Fabrication of PVP nanofibers incorporated with gold nanoparticles synthesized by Curcuma xanthorrhiza rhizome extract

Life Sciences (LS-2 - Multiplex Live Imaging of Cells, Tissues & Organisms)

- 27 **Miss Petra Tramontana (University of Zagreb, Faculty of Science, Department of Biology) - 1047:** Free-living alga Chlorella vulgaris as a freshwater ecosystem inhibitor?

Life Sciences (LS-3 - 3-D Structures of Macromolecules & Supramolecular Assemblies)

- 28 **Dr Josephine Lai Kee Him (Centre de Biochimie Structurale) - 249:** The cryo-EM structure of the Broad Bean Stain Virus reveals a common capsid assembly mechanisms among comoviruses
- 29 **Prof José M. Valpuesta (Centro Nacional de Biotecnología) - 55:** Structural and functional analysis of the interaction between gelsolin and the chaperonin CCT

Life Sciences (LS-4 - Atomic Force Microscopy in Molecular and Cell Biology)

- 30 **Mr Eiji Usukura (Nagoya University) - 128:** Cutting Edge of Atomic Force Microscopy (AFM) of the Cell: Live Cell imaging and Structure Analysis of Cytoskeletal Actin Filaments at High Resolution

Life Sciences (LS-8 - Pathology and Immunocytochemistry & Biomolecular Labeling)

- 31 **Mr Marné Prinsloo (Peter MacCallum Cancer Centre) - 699:** Automation of Multiplex Immunohistochemistry
- 32 **Mr Guillermo Solís Fernández (KU Leuven / Instituto de Salud Carlos III) - 1003:** Super-resolution profiling of proteomic derived colorectal cancer metastasis markers

Life Sciences (LS-9 - Applications in Correlative Microscopy of Biological Systems)

- 33 **Dr Yuri Nishino (University of Hyogo) - 1136:** Molecular distribution analysis of nicotinic acetylcholine receptor and MuSK on the cell surface by correlative fluorescent microscopy and cryo-SEM

Life Sciences (LS-10 - Plant Science & Mycology)

- 34 **Dr Hilda Araceli Zavaleta-Mancera (Postgraduate College in Agricultural Sciences, Electron Microscopy Unit) - 645:** Nano-silver treatments inhibit stem-end bacteria on vascular tissue of cut Rose hybrida

Life Sciences (LS-12 - Multimodal Molecular Imaging in Health & Disease)

- 35 **Dr Hussein Mansour (Discipline of Anatomy and Histology, School of Medical Sciences and Bosch Institute, Sydney Medical School, University of Sydney) - 572:** Increased oxidative stress and apoptotic cell death is closely correlated with reactive astrogliosis, altering their structural and functional properties in the aging retina

Life Sciences (LS-14 - Host-Pathogen Interactions, Microbiology & Virology)

- 36 **Ms Sandra Cramer (CSIRO Australian Animal Health Laboratory) - 1176:** Diagnosis of virus belonging to the family Reoviridae in diseased pigeons, using transmission electron microscopy.
- 37 **Ms Alysia Hubbard (CMCA, University of Western Australia) - 1135:** HUMAN RHINOVIRUS AND ASTHMATIC EPITHELIUM - CHANGES IN BARRIER INTEGRITY AND FUNCTION

Physical Sciences (PS1 - Nanoscale, nanostructured and porous materials)

- 38 **Dr Wenqing Huang (SINOPEC Beijing Research Institute of Chemical Industry) - 187:** Preparation of (Li,K)-codoped WO₃ for Smart Windows by One-step Hydrothermal Reaction
- 39 **Dr Kazuhiro Kumagai (National Institute of Advanced Industrial Science and Technology) - 714:** Novel sample preparation to improve the accuracy of nanoparticle size distribution measurement by electron microscopies
- 40 **Dr Hiroshi Nakajima (Kyushu University) - 271:** Microstructures of dendronized CdS quantum dots
- 41 **Dr Emile Perez (Laboratoire des IMRCP, université Paul Sabatier, Toulouse) - 13:** How electron microscopy can contribute to the elaboration of porous organogels
- 42 **Dr Yuki Sasaki (Japan Fine Ceramics Center) - 531:** Fabrication of α -phase AgI in graphene sandwiched structure under ambient temperature and pressure
- 43 **Dr Kazuhiro Yamamoto (National Institute of Advanced Industrial Science and Technology(AIST)) - 86:** TEM study of rat lung intratracheally instilled of metal oxide nanoparticles

Physical Sciences (PS2 - Carbon-based materials and 2D structures)

- 44 **Ms Eileen Courtney (TEMUL, Department of Physics, School of Natural Sciences & Bernal Institute, University of Limerick) - 99:** Interaction between 2D transition metal dichalcogenides and metal atoms for use in electrical contacting, investigated via experimental and simulated atomic resolution HAADF Scanning Transition Microscopy
- 45 **Mr Andreas Hutzler (Chair of Electron Devices, University of Erlangen-Nuremberg) - 497:** Large-Area Layer Counting of 2D Materials via Visible Reflection Spectroscopy
- 46 **Mr Julian Sickel (Physikalisches Institut, WWU Münster, Interdisziplinäres Centrum für Elektronenmikroskopie und Mikroanalyse) - 514:** Manipulation of WSe₂-monolayers on the nm-scale

Physical Sciences (PS3 - Thin films, coatings and surfaces)

- 47 **Mr Philipp Haefner (University of Applied Sciences Ansbach) - 185:** Measuring the bacterial adhesion of a single microorganism on plastic surface with a new tailor-made system
- 48 **Dr Felipe Kremer (Centre for Advanced Microscopy, The Australian National University) - 849:** Ion shaping process of Au nanoparticles in silica for future plasmonic devices studied via TEM

Physical Sciences (PS4 - Metals and alloys)

- 49 **Mr Hironori Goto (University of Toyama) - 171:** Microstructure observation of δ -Ni₂Si in Cu-Ni-Si alloy during aging treatment
- 50 **Mr Yuhei Haizuka (Graduate School of Science and Engineering for Education, University of Toyama) - 149:** TEM observation of Al-2.5mass%Li(-2.0mass%Cu) alloys deformed by HPT (high pressure torsion)
- 51 **Mr Tomoya Hiragi (Graduate School of Science and Engineering for Education, University of Toyama) - 154:** Aging precipitation sequence of Mg-Y-Sc alloy by HRTEM
- 52 **Mr Tomoya Kataoka (Graduate School of Science and Engineering for Education, University of Toyama) - 160:** Precipitation observation of Al-1.0mass%Mg₂Ge alloys with different elements
- 53 **Mr Tomoyoshi Maeda (Graduate School of Science and Engineering for Education, University of Toyama) - 170:** Aging precipitation structure observation of Mg-Zn alloys by HRTEM
- 54 **Dr Takeshi Nishiyama (JFE Steel Corporation) - 263:** Three-dimensional microstructural analysis for novel TRIP steels by SEM-EBSD/FIB.
- 55 **Mr Shivank Shukla Department of Metallurgical Engineering, Indian Institute of Technology) - 186:** First-principles calculations and quantitative imaging of vanadium-oxygen solid solution
- 56 **Mr Toru Yasumoto (University of Toyama) - 172:** Microstructure observation in Al-Zn-Mg-(Cu) alloys with high Zn concentration

Physical Sciences (PS5 - Ceramics and inorganic composites)

- 57 **Mr Shodai Aritomi (Department of Applied Quantum Physics and Nuclear Engineering, Kyushu University) - 689:** TEM studies of phase separation in VO₂ films
- 58 **Prof Miguel Avalos-Borja (Instituto Potosino de Investigacion Cientifica y Tecnologica) - 530:** Characterization of Re₂C obtained from different Re:C stoichiometries
- 59 **Mr satyam choudhury (Department of Metallurgical Engineering, Indian Institute of Technology) - 416:** Elucidation of Crystal Structure of BiCrO₃ Structural Derivatives with Transmission Electron Microscopy
- 60 **Dr Masahiro Ohtsuka (Graduate School of Engineering, Nagoya University) - 548:** Trace dopant/oxygen vacancy site determination in Al-doped Y₂Ti₂O₇ by 2D electron channeling EDX analysis

Physical Sciences (PS6 - Biomaterials, polymers and polymer-based composites)

- 62 **Prof José Jorge Chanona-Pérez (INSTITUTO POLITECNICO NACIONAL. ESCUELA NACIONAL DE CIENCIAS BIOLÓGICAS) - 1513:** Microscopy and spectroscopy techniques to characterization of cellulose nanoparticles from nopal waste

Physical Sciences (PS8 - Phase transformations and corrosion)

- 63 **Dr Junjie Li (International Iberian Nanotechnology Laboratory) - 321:** In-Situ Atomic-Scale Observation of Intermediate States of Melting and Crystallization of Supported Bi Nanoparticles in the TEM

Physical Sciences (PS9 - Amorphous and disordered materials, liquid crystals)

- 64 **Dr Xiaoke Mu (Karlsruhe Institute of Technology (KIT)) - 487:** Using Radial Distribution Function and Multivariate Statistic Analysis to Quantify STEM Diffraction for Imaging Complex Glasses
- 65 **Mr Ankit Singh (Department of Metallurgical Engineering, Indian Institute of Technology (BHU), Varanasi) - 141:** Phase evolution, microstructure and interfaces in Fe-based bulk amorphous alloy coatings on steel

Physical Sciences (PS11 - Materials in geology, mineralogy and archeology)

- 67 **Mr yusuke uetake (SMBU, JEOL Ltd.) - 1223:** Analysis of internal structure for Radiolarian microfossil by SEM via Ar⁺ ion beam cutting method

Physical Sciences (PS12 - Materials for energy production, storage and catalysis)

- 68 **Prof José Jorge Chanona-Pérez ((INSTITUTO POLITECNICO NACIONAL. ESCUELA NACIONAL DE CIENCIAS BIOLÓGICAS)) - 244:** Microscopy and spectroscopy characterization of carbon nanotubes functionalized with Spirulina for application in artificial photosynthesis.
- 69 **Dr Paul Haghi-Ashtiani (Laboratoire Mécanique des Sols, Structures et Matériaux (MSSMat), CNRS UMR 8579, CentraleSupélec, Université Paris-Saclay, 3 rue Joliot-Curie, 91192 Gif-sur-Yvette Cedex) - 46:** STEM-EDS characterization of Carbon Coated TiO₂ Nanowires for the application of dielectric PVDF nanocomposites
- 70 **Dr Byung Kyu Park (ThermoFisher Scientific) - 301:** A Study on Silylated Beta Zeolite-Supported NiW Catalysts by TEM Techniques
- 71 **Mr Avnish Singh Pal (Department of Metallurgical Engineering, Indian Institute of Technology (BHU), Varanasi) - 406:** Evolution of chessboard like nanodomains in Mn-doped CoFe₂O₄ spinel and NdLiTiO₃ based perovskite systems for nanoelectronic applications
- 72 **Mr Josh Vincent (Arizona State University) - 364:** AC-TEM Investigation of Metal-Support Interfacial Structure and its Impact on Activity in CeO₂-Supported Pt Catalysts
- 73 **Dr Richard Webster (Electron Microscope Unit, University of New South Wales) - 432:** STEM Characterisation of Pd-Ru Core-Shell Nanoparticle Geometries for Oxygen Evolution

Physical Sciences (PS13 - Physical science applications of in-situ microscopy)

- 74 **Prof Peng Wang (Nanjing University) - 491:** In-situ TEM Characterization of Ultra-robust memristors Based on Two-dimensional Materials
- 75 **A/Prof Qinghua Zhang (Institute of Physics, Chinese Academy of Sciences) - 201:** Atomic-resolution imaging of electrically induced oxygen vacancy migration and phase transformation in functional oxides

Instrumentation and Techniques (IT1 - Instrumentation)

- 76 **Dr Sergey Gorelick (Monash University) - 1602:** Fabrication of glass microlenses using focused Xe beam for integration in microfluidic devices
- 77 **Prof Jarle Hjelen (Dept of Materials Science and Engineering, NTNU) - 1258:** Development of an in-chamber EBSD detector system for material characterization in a table top SEM.
- 78 **Dr Shunichi Motomura (Hitachi High-Technologies Corporation) - 1132:** Development of objective aperture holder capable of mounting ACE corrector and ACE corrector control system for aberration corrected SEMs
- 79 **Mr Georg Alexander Rosenthal (Microscopy Solutions Pty Ltd) - 1123:** A protected inert-gas sample manipulation and transfer environment for cryo electron microscopy and analytics

Instrumentation and Techniques (IT2 - Computational methods for data acquisition, analysis and visualisation)

- 80 **Prof Nadi Braidy (Université de Sherbrooke) - 1483:** Hyperfly: Hyperspectral and Hypermodal Data Visualization Using Dragonfly

Instrumentation and Techniques (IT3 - Methods and workflows for correlative microscopy)

- 81 **Mr Atsushi Miyaki (Hitachi High-Technologies Corporation) - 278:** Development of correlative observation systems between SEM and various microscopes

Instrumentation and Techniques (IT5 - In-situ, environmental and time-resolved microscopies)

- 82 **Dr Daan Hein Alsem (Hummingbird Scientific) - 1035:** Direct observation of crystallization in phase-change materials using in-situ TEM
- 83 **Dr Daan Hein Alsem (Hummingbird Scientific) - 1147:** Easing in-situ TEM biasing experiments with movable probes
- 84 **Prof Takashi Ishiguro (Department of Materials Science and Technology, Tokyo University of Science) - 731:** Development of Sequential Transmission Infrared Spectroscopic Microscope Incorporating Microreactor

Instrumentation and Techniques (IT6 - Diffraction techniques)

- 85 **Dr Naga Vishnu Vardhan Mogili (Brazilian Nanotechnology National Laboratory, Centro Nacional de Pesquisa em Energia e Materiais) - 602:** A critical assessment of the convergent-beam electron diffraction technique used for determining elastic strain in semiconductor superlattices
- 86 **Dr Chris Stephens (Thermo Fisher Scientific) - 1516:** Introducing Lumis: A High Resolution High Sensitivity EBSD Detector

Instrumentation and Techniques (IT8 - Phase-related imaging techniques)

- 87 **Dr Zentaro Akase (Institute of Multidisciplinary Research for Advanced Materials, Tohoku University) - 403:** Effect of dynamical diffraction on phase shift in electron holography study
- 88 **Mr Alexandre Pofelski (McMaster University) - 519:** An attempt to map the electromagnetic field from plasmonic nanostructures using differential phase contrast and electron holography

Instrumentation and Techniques (IT9 - STEM and TEM imaging)

- 89 **Dr Hiroki Kawamoto (Hitachi High-Technologies Corporation) - 228:** Advanced TEM Navigation Function for High-Throughput Image Acquisition
- 90 **Mr Hirotaka Sakai (Interdisciplinary Graduate School of Engineering Sciences, Kyushu University) - 1422:** Tomographic 3D observation of crystalline microstructures using a STEM dark-field method

Instrumentation and Techniques (IT10 - SEM, FIB, scanning probe and surface microscopy)

- 91 **Dr Hiroshi Akamine (Kyushu University) - 1462:** Interpretation of moire fringes in SEM observations for periodic microstructures
- 92 **Mr Takatoshi Donga (Major in Electrical, Electronic and Mechanical Engineering, Osaka Institute of Technology) - 879:** Time evolution simulation of scattered electrons in scanning electron microscope specimen chamber
- 93 **Mr Hideya Mizuno (Major in Electrical, Electronic and Mechanical Engineering, Osaka Institute of Technology) - 1241:** Positive and negative charge accumulation mechanism generated by electron beam irradiation to insulating specimens
- 94 **Dr Karen Privat (Electron Microscope Unit, Mark Wainwright Analytical Centre, UNSW Sydney) - 1179:** From Automotive Waste to New Industrial Materials
- 95 **Ms Jacinta White (CSIRO) - 1192:** Investigation into the effect of cryogenic sample preparation on hydrogel for subsequent SEM examination

Instrumentation and Techniques (IT12 - Spectroscopy – High energy excitations and local chemical analysis)

- 96 **Ms Alexandra Sheader (University of Oxford) - 903:** Sub-cellular elemental mapping by combined STEM-EDX-EELS

Instrumentation and Techniques (IT13 - Spectroscopy – Low energy excitations and ultrafast spectroscopy)

- 97 **Prof Peter Crozier (Arizona State University) - 644:** Local characterization of CeO₂-x-TiO₂ mixed metal oxide interfaces
- 98 **Mr Daichi Yoshimoto (Kyushu University) - 1417:** Characterization of non-radiative Bloch modes in a plasmonic triangular lattice by electron energy-loss spectroscopy

Life Sciences (LS-1 - Structure and Function of Cells & Organelles)

- 99 **Mrs Lucinda Beutler (Northern Blood Research Centre, Kolling Institute, University of Sydney) - 744:** Characterising loss of transcription factor Gfi1b in megakaryocytes in murine bone marrow and spleen tissues by transmission electron microscopy
- 100 **Ms Megan Farrell (EMBL Australia Node in Single Molecule Science, ARC Centre of Excellence in Advanced Molecular Imaging) - 1173:** Investigating the parameters influencing the rate of phosphorylation of CD3 subunits by Lck.
- 101 **Dr Adam Parslow (Tumour Targeting Laboratory, Olivia Newton-John Cancer Research Institute, School of Cancer Medicine, La Trobe University) - 1167:** Evaluating targeted therapy resistance in breast cancer through mTORC1 imaging

Life Sciences (LS-2 - Multiplex Live Imaging of Cells, Tissues & Organisms)

102 Miss Daniela Petrinec (University of Zagreb, Faculty of Science, Department of Biology) - 1048: Visualisation of hunting nets formed by algae: a perfect hunting mechanism?

Life Sciences (LS-3 - 3-D Structures of Macromolecules & Supramolecular Assemblies)

103 Dr Matthias Floetenmeyer (Centre for Microscopy and Microanalysis, The University of Queensland) - 1218: The University of Queensland. Services for the structural biology at the Centre for Microscopy and Microanalysis (CMM). An Integrated approach.

104 Ms Anjali Malik (Indian Institute of Technology, Roorkee) - 1004: Structure based inhibition of polyamine biosynthetic pathway enzyme arginase from Entamoeba histolytica

105 Dr Sergey Ryazantsev (California NanoSystems Institute at UCLA) - 851: 3D structure of human myeloma IgG subclasses.

Life Sciences (LS-7 - Embryology & Developmental Biology)

106 Dr Josip Barisic (Ruder Boskovic Institute) - 30: The use of histopathological semi-quantitative scoring approach in zebrafish embryo toxicity tests

Life Sciences (LS-8 - Pathology and Immunocytochemistry & Biomolecular Labeling)

107 Dr Nigel Waterhouse (QIMR Berghofer Medical Research Institute) - 1598: Unifying image analysis and flow cytometry software to analyse and present multi-parameter image data for quantitative pathology.

Life Sciences (LS-9 - Applications in Correlative Microscopy of Biological Systems)

108 Miss Yukari Noma (University of Hyogo) - 1188: Internalized molecular localization of nAChR and MuSK by CLEM

109 Prof Im Joo Rhyu (Department of Anatomy, Korea University College of Medicine) - 1182: Atmospheric SEM and some applications on biological specimens

Life Sciences (LS-10 - Plant Science & Mycology)

110 Dr Rosemary White (CSIRO Agriculture and Food) - 1138: Second harmonic imaging of plant cell walls – the cotton fibre

Life Sciences (LS-13 - Invertebrate Biology & Taxonomy)

111 Dr Brett Hamilton (Centre for Microscopy and Microanalysis, The University of Queensland, 306 Carmody Road, St Lucia, QLD 4072, Australia, Centre for Advanced Imaging, The University of Queensland, 306 Carmody Road, St Lucia, QLD 4072, Australia, Pathology Department, Mater Health Services, South Brisbane, QLD, Australia) - 1206: Biochemical venom modulation in spiders is achieved via compartmentalized toxin production and storage

Life Sciences (LS-14 - Host-Pathogen Interactions, Microbiology & Virology)

112 A/Prof Hiang Lian Hing (Universiti Kebangsaan) - 1331: Liquid cell TEM (L-TEM) for observation of Polymyxin effect on E. coli.

Physical Sciences (PS1 - Nanoscale, nanostructured and porous materials)

113 Prof Miguel Avalos-Borja (Instituto Potosino de Investigacion Cientifica y Tecnologica) - 997: Defects in gold nanoplates: A full characterization using PED

114 Ms Pavithra Bellare (Indian Institute of Science) - 771: Structure and Stability of Ultrathin Au/ Alloy Nanowires

115 Ms Pavithra Bellare (Indian Institute of Science) - 930: Simple Liquid Phase Exfoliation of Molybdenum Trioxide (MoO₃) rods into Nanosheets and Nanotubes

116 Dr Young Heon Kim (Korea Research Institute of Standards and Science) - 1177: Thermal behavior and decomposition mechanism of InAs nanowires: in-situ transmission electron microscopy study

117 Dr Akira Niwata (JEOL Ltd.) - 1227: Evaluation of LaB₆ nanowire emitter

118 Miss Debadarshini Samantaray (Materials Research Center, Indian Institute of Science) - 1016: Designing radial and axial heterostructure of Te/Telluride nanowires by controlled dewetting

Physical Sciences (PS2 - Carbon-based materials and 2D structures)

119 Miss Jung Hwa Kim (Ulsan National Institute of Science and Technology) - 1414: Dislocations in Bilayer Transition Metal Dichalcogenides

120 Mr Etienne Minnaar (Centre for HRTEM) - 1395: QUANTITATIVE INVESTIGATION OF GRAPHITE AND DISLOCATIONS IN PCD SINTERED AT ELEVATED PRESSURE

121 Mr Eoin Moynihan (University of Limerick) - 1101: Low-Loss EELS Study of Monolayer MoS₂ and the Effects of Ion-Implantation

122 Miss Hyoju Park (UNIST (Ulsan National Institute of Science and Technology)) - 1409: Screw Dislocation-Driven Growth of Double-Helical Hexagonal Boron Nitride

Physical Sciences (PS3 - Thin films, coatings and surfaces)

123 A/Prof Ivan Kempson (University of South Australia) - 1116: Time-of-Flight Secondary Ion Mass Spectrometry (ToF-SIMS) Imaging and 3D Reconstruction of Cu in Metal Scavenging Polymers

124 Prof Vilko Mandic (Faculty of Chemical Engineering and Technology) - 953: Regeneration performance of the nanostructured titania photocatalyst prepared by anodic growth

Physical Sciences (PS4 - Metals and alloys)

- 125 **Mr Taiga Kamei (Kyushu University) - 1424:** Electron microscopic analysis of austenite transformation behavior in cold-rolled low carbon steel
- 126 **Mr Yoshiki Kono (Department of Applied Quantum Physics and Nuclear Engineering, Kyushu University, Fukuoka 819-0395) - 456:** In situ electron microscopy analysis on thermal stability of PdRu-Rh nanoparticles
- 127 **Miss Sijia Liu (Changwon National University) - 1377:** Microstructural evolution upon creep test of Ni based superalloy
- 128 **Ms Bianca Sala (University of Glasgow) - 329:** Absolute chemical analysis of nanoscale carbide precipitates within steel matrices
- 129 **Ms Wenhui Yang (Kyushu University) - 556:** STEM analysis of doping atom positions in η -Cu₆Sn₅
- 130 **Dr Ying Da Yu (Department of Materials Science and Engineering, Norwegian University of Science and Technology, NO-7491 Trondheim) - 345:** EBSD characterization of incoherent CSL grain boundaries in pure aluminum processed by severe plastic deformation
- 131 **A/Prof Taiki Tsuchiya (University of Toyama) - 2003:** Effect of ex.Si addition on age-hardening behaviour in Al-0.5at.%Mg₂Si casting alloy

Physical Sciences (PS5 - Ceramics and inorganic composites)

- 132 **Dr Young Heon Kim (Korea Research Institute of Standards and Science) - 1099:** In-situ TEM study of the phase transformation in a single lanthanide co-doped NaYF₄ unconvertible nanoparticle
- 133 **Prof Joachim Mayer (Central Facility for Electron Microscopy, RWTH Aachen University, Ernst Ruska-Centre (ER-C) for Microscopy and Spectroscopy with Electrons, Forschungszentrum Jülich GmbH) - 905:** Characterization of molybdenum substituted lanthanum tungstate: a Transmission Electron Microscopy study
- 134 **Dr Jacques O'Connell (CHRTEM) - 854:** TEM investigation of the velocity effect in materials with continuous and discontinuous latent tracks

Physical Sciences (PS6 - Biomaterials, polymers and polymer-based composites)

- 135 **Dr Markus Drechsler (Universitaet Bayreuth, Bavarian Polymer Institute) - 1571:** Liquid Crystalline Nanostructures as PEGylated Reservoirs of Omega-3 Polyunsaturated Fatty Acids

Physical Sciences (PS7 - Semiconductors and materials for communication)

- 136 **A/Prof Junji Yamanaka (Center for Instrumental Analysis, University of Yamanashi) - 828:** STEM Moire Observation of the Compositionally Step-Graded SiGe Thin Film and its Image Analysis
- 153 **Dr Jucheol Park (Materials Characterization Center, Gumi Electronics & Information Technology (GERI), Gumi, Korea) - 841:** Electron energy-loss spectroscopy and first-principles calculation studies on high-k dielectric thin films
- 154 **Mr Sang-yeol Nam (Gumi Electronics & Information Technology Research Institute) - 696:** TEM characterization of backside metal with Ag/Sn/Ag multilayer

Physical Sciences (PS8 - Phase transformations and corrosion)

- 137 **Miss Su Kyeong Kwon (KOREATECH University) - 1134:** Effect of oxidation of metallic 3D printing material on 3D printed object
- 138 **Dr Hirokazu Sasaki (Furukawa Electric) - 1144:** Observation of GaAs p-n junction using electron holography, electron diffraction microscopy, differential phase contrast STEM, and shadow image distortion method.
- 139 **Prof Ivan Guillermo Solórzano (PUC-Rio) - 1270:** Study of Grain Boundary Precipitation in High Cr-Ni Corrosion Resistant Alloy

Physical Sciences (PS9 - Amorphous and disordered materials, liquid crystals)

- 140 **Mr Semir Vrana (Physikalisches Institut, WWU Münster) - 922:** Characterizing amorphous specimen by using the three particle structure factor
- 141 **Mr Taiki Yamada (Graduate School of Engineering, Nagoya University) - 552:** Nanoscale local stress mapping of phase-separated glass by scanning transmission electron microscopy-cathodoluminescence

Physical Sciences (PS10 - Magnetic, ferroelectric and multiferroic materials)

- 142 **Dr Youngji Cho (Department of Applied Quantum Physics and Nuclear Engineering, Kyushu University, Fukuoka 819-0395) - 535:** Extraction of desired phase information in dark-field electron holography
- 143 **Dr Gi-Yeop Kim (POSTECH) - 1554:** STEM study of depolarization field effect in PTO/STO superlattices
- 144 **Prof Shigeo Mori (Osaka Prefecture University) - 256:** HAADF-STEM Study on Unusual Inhomogeneous Microstructures in Charge-Glass State of PbCrO₃

Physical Sciences (PS11 - Materials in geology, mineralogy and archeology)

- 145 **A/Prof Michael Lee (Nelson Mandela University) - 359:** Evidence for thermal alteration of fission tracks in Phalaborwa baddeleyite

Physical Sciences (PS12 - Materials for energy production, storage and catalysis)

- 146 **Mr Hsiangsheng Chen (School of Chemistry, University of New South Wales) - 1523:** Precise Illustration of Active Sites: The Case of Shape-Controlled Ordered Pt₃Sn Catalysts
- 147 **Ms Yen Yee Choo (ARC Centre of Excellence in Exciton Science, Monash University, Victoria 3800, Department of Materials Science and Engineering, Monash University, Victoria) - 1534:** Structure transition-property relationships in inorganic cesium lead halide perovskites
- 148 **Dr Santhana Eswara (Luxembourg Institute of Science and Technology) - 945:** Nanoscale correlative imaging of halide perovskite solar cells

Physical Sciences (PS13 - Physical science applications of in-situ microscopy)

- 151 **Mr Atsuhiko Kotani (Osaka Prefecture University) - 1304:** Observation of magnetic nanostructures by phase plate microscopy with hole-free phase plate
- 152 **Dr Ji-Hwan Kwon (Korea Research Institute of Standards and Science) - 1174:** Operando transmission electron microscopy observation: Dynamic structural changes of Si anode in Li-ion battery