

SATURDAY 8 SEPTEMBER 2018

9:00-17:00	Pre-Congress Offsite Workshops	9:00-17:00
18:30-21:30	IFSM Young Scientists Assembly Dinner	18:30-21:30

SUNDAY 9 SEPTEMBER 2018

9:00-17:00	IFSM Young Scientists Assembly	9:00-17:00
14:00-18:00	Registration Open <i>Outside Exhibition Hall 2 & Ground Level Foyer, International Convention Centre</i>	14:00-18:00
18:00-20:00	Welcome Reception <i>Trade Exhibition, International Convention Centre, Sydney</i>	18:00-20:00

MONDAY 10 SEPTEMBER 2018

7:30	Registration Open <i>Outside Exhibition Hall 2 & Ground Level Foyer, International Convention Centre</i>	7:30
8:30	Opening Ceremony & Welcome to Country <i>Dr Alan Finkel AO Darling Harbour Theatre</i>	8:30
9:00	Plenary Lecture <i>Darling Harbour Theatre</i> Prof Dan Shechtman The Discovery of Quasi-Periodic Materials – The Role of TEM	9:00
10:00	Morning Tea, Exhibition and Poster Viewing <i>Exhibition Hall 2</i>	10:00

	Darling Harbour Theatre	Meeting Room C4.1	Meeting Room C4.2	Meeting Room C4.3	Meeting Room C4.4	Meeting Room C4.5	Meeting Room C4.6	Meeting Room C4.7	Meeting Room C4.8	Meeting Room C4.9	Meeting Room C4.10	Meeting Room C4.11	
	LS-1.1 - Structure and Function of Cells & Organelles	PS-5.1 - Ceramics and inorganic composites	PS-13.1 - Physical science applications of in-situ microscopy	PS-1.1 - Nanoscale, nanostructured and porous materials	PS-4.1 - Metals and alloys	PS-7.1 - Semiconductors and materials for communication	IT-5.1 - In-situ, environmental and time-resolved microscopies	PS-12.1 - Materials for energy production, storage and catalysis	IT-1.1 - Instrumentation	IT-6.1 - Diffraction techniques	LS-2 - Multiplex Live Imaging of Cells, Tissues & Organisms	LS-8 - Pathology and Immunocytochemistry & Biomolecular Labeling	
	Chairpersons: Bram Koster & Sharon Grayer Wolf	Chairpersons: Yuichi Ikuhara & Peter Crozier	Chairpersons: Masaki Takeguchi & Xiaozhou Liao	Chairpersons: Frances Ross & Ben Britton	Chairpersons: Xiaodong Han & Jianfeng Nie	Chairpersons: David Muller & Jenny Wong-Leung	Chairpersons: Patricia Kooyman & Prathiba Gai	Chairpersons: Christina Scheu & Paulo Ferreira	Chairpersons: Greg McMullan & Nestor Zaluzec	Chairpersons: Randi Holmestad & Kenji Tsuda	Chairpersons: Renee Whan & Paul Timpson	Chairpersons: Paul Verkade & Danielle Jorgens	
10:30	Invited Speaker Dr Peijun Zhang	761: Enhanced thermoelectric and piezoelectric materials by aberration-corrected STEM Invited Speaker: Prof Stephen Pennycook	Invited Speaker Prof Julia R. Greer	230: Correlative STEM and SEM Imaging of Nanostructured Materials in a Scanning Electron Microscope Invited Speaker: Prof Dagmar Gertsen	Invited Speaker Prof Daniel Gianola	910: Understanding electronic and structural properties of III-V nanowires via aberration-corrected/monochromated STEM techniques Dr Reza R. Zamani	755: Dynamic AC-ETEM observation of deactivation processes of platinum electrode catalysts in a proton exchange membrane fuel cell Invited Speaker: Prof Kenta Yoshida	Invited Speaker Prof Barry Carter	Invited Speaker Prof Pieter Kruit	1325: Quantitative Convergent-Beam Electron Diffraction - The Nexus Between Electron and Quantum Crystallography Invited Speaker: A/Prof Philip Nakashima	Invited Speaker Dr Teng-Leong Chew	429: Using Fluorescence Multiplexing and Spectral Unmixing to Characterize the Haematopoietic Stem Cell Microenvironment Dr Gavin Tjin	10:30
10:45						1438: Stable Defects in Semiconductor Nanowires Dr Ana M Sanchez						1239: Immunogold detection of synaptic membrane proteins on grid-glued double replica pairs Dr Jacqueline Montanaro-Punzengruber	10:45
11:00	592: Applications of Microscopy to Bio-synthetic systems Mrs Judith Mantell	1125: Imaging Point Defects in Complex Oxides Using Quantitative STEM Invited Speaker: Prof Susanne Stemmer	1283: Elastic properties of Cerium Oxide nanocubes Prof Karine Masenelli-Variot	934: Interaction of human mesenchymal stem cells with modified Ti6Al4V pre-exposed in simulated body fluid Mrs Petra Jarolimová	878: Automatic Dislocation Imaging in Scanning Electron Microscopy Mr Clement Lafond	75: Morphology dependent strain relaxation in horizontally grown semiconductor core-shell nanowires and its effect on electronic band alignment Mrs Sara Marti-Sánchez	1250: Nanoscale liquid phase in situ observations of structural transformations of Au and Au-Cu nanostructures Dr Nabeel Ahmad	155: Revealing atomic structure and chemistry of sensitive battery materials and interfaces by cryo-TEM Prof Benjamin Butz	691: Revitalizing uncorrected electron microscopes by a low-cost, plug-and-play spherical aberration corrector using a sculpted thin film Mr Peng-Han Lu	690: Principles and Applications of Scanning Convergent Beam Electron Diffraction (SCBED) for Characterizing Complex, Multi-element Crystals Invited Speaker: Mr Yu-Tsun Shao	Invited Speaker Dr Beth Cimini	Invited Speaker Dr Kent McDonald	11:00
11:15	260: Iron visualisation in the human brain with electron microscopy Ms Mariella Sele	209: In situ straining experiments in iron and iron alloys Dr Daniel Caillard	638: Deposit formation in diesel fuel injectors Dr Catriona Mcgilvery	966: Elasto-chemical coupling at coherent interfaces in nano-precipitation strengthened steel revealed by atomic scale correlative microscopy Dr Christian Liebscher	594: In-situ propagation of metal phases in germanium nanowires observed by transmission electron microscopy Dr Martien Den Hertog	1115: Homoepitaxial growth of 2D titanium carbide MXenes Dr Xiahan Sang	1281: Low-dose aberration-free imaging of lithium-rich layered cathodes by electron ptychography in the STEM Dr Juan G Lozano	1454: Low-voltage TEM for quantitative analysis of low-dimensional materials on the atomic level Prof Ute Kaiser					11:15
11:30	1085: Structural Exploration of Ex Vivo Erythroblast Differentiation by Serial Block-Face Scanning Electron Microscopy and Electron Spectroscopic Imaging Dr Maria A Aronova	1467: Elucidating Ion Transport in Lithium-Ion Conductors by Combining Vibrational Spectroscopy in STEM and Neutron Scattering Dr Miaofang Chi	166: Orientation mapping of nanoscale deformation processes using transmission Kikuchi diffraction Mr Glenn Sneddon	Invited Speaker Dr Sophie Primig	1619: TEM investigation of nanostructured bainite subject to high-strain rate deformations Prof Jer-Ren Yang	952: Towards an in-situ TEM based correlation of structural modifications and switching characteristics in filamentary type HfO ₂ -RRAM Mr Alexander Zintler	279: Direct insight on the dynamical behaviour of cobalt oxide electrocatalysts under operation conditions by electrochemical in situ STEM Miss Nathaly Ortiz Peña	546: Determination of Al location in Ni-rich layered oxide Li-ion cathode by combined atomic resolution X-ray EDS and EELNES Prof Frederic Cosandey	1162: Atomic resolution observation and analysis of carbon materials at low acceleration voltages using aberration corrected microscope with cold field emission gun Mr Hiroki Hashiguchi	Invited Speaker Mr Robert S. Pennington	1479: Making sense of mitochondria: Novel techniques for measuring dynamics, (dys)function and interaction. Dr Claudette St. Croix	708: Multiphotonic Imaging and Bismuth Ferrite Harmonic Nanoparticles (BFO HNP) to assess pre-clinically innovative therapeutic strategies through monitoring engraftment properties of injected cells Dr Laurence Dubreil	11:30
11:45	1210: Correlative Scanning Electron Microscopy (SEM)-Fluorescence Microscopy reveals the organisation of the red blood cell membrane skeleton in healthy and diseased states Dr Adam Blanch	135: Chemical Analysis of Elemental Excess and Depletion at Grain Boundaries of Ba(Ce,Zr,Y)O _{3-δ} Proton Conductors Dr Dan Zhou	526: In-situ Nanoscale Characterization of Catalytic Reactions Promoted by Localized Surface Plasmon Resonance Energy Dr Renu Sharma	1577: Characterization of helium and tritium filled bubbles in irradiated beryllium Dr Michael Klimentov	1373: The Microstructure Observation of Brownmillerite Thin Film as the Resistive Switching Memory with Ex-situ & In-situ TEM Research Mr Hyoung Gyun Kim	1109: TEM Mechanical Testing in Liquid with Temperature Control Dr Katherine Jungjohann	871: Transmission Electron Microscopy Study of Layered Oxides Mr Jiayu Liu	398: Ways and means, past, present and future, of open aperture ESTEM for atom-by-atom gas reaction catalyst research Prof Edward Boyes			863: Intravital optical window imaging of RhoA-, Rac1- and Akt-FRET biosensor mice monitoring drug treatment response in cancer. Dr Max Nobis	774: Wide-area correlative light and electron microscopy (CLEM) applied to routinely prepared human pathology samples A/Prof Murray Killingsworth	11:45
12:00	1522: The Organisation of the Plant ER-Golgi Interface Prof Chris Hawes	248: Direct observation of element distribution across ionic oxide grain boundaries using atomic-resolution STEM-EDS Dr Bin Feng	649: Probing the surfaces of nanostructures under reactive environments Dr Thomas Willum Hansen	259: Advanced 3D Characterization of Semiconductor Devices: Hybrid Metrology Correlating STEM-EDXS and Atom Probe Tomography Dr Paromita Kundu	1567: EBSD study on the recrystallization behaviour of the nickel-base superalloy Rene 65 Mr Tomasz Wojcik	659: Aberration-Corrected STEM Imaging of Compound Semiconductors Prof David J. Smith	382: In-situ visualisation and analysis of single atom dynamics in chemical reactions by novel E(S)TEM Prof Prathiba Gai	1247: Structural evolution of the LiNi _{0.2} Mn _{1.5} O ₄ cathode material upon ex-situ and in-situ cycling by (S)TEM Ms Elizaveta Tyukalova	1089: Monochromator and spectrometer design for ultra-high energy resolution EELS Prof Ondrej L. Krivanek	1051: Quantitative analysis of precipitate crystal structure evolution in Al-Mg-Si-Cu alloys using scanning precession electron diffraction Mr Jonas Kristoffer Sunde	567: Anionic Ultrasmall Quantum Dots for Long-term Intravital Vascular Imaging Dr Xiaowen Liang	Invited Speaker Dr Thomas Sharp	12:00
12:15	1630: Identification of nuclear lipid islet and their contribution to efficient RNA polymerase II-dependent transcription Prof Dr Pavel Hozak	1020: Linking Macroscopic and Nanoscopic Ionic Conductivity: A New Paradigm for Characterizing Grain Boundary Conductivity in Polycrystalline Ceramics Dr William Bowman	1121: In situ observation of crystallization of materials with high solubilities Dr Tomoya Yamazaki	1320: Identifying nucleation and growth mechanisms in nano-grained polycrystalline thin films Dr Duncan T. L. Alexander	1419: Transmission electron microscopy of the Fe-Al-Ti-B alloys with additions of Mo Dr Darja Jenko	1049: Se-doped antimony telluride: Se sites position determination Dr Alexander Meledin	927: The development of reproducible in situ electrical biasing of semiconductor materials using piezo-controlled electrical contacts and chip based systems. Dr David Cooper	1512: Anisotropy of lithium K edge in LiCoO ₂ studied by EELS Dr Jun Kikkawa	113: Development of a high brightness ultrafast Transmission Electron Microscope based on a laser-driven cold field emission source Dr Florent Houdellier	1420: Looking for the Potential in Digital Large Angle Electron Diffraction Patterns Dr Richard Beanland	758: Intravital single molecule microscopy for studying nanoscale actin cytoskeleton organisation and dynamics Mr Marco Heydecker	12:15	
12:30	Lunch, Lunch Workshops, Exhibition and Poster Sessions/Viewing <i>Exhibition Hall 2</i>											12:30	

MONDAY 10 SEPTEMBER 2018

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	LS-1.2 - Structure and Function of Cells & Organelles	PS-5.2 - Ceramics and inorganic composites	PS-13.2 - Physical science applications of in-situ microscopy	PS-1.2 - Nanoscale, nanostructured and porous materials	PS-4.2 - Metals and alloys	PS-7.2 - Semiconductors and materials for communication	IT-5.2 - In-situ, environmental and time-resolved microscopies	PS-12.2 - Materials for energy production, storage and catalysis	IT-1.2 - Instrumentation	IT-6.2 - Diffraction techniques	IT-8.1 - Phase-related techniques	LS-4 - Atomic Force Microscopy in Molecular and Cell Biology	
	Chairpersons: Bram Koster & Sharon Grayer Wolf	Chairpersons: Yuichi Ikuhara & Peter Crozier	Chairpersons: Masaki Takeguchi & Xiaozhou Liao	Chairpersons: Frances Ross & Ben Britton	Chairpersons: Xiaodong Han & Jianfeng Nie	Chairpersons: David Muller & Jenny Wong-Leung	Chairpersons: Patricia Kooymann & Prathiba Gai	Chairpersons: Christina Scheu & Paulo Ferreira	Chairpersons: Greg McMullan & Nestor Zaluzec	Chairpersons: Randi Holmestad & Kenji Tsuda	Chairpersons: Etienne Snoeck & Nobuo Tanaka	Chairpersons: Yves Dufrene & Peter Hinterdorfer	
14:00	91: The interplay between endoplasmic structure, dynamics and functions Invited Speaker: Dr Eija Jokitalo	1236: A study of fission product migration paths in irradiated TRISO particle SiC Dr Jaco Olivier	26: In situ TEM for inorganic nanomaterial property analysis Invited Speaker: Prof Dmitri Golberg	Invited Speaker Prof N. Ravishanker	Invited Speaker Dr Xiaoxu Huang	1794: STEM-Cathodoluminescence for semi-conductors Invited Speaker: Prof Mathieu Kociak	Invited Speaker Dr Marc Willinger	1596: Development of photo(opto)-acoustic based microscopy for in vivo and in vitro studies of biological systems Invited Speaker: Dr Elena Tchernychova	Invited Speaker A/Prof Benjamin McMorran	Invited Speaker Prof Xiaodong Zou	1235: Advances in electromagnetic field observations using high-voltage electron holography Invited Speaker: Dr Toshiaki Tanigaki	Invited Speaker Prof Toshio Ando	14:00
14:15		846: Nanostructural characterization of superconductor joint between GdBa ₂ Cu ₃ O ₇ coated conductors Dr Takeharu Kato											14:15
14:30	1117: Non-thermal Effects of Microwaves on Fixation of Biological Samples Mr Richard Webb	964: Atomic scale characterisation of A-site deficient thermoelectric perovskites using high spatial and energy resolution EELS Dr Demie Kepaptsoglou	520: In-situ Transmission Electron Microscopy Investigation of Ferroelectric Domain Switching Invited Speaker: Dr Zibin Chen	1374: Direct visualization of selective indium incorporation in InGaN/GaN core-shell nanorods using scanning transmission electron microscopy cathodoluminescence Dr Gordon Schmidt	1369: Deformation mechanisms during plane strain compression of 17%Mn steel Prof Elena Pereloma	819: Fabrication and Tuning of Photonic Crystal Cavities in Hexagonal Boron Nitride by Electron Beam Induced Etching Mr Johannes Froech	812: From In-Situ Surface Observation to Post-Test Sub-surface Microstructure and Chemical Analyses: Oxidation of Coated SOFC Steel Mr Stéphane Poitel	1264: Revealing phase transformation kinetics of electrochemical reactions by in situ TEM Dr Kai He	980: The role of spatial coherence for the creation of atom size electron vortex beams Mr Sebastian Schneider				14:30
14:45	803: Introducing The 3D Leaf Cell Mr Richard Harwood	1448: Lithium detection and mapping in Li _{1-x} La ₂ Zr ₂ O ₁₂ Solid Electrolytes used for lithium-ion batteries by using electron microscopy based techniques Prof Servet Turan		808: Initial Growth of Au Nanoparticles Investigated by Multimode Electron Tomography Prof Sara Bals	1326: CHORD, an alternative method for orientation mapping: new features for phase discrimination Mr Lafond Clement	1222: Cathodoluminescence study of stacking faults and dislocations in bulk GaN Dr Wei Yi	815: Nanowires growth in FIB-SEM reactor Mr Libor Novak	1187: Observing the Lithiation of MoS ₂ Dr Shalini Tripathi	1371: Shaping electron beam using magnetic vortex Dr Changlin Zheng	Invited Speaker Dr Marie-Ingrid Richard	Invited Speaker Prof Christoph Koch	Invited Speaker Dr Felix Rico	14:45
15:00	298: 3D imaging of microvessels as a tool to evaluate angiogenesis in prostate cancer Dr Tzipi Hyams	358: Advances towards investigating electronic and optical transformation of La ₂ CoMnO ₆ Mr Wolfgang Wallisch	195: Real-time observation of solid state electrochemical processes at atomic scale by in-situ TEM Prof Xuedong Bai	182: Automated quantification of 2D and 3D STEM spectrum image data including thousands of nanoparticles Mr Yi-Chi Wang	1300: Radiation induced recrystallization mechanism revealed by PED analysis in CrFeCoNiCu high entropy alloy Dr Hye Jung Chang	1366: Investigation of GaN/AlN Quantum Dot Formation using Nanoscale Cathodoluminescence Microscopy Dr Gordon Schmidt	1335: In-situ study on the Mechanical Properties of 3D Printed Nanoprobes for High Resolution Scanning Thermal Microscopy Mr Johannes Froech	457: Nanoscale Dynamics of Electrochemical Sodiation of CF _x Unveiled by in-situ TEM: A Comparative Study with Lithiation Dr Jian Lin Wang	1029: Measurement of the electron source brightness and the illumination semi-angle distribution in a transmission electron microscope Dr Felix Börrnert	797: Towards diffract-and-destroy electron crystallography: ab-initio structure determination of the pharmaceutical co-crystal Sofosbuvir-L-proline from single nanocrystals Dr Petr Brazda	1314: High resolution phase-shifting holography Dr Chris Boothroyd	1519: Innovative experimental protocol based on the Atomic Force Microscope for probing the mechanical properties of cell membranes Mr Anh Dung Nguyen	15:00
15:15	337: EM observations on the 3-D structure of giant mitochondria in human non-alcoholic fatty liver disease (NAFLD) Mr Gerry Shami	717: Momentum transfer resolved EELS study of anisotropic carrier plasmon in Cs _{0.33} WO ₃ Dr Yohei Sato	1393: Operando TEM observation of lithium ion battery Prof Yoshifumi Oshima	477: In situ electron microscopy of bio-nano interfaces Miss Martha Ilett	1221: Nanoscale characterization of β* and Cu containing precipitates in a Cu added Al-Mg-Si alloy Mr Takuya Maeda	1406: Low-kV EELS band gap measurements on indium monolayer structures in ZnO Mr Thomas Aarholt	900: Recent trends in in-situ heating in SEM and FIB/SEM systems. Dr Petr Wandrol	427: Determining bandgap profiles and sub-gap defect levels in solar cells using high resolution electron energy-loss spectroscopy Prof David McComb	38: Evaluation of probe properties and influence of Coulomb interactions in the illumination system of a 1.2 MV cold field emission transmission electron microscope Dr Takeshi Kawasaki	847: Local structure and dynamics of colloidal glasses probed with scanning small angle x-ray scattering Dr Amelia Liu	570: Optimized acquisition of off-axis holograms by dynamic computer control of the electron microscope Dr Christophe Gatel	1524: Force Spectroscopy and High-Speed Bio-AFM reveal Dynamic and Nano-Mechanical Properties of Antibodies Prof Peter Hinterdorfer	15:15
15:30	1166: Quantitative analysis of morphological feature of cell nuclei in Cerebellum cortex using Array Tomography and Deep Learning Dr Mitsuo Suga	1194: Applications of a Direct Electron Detector in Electron Energy Loss Spectroscopy and Mapping Invited Speaker: Prof Gianluigi Botton	440: Surface-coating Mediated Electro-Chemical Performance in CuO-based Sodium Ion Batteries Prof Jianbo Wang	105: Atomic resolution STEM imaging of organic surfactant molecules on CeO ₂ nanocrystals Mr Xiaodong Hao	1058: Co-precipitation in a Si-containing 7xxx type Aluminium alloy Prof Randi Holmestad	1292: Structural and spectroscopic characterisation of heterostructures for semiconductor spintronics applications Dr Demie Kepaptsoglou	1494: Recording the composition and structure of the seed particle during growth of GaAs nanowires by in-situ TEM Prof Reine Wallenberg	328: Imaging antisite defects in Ag-substituted Cu ₂ ZnSnSe ₄ Prof David Cherns	955: Ultra fast direct electron detection for use in ptychography with (S)TEM Prof Lothar Strueder	939: Mapping electromagnetic and strain fields by precession electron diffraction. Dr David Cooper	769: High Precision Phase-Shifting Electron Holography with Multiple Biprisms for GaN Semiconductors Dr Kazuo Yamamoto	1440: Investigation of bacterial adhesion mediated by a curli amyloid binding network using AFM. Dr Yoojin Oh	15:30
15:45	1475: Helium Ion Microscopy for Cells and Tissues Dr John Notte		1036: In-situ transmission electron microscopy on reversible lithium loading of bilayer graphene Dr Felix Börrnert	1002: Self-assembled Nanoscale Modification of Metal and Metal-Oxide Interfaces: Electron Microscopy and In-situ XRD study Prof Satyam Parlapalli	954: Advanced Analytical TEM Characterisation of Irradiation-Induced Nano-Scale Features in Low-Alloy Steel Mr Alexander Carruthers	960: Morphological and optical variations induced by p-n dopants in Ga _{0.9} In _{0.1-x} P nanowires homojunctions monolithically integrated on Si (111) for photovoltaic applications Mr Nicolas Bologna	1308: Atoms in Motion: Electron Beam Driven Dynamics in Experiment and Simulation Mr Daniel Knez	1541: Transmission electron microscope analysis for electron beam sensitive CH ₃ NH ₃ Pb ₃ organic-inorganic perovskites Dr Wei Li	1052: A high speed pixelated electron detector enabling <14 microsecond scanning diffraction readout and online data reconstruction Dr Jim Ciston	1507: Nano-scale local structural study of BaTiO ₃ using STEM-CBED with a fast pixelated STEM detector Prof Kenji Tsuda	768: 4D STEM Holography with an Amplitude-Division Diffraction Grating Mr Fehmi Yasin	1592: Bacterial biofilms: force matters! Prof Yves Dufrene	15:45
16:00	Afternoon Tea, Exhibition and Poster Viewing Exhibition Hall 2												16:00
16:30 - 17:30	IMC20 Public Bid Presentation Darling Harbour Theatre												16:30 - 17:30
16:30 - 18:00	Dedicated Poster Viewing Session Exhibition Hall 2												16:30 - 18:00

TUESDAY 11 SEPTEMBER 2018

Registration Open Outside Exhibition Hall 2 & Ground Level Foyer, International Convention Centre													
Plenary Lecture Darling Harbour Theatre Assoc Prof Jennifer Dionne In situ Visualization of Photochemical Transformations at the Single and Sub-particle Level													
Morning Tea, Exhibition and Poster Viewing Exhibition Hall 2													
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7:30													7:30
9:00													9:00
10:00	LS-3.1 - 3-D Structures of Macromolecules & Supramolecular Assemblies Chairpersons: Eric Hansen & Gabriel Lander	PS-5.3 - Ceramics and inorganic composites Chairpersons: Yuichi Ikuhara & Peter Crozier	IT-4 - Cryo-TEM techniques for biological material Chairpersons: Christopher Russo & Sara Sandin	PS-1.3 - Nanoscale, nanostructured and porous materials Chairpersons: Frances Ross & Ben Britton	PS-4.3 - Metals and alloys Chairpersons: Xiaodong Han & Jianfeng Nie	PS-7.3 - Semiconductors and materials for communication Chairpersons: David Muller & Jenny Wong-Leung	IT-5.3 - In-situ, environmental and time-resolved microscopies Chairpersons: Patricia Kooyman & Prathiba Gai	PS-12.3 - Materials for energy production, storage and catalysis Chairpersons: Christina Scheu & Paulo Ferreira	IT-1.3 - Instrumentation Chairpersons: Greg McMullan & Nestor Zaluzec	IT-12.1 - Spectroscopy - High energy excitations and local chemical analysis Chairpersons: Gianluigi Botton & Gerald Kothleitner	IT-8.2 - Phase-related techniques Chairpersons: Etenne Snoeck & Nobuo Tanaka	IT-7.1 - Multi-scale 3D imaging Chairpersons: Paul Matsudaira & Sara Bals	10:00
10:30	Invited Speaker Prof Patrick Sexton	687: Direct electromagnetic field imaging of materials by advanced differential phase contrast STEM Invited Speaker: Prof Naoya Shibata	Invited Speakers Dr Nigel Unwin	Invited Speaker Dr Amy Gandy	Invited Speaker: Xiuliang Ma	1538: New views of III-nitride wide band gap semiconductors enabled by advances in STEM imaging Invited Speaker: Prof James Lebeau	1511: Probing Materials Functionality; Opportunities for In Situ Electron Microscopy Invited Speaker: Prof Peter Crozier	Invited Speaker Dr Patricia Abellan	Invited Speaker Dr Si Chen	Invited Speaker Dr Marta Rossell	833: Exploring the inelastic interaction between phase-shaped electron beams and plasmonic resonances Invited Speaker: Prof Jo Verbeeck	Invited Speaker Ms Naomi Ginsberg	10:30
10:45													10:45
11:00	1544: Cryo-EM structure of the Triclosan efflux pump TrxABXC of <i>Pseudomonas Aeruginosa</i> Dr Isabelle Rouiller	322: Identification of Rapid Oxygen Exchange through Site-Dependent Cationic Displacements on CeO ₂ Nanoparticles Mr Ethan Lawrence	62: Cryo-electron microscope developed for simultaneous STEM, SEM imaging and its application to biological samples Prof Jiro Usukura	1064: Understanding flow and diffusion in porous networks combining electron tomography and pore-scale simulations Dr Christian Kübel	688: Applications of HAADF-STEM and EDS-STEM techniques in Mg-Sn and Mg-Sn-Zn alloy Mr Chaoqiang Liu	80: Novel method for strain measurements: moiré based technique by specimen design Dr Nikolay Cherkashin	133: Low-dose cryogenic O ₂ and H ₂ O mapping in organic photovoltaics Mr Zino Leijten	509: Plasmonic nanowire arrays as a platform for photocatalytic testing Prof Rik Drummond-Brydson	208: See the world with new eyes - Micro X-ray Fluorescence Mr Samuel Scheller	479: High Spatial Resolution X-ray Microanalysis of Soft-Matter in the AEM Dr Nestor Zaluzec	700: Dynamic electron wavefront shaping by structured electrostatic fields: Twisted electrons with tunable orbital angular momentum Mr Peng-Han Lu	Invited Speaker Prof Alfons Van Blaaderen	11:00
11:15	234: Near atomic cryo-electron microscopy structure of human BRISC deubiquitinase complex inhibited by SHMT2 suggests link to cancer cell growth in hypoxic environments Dr Andreas Schenk	60: Atomic and Electronic Structures of the (111) Diamond/Cubic Boron Nitride Interface Prof Chunlin Chen	205: Comparison of Hole-Free Phase Plates and Electrostatic Zach Phase Plates for Cryo-Electron Microscopy of Biological Specimens Mr Martin Obermair	12: Contribution of electron microscopy to study the nanoscale and porous organization of self-assembled gelled oil materials Dr Sophie Franceschi	892: In-situ TEM Study of Dislocation Plasticity of a Single Crystal FeCoCrMnNi HEA Prof Gerhard Dehm	1284: Composition and strain measurement in III-V semiconductor using convergent-beam electron diffraction Dr Yueming Guo	711: In-situ gas reaction of thicker materials in environmental HVEM Prof Nobuo Tanaka	Invited Speaker Prof Eric Stach	1211: Combined Hyperspectral Soft X-ray and Hyperspectral Cathodoluminescence study of an Urelite Dr Nick Wilson	354: Analytical and imaging improvements with recent FEG microprobe Mr Jean-Louis Longuet	1055: Toward a programmable phase plates for electrons Dr Vincenzo Grillo		11:15
11:30	311: CryoEM study of a bacterial multidrug efflux pump involved in antibiotic resistance Dr Olivier Lambert	1113: Study of Order-Disorder Transformations in Ytria-Rich Tantalate Using Transmission Electron Microscopy Dr Daesung Park	293: Direct observation of three-dimensional ferritin crystallization with molecular resolution Mr Lothar Houben	1157: Structural Study of Hyperbolic Surface Structures by Electron Microscopy Dr Lu Han	597: Interface effects of nanolayered metallic composites Prof Shijian Zheng	950: Combining TEM and 3D scanning spreading resistance microscopy, a hybrid approach, to the analysis of Ge gate-all-around nano-wires Dr Paola Favia	1199: PCM Materials & Devices: High Speed and Low-dose TEM Imaging Dr Shalini Tripathi	Invited Speaker Prof Eric Stach	286: New WDS Technology, modification of a WDS to a SD-WDS for more reliable results and where to next? Dr Richard Wuhrrer	738: Comparison of electron and X-ray microscopies for characterizing perfluorosulfonic acid ionomer for fuel cell applications Miss Lis Melo	1061: Atomic-Sized Electron Probes with Selectable Orbital Angular Momentum Dr Jordan Hachtel	7: Examination of strain evolution in compressed micropillars by HR-EBSD Dr Szilvia Kalácska	11:30
11:45	276: Cryo-Electron Microscopy Investigations of Seneca Valley Virus Dr Mihnea Bostina	1339: The Growth of Super-Tetragonal Phase in BiFeO ₃ on LaAlO ₃ Substrate through Designer Defects Dr Xuan Cheng	348: Shrinkage of freeze-dried cryosections of cells: Investigations by EFTEM and Cryo-CLEM Prof Jean Michel	173: Measurement of local crystal lattice strain variations in dealloyed nanoporous gold Mr Christoph Mahr	928: Quantitative study of plastic deformation in aluminum using EBSD, TKD, and PED-based orientation imaging techniques Mr Paul Fischione	247: In-situ chemical analysis using EELS measurements with single nanosecond electron pulses Dr Thomas Lagrange	1352: Atomic surface structure of Mn ₃ O ₄ nanoparticle and origin of its high activity in oxygen evolution reaction Dr Sangmoon Yoon	112: Evaluation of TES microcalorimeter EDS for low-concentration phosphorus detection in steels Ms Keiko Yamada	1068: STEM-EELS studies of defects and their evolution in the BaTi ₈ O ₁₆ hollandite system Dr John Halpin	1398: Measuring the orbital angular momentum spectrum of electron beams using a Damman vortex grating Prof Koh Saitoh	299: Accessing the 3D microstructure of complex geometric, biological structures using electron tomography and nano X-ray tomography Dr Benjamin Apeleo Zubiri		11:45
12:00	782: Electron microscopy - powerful tool to study the 3D structure of human myeloma IgG subclasses. Dr Sergey Ryazantsev	77: Nanoindentation-induced phase transformation between SiC polymorphs Dr Tingting Yao	1493: Cryo-FIB-Lift-out for Biological imaging - The impossible made 'merely difficult' Dr Chris Parmenter	1133: In situ edge engineering of two-dimensional transition metal dichalcogenides Dr Xiahua Sang	1289: Atom Probe Tomography Investigations of Oxygen/Nitrogen additions to Aerospace Ti-alloys Dr Paul Alexander John Bagot	303: In situ phase-shifting electron holography for precise measurement of electric potential, field, and charge density distributions across a biased p-n junction Dr Satoshi Anada	1334: The impact of the electron dose rate and temperature-dependent radiolysis products on the growth and dissolution of metal nanoparticles in LTEM A/Prof Sašo Šturm	37: Designing catalysts in the atomic scale - correlating the structure and catalytic activity Prof Maya Bar Sadan	915: In Situ TEM: The Performance of EDXS at Elevated Sample Temperatures Mr Robert Krisper	423: Soft X-ray transmission X-ray microscopy - fuel cell and magnetotactic bacteria applications Invited Speaker: Prof Adam Hitchcock	390: Theoretical and numerical study of the interaction between phase-shaped electrons and plasmonic modes Mr Hugo Lourenço Martins	114: Multiscale tomography on all-ceramic solid oxide fuel cells Dr Matthias Meffert	12:00
12:15	1168: Chilling the courier: How cryo-EM can be used to improve therapeutic nano-delivery systems Mr Lou Brillault	857: Structural relaxation and oxygen vacancies in Ca and Y co-doped bismuth iron garnet thin films Mr Adrien Teurtie	1493: Cryo-FIB-Lift-out for Biological imaging - The impossible made 'merely difficult' Dr Chris Parmenter	1471: Crystallography, Electron Microscopy and Functional Evolution of Atomically Thin Confined Nanowires Dr Jeremy Sloan	668: Quantification of precipitate hardening of slip and twinning in Mg-5Zn using micro-pillar compression A/Prof Nicole Stanford	869: Insight in Mg dopant incorporation in GaN by atom probe tomography and off-axis electron holography Miss Lynda Amichi	158: Revealing nanoscale passivation and corrosion mechanisms of highly reactive Li metal by environmental TEM Prof Benjamin Butz	381: Transmission electron microscopy study of carbon/metal oxide hybrid materials for Energy Storage Application Ms Anna Frank	257: A Standard Protocol and Specimen for Measuring the Effective Solid Angle of X-ray Detectors in the Analytical Electron Microscope Dr Nestor Zaluzec	601: Design of phase plate for high contrast imaging in phase plate scanning transmission electron microscopy Prof Hiroki Minoda	1415: Three-dimensional observation of dislocations in ferromagnetic iron using magnetic-field-free electron tomography Prof Satoshi Hata		12:15
12:30	Lunch, Lunch Workshops, Exhibition and Poster Sessions/Viewing Exhibition Hall 2												12:30

TUESDAY 11 SEPTEMBER 2018

	Darling Harbour Theatre	Meeting Room C4.1	Meeting Room C4.2	Meeting Room C4.3	Meeting Room C4.4	Meeting Room C4.5	Meeting Room C4.6	Meeting Room C4.7	Meeting Room C4.8	Meeting Room C4.9	Meeting Room C4.10	Meeting Room C4.11	
	LS-3.2 - 3-D Structures of Macromolecules & Supramolecular Assemblies	LS-5 - Cellular Transport & Dynamics	LS-6 - Applications of Cryo Electron Microscopy in Biology	PS-1.4 - Nanoscale, nanostructured and porous materials	PS-4.4 - Metals and alloys	PS-10.1 - Magnetic, ferroelectric and multiferroic materials	IT-5.4 - In-situ, environmental and time-resolved microscopies	PS-12.4 - Materials for energy production, storage and catalysis	IT-1.4 - Instrumentation	IT-12.2 - Spectroscopy - High energy excitations and local chemical analysis	IT-8.3 - Phase-related techniques	IT-7.2 - Multi-scale 3D imaging	
	Chairpersons: Eric Hanssen & Gabriel Lander	Chairpersons: Rob Parton & Georg Ramm	Chairpersons: Thomas Mueller-Reichert & Michel Steinmetz	Chairpersons: Frances Ross & Ben Britton	Chairpersons: Xiaodong Han & Jianfeng Nie	Chairpersons: Shujun Zhang & Laura Bocher	Chairpersons: Patricia Kooymann & Prathiba Gai	Chairpersons: Christina Scheu & Paulo Ferreira	Chairpersons: Greg McMullan & Nestor Zaluzec	Chairpersons: Gianluigi Botton & Gerald Kothleitner	Chairpersons: Etienne Snoeck & Nobuo Tanaka	Chairpersons: Paul Matsudaira & Sara Bals	
14:00	Invited Speaker Prof Jose Rodriguez	Invited Speaker Prof Jennifer Stow	Invited Speaker Prof Peter Peters	484: Study of structural distortions in Eshelby twisted InP nanowires by precession electron diffraction Prof Daniel Ugarte	126: Interfaces and defects: their role during precipitation in Al-Ag alloys Mr Zezhong Zhang	574: Magnetic transition in temperature: inhomogeneities revealed by electron holography at the nanometer scale Invited Speaker: Mr Christophe Gate	369: Imaging Coherent Structural Dynamics with Ultrafast Electron Microscopy Invited Speaker: A/Prof David Flannigan	1010: In situ Scanning Transmission Electron Microscopy with Atomic Resolution under Atmospheric Pressures Invited Speaker: Prof Xiaoping Pan	Invited Speaker Dr Damien Mcgruther	Invited Speaker Dr Demie Kepaptsoglou	969: In situ Observation of Lithiation of Ge Nanowires using Electron Holography Prof Molly Mccartney	727: Multiscale 3-D Imaging Techniques Based on Focused Electron Probes with Applications to Biological Systems Invited Speaker: Dr Richard Leapman	14:00
14:15				904: Microstructure evolution in nanotwinned copper under mechanical deformation Prof Kui Du	506: Ultrafine-grained multi-phase medium-Mn advanced high strength steels Prof James Wittig						1268: In-situ TEM Electrical Biasing of LAO/STO Interface-Devices Revealing Charge Modulation and Associated Structural and Chemical Changes Mr Jinsol Seo		14:15
14:30	1131: Structure and function of the proteasome activator PA28 of the malaria parasite Plasmodium falciparum A/Prof Eric Hanssen	Invited Speaker Dr Kate Mcarthur	Invited Speaker Prof Masahide Kikkawa	1071: New modes of imaging for in situ TEM nanomechanical testing Invited Speaker: Prof Andrew Minor	676: In situ and post mortem TEM characterization of creep deformation micromechanisms in the AD730 superalloy: influence of the stress level and grain size. Prof Florence Pettinari-Sturmel	1380: Direct observation of magnetic domain dynamics in Z-type cobalt hexaferrite Dr Kyung Song	240: Gaseous Environmental TEM: a complementary study of nanocatalysts using a combined dedicated ETEM vs E-cell approach Dr Thierry Epicier	68: Differentiating the structures of PInI octahedral nanoparticles through combined ADF and EDX simulations Dr Katherine Macarthur	624: Compressed sensing and other beam strategies to reduce electron dose in (S)TEM Dr Armand Béch�	712: Direct observation of hole in cuprate superconductor using STEM-EELS Dr Mitsutaka Haruta	500: Electron Holographic Measurement of the Three-Dimensional Electrostatic Potential Distribution of a Flat Capacitor Mr Tolga Wagner	366: Forward Models for 3D Materials Characterization by SEM and TEM Modalities Invited Speaker: Prof Marc Degraef	14:30
14:45	313: Local Resolution in cryo Electron Microscopy: Adding directionality Prof Jose-Maria Carazo				736: A novel design of hot rolled Al-Cu alloy through ordered L12 precipitates by minor addition of Nb and Zr Prof Kamania Chattopadhyay	177: Time resolved Lorentz-TEM measurements of topological skyrmion decay in Fe _{0.5} Co _{0.5} Si Mr Simon Pöllath	295: In situ detection of product gas molecules associated with catalytic reactions of fine metallic particles by environmental high-voltage TEM equipped with quadrupole mass spectrometer Prof Shunsuke Muto	660: Quantitative STEM of Catalyst Nanoparticles with Simultaneous ADF Imaging and Spectroscopy Prof Peter Nellist	501: Development of a high throughput SEM Mr Wilco Zuidema	845: Atomic scale charge compensation mechanism in Ca and Y co-doped bismuth iron garnet thin films Mr Adrien Teurtrie	153: Electron holography using femtosecond electron pulses Dr Arnaud Arbouet		14:45
15:00	1536: Cryo-electron microscopy structure of the Plasmodium falciparum Rh5/CyRPA/Ripr invasion complex reveals the mechanism of malaria parasite invasion into human red blood cells. Dr Wilson Wong	1207: Using TIRF microscopy, 2-Photon photoactivation and optogenetics to identify the protein machinery regulating T-cell receptor recycling Dr Gregory Redpath	Invited Speaker Dr Ben Engel	1152: Wettability of the outer and inner surfaces of carbon nanotubes evaluated by single-nanotube-level force measurements and in-situ observations Mr Konan Imadate	759: Precipitate observation of Al-Mg-Si-Cu-Ag alloys by HRTEM and HAADF-STEM A/Prof Seungwon Lee	1286: TEM study of controlled localisation of skyrmion nucleation by focused ion beam irradiation Miss Kayla Fallon	1356: Single-shot three-dimensional electron imaging for in-situ dynamics Dr Emad Oveisi	1449: Catalyst nanomaterials studied by in situ heating and identical location transmission electron microscopy Dr Francisco Ruiz Zepeda	1341: Crystalline orientation maps obtained from channeling contrast: focus on acquisition and image treatments A/Prof Cyril Langlois	121: Atomic resolution spatially-resolved inversion parameter in spinel oxides Mr Pau Torruella Besa	937: Off-axis electron holography phase-shifting techniques combined with summation for routine high sensitivity and high spatial resolution phase maps Dr Victor Bourreau	1309: 3D Reconstruction of Magnetic Textures in Nanomagnets by Electron Holographic Tomography Dr Axel Lubk	15:00
15:15	54: Near-atomic cryo-EM structure of the chaperonin CCT in complex with its substrate mLST8, a key component of the mTOR complex. Dr Jorge Cuellar	1563: A novel combinatorial approach utilizing TIRF microscopy and Duolink for assessment of protein-protein interactions at the cell membrane Dr Michael Lovelace		254: Direct measurement of the surface energy of bimetallic nanoparticles using in-situ heating TEM Mr Adrian Chmielewski	770: Effect of second cold rolling and intercritical annealing on a new medium Mn ultra-fine duplex AHSS Mr Majid Parvizi	550: Observation and analysis of current-driven motion of magnetic domain boundaries in a chiral-lattice helimagnet FeGe Dr Kiyou Shibata	462: Time-Resolved Electron Holography by Interference Gating Mr Tolga Wagner	1040: Modulating electron beams in space and time to probe for the genuine structures and function at the atomic scale Dr Christian Kisielowski	665: Utilization of Electron Channelling Contrast Imaging to Display Crystal Lattice Orientation in Scanning Electron Microscope Mr Jan Cupera	524: Understanding High Contact Resistance in MOS2 FETs Using STEM-EELS Mr Ryan Wu	67: Vortex beam phases in real space studied by electron holography Dr Ken Harada	236: A robust method to acquire tilt series in a few seconds for Fast Operando Nano-Tomography in ETEM Dr Thierry Epicier	15:15
15:30	575: Cryo-EM Structures of a Single Ring Chaperonin from Bacteriophage OBP P. Fluorescence in Nucleotide-free and ADP-bound States Prof Olga Sokolova	Invited Speaker Prof John McGhee	1315: Unsupervised deep learning approach for automated annotation of cellular electron cryo-tomograms Prof Niels Volkman	275: STEM imaging and concomitant EDS mapping of in situ cation-exchange at solid state between diverse nanoparticles populations: how it actually works. Prof Andrea Falqui	861: Martensite and twin in Fe50Mn30Co10Cr10 high entropy alloy Miss Lin Qi	1316: Cryogenic TEM Studies of Bloch and NEEL Skyrmion Textures in Lacunar Spinel and Cubic Helimagnets Mr Felix Lucas Kern	157: Ultrafast coherent Transmission Electron Microscopy with a high brightness laser-driven cold field emission source microscope: imaging, diffraction, spectroscopy and holography with ultrashort electron pulses Mr Giuseppe Mario Caruso	1032: Comparison of Atomic Scale Dynamics for 14 Kinds of Transition Metal Nanocatalysts Mr Kecheng Cao	123: SHeM: Scanning Helium atom Microscopy A novel atom probe technique Dr Sabrina Daniela Eder	510: How sharp are atomically sharp interfaces in complex functional oxide heterostructures? Invited Speaker: Prof Peter A. Van Aken	224: Electron wave front manipulation using patterned electrostatic mirrors Mr Maurice Krielaart	591: In situ 3D characterization of metal nanoparticles while heating Prof Sara Bals	15:30
15:45	598: The molecular basis for UV-damage recognition in chromatin Dr Simone Cavadini		1604: Multiscale 3D imaging of cilia by electron and X-ray cryo-microscopy Dr Elisabeth Müller	320: Direct Atomic-Scale Observation of Nanoparticles Coalescence Driven Nucleation and Growth in the TEM Dr Junjie Li	867: High-pressure torsion triggered diffusive phase transformation in a twinning-induced plasticity steel Dr Xianghai An	190: Lorentz TEM observation of deformed skyrmions in supercooled state Dr Daisuke Morikawa	720: HT BSE detector and EBAC electronics for ESEM. Dr Grigore Moldovan	852: A Novel Technique to Investigate Ionomer Distribution in PEMFC: Differentiating Carbon by STEM-EELS Mr Kang Yu	609: Optimizing Data and Sample Connectivity for Cryo-EM Workflows Mr Maarten Kuijper	79: Towards an application of quasi non-diffractive electron Bessel beams in scanning transmission electron microscopy Dr Simon Hettler	967: Joint reconstruction of multi-modal tomography data using total generalized variation Dr Georg Haberfehrner	15:45	
16:00	Afternoon Tea, Exhibition and Poster Viewing Exhibition Hall 2												16:00
16:30 - 18:00	Dedicated Poster Viewing Session Exhibition Hall 2												16:30 - 18:00

WEDNESDAY 12 SEPTEMBER 2018

Registration Open Outside Exhibition Hall 2 & Ground Level Foyer, International Convention Centre											
Plenary Lecture Darling Harbour Theatre											
Prof Zhiwei Shan Mechanical Testing Laboratory inside TEM											
Morning Tea, Exhibition and Poster Viewing Exhibition Hall 2											
Darling Harbour Theatre	Meeting Room C4.1	Meeting Room C4.2	Meeting Room C4.3	Meeting Room C4.4	Meeting Room C4.5	Meeting Room C4.6	Meeting Room C4.7	Meeting Room C4.8	Meeting Room C4.9	Meeting Room C4.10	Meeting Room C4.11
FI-1 - Facility Management and Outreach	IT-14.1 – Advances in Atom Probe Tomography	LS-7 - Embryology & Developmental Biology	LS-12 - Multimodal Molecular Imaging in Health & Disease	PS-4.5 - Metals and alloys	PS-10.2 - Magnetic, ferroelectric and multiferroic materials	IT-5.5 - In-situ, environmental and time-resolved microscopies	PS-12.5 - Materials for energy production, storage and catalysis	IT-2.1 - Computational methods for data acquisition, analysis and visualization	IT-12.3 - Spectroscopy – High energy excitations and local chemical analysis	IT-8.4 - Phase-related techniques	PS-11.1 - Materials in geology, mineralogy and archeology
Chairpersons: Tim White & Jenny Whiting	Chairpersons: David Larson, Ross Marceau & Leigh Stephenson	Chairpersons: Louise Cole & Anastasios Pavlopoulos	Chairpersons: Peter Peters & Peijun Zhang	Chairpersons: Xiaodong Han & Jianfeng Nie	Chairpersons: Shujun Zhang & Laura Bocher	Chairpersons: Patricia Kooyman & Prathiba Gai	Chairpersons: Christina Scheu & Paulo Ferreira	Chairpersons: Steven Ludtke & Nigel Browning	Chairpersons: Gianluigi Botton & Gerald Kohlreiter	Chairpersons: Etienne Snoeck & Nobuo Tanaka	Chairpersons: Ashley Slattery & David Saxey
10:30 1224: Diamond Jubilee of Australia's first Microscopy Core Facility - the EMU/ACMM/SMM at 60 Invited Speaker: Dr Guy Cox	Invited Speaker Dr Kathryn Grandfield	Invited Speaker Dr Alexander Combes	1046: Multimodal Microscopy to Study Plasma Membrane Microdomains Invited Speaker: Prof Robert Parton	898: Microstructural evolution of 25Cr duplex stainless steel upon shot peening treatment Miss Sijia Liu	1629: Model-based iterative reconstruction of charge density and electric field using off-axis electron holography Invited Speaker: Dr Rafal E. Dunin-Borkowski	1436: Radicals-assisted CVD implemented in a modified HR environmental TEM for in-situ real-time SWCNTs growth with a given chirality. Invited Speaker: Dr Ileana Florea	788: In-situ TEM Observation of Resistive Switching of Oxide Thin Film Devices Invited Speaker: Prof Sang Ho Oh	Invited Speaker Mr Bryan Reed	1290: Electron magnetic circular dichroism: state of the art and future prospects Invited Speaker: Dr Jan Rusz	962: Bringing STEM into phase: new opportunities with focused-probe STEM ptychography Invited Speaker: Prof Peter Nellist	1265: Combining Atom Probe Tomography and Transmission Electron Microscopy in monazite reveals grain-scale-closed systems reset at nano-scale: toward nano-geochronology. Invited Speaker: Dr Anne-Magali Seydoux-Guillaume
				10:45							
11:00 1817: The good, the bad and the ugly of outreach stories: what works and why. Invited Speaker: Dr Bronwen Cribb	Invited Speaker Dr Stefan Parviainen	Invited Speaker Dr Neha Bhatia	1614: Routine determination of sub-100 kDa complexes with conventional cryo-EM Invited Speaker: Dr Gabriel Lander	161: Applications of Advanced Scanning Transmission Electron Microscopy Techniques in the Study of Light Alloys Ms Yunhe Zheng	850: Exploring the local structure of stress-written phases in polymorphic BiFeO3 Dr Kristina Holsgrove	1126: In situ crystallography and electrical dynamics of strained Ge-Si core-shell nanowires Dr Chao Zhang	365: In situ TEM implementation of impedance spectroscopy on a model solid oxide electrolysis cell combining reactive gasses, high temperatures and electrical potentials Dr Soren Bredmose Simonsen	1183: Increasing the Speed of EELS/EDS Mapping through Dynamic/Adaptive Sampling Methodologies Mr Karl Hujsak	1007: Atomic Resolution Linear Dichroism in a Scanning Transmission Electron Microscope Mr Jaume Gazquez	284: Boundary-artifact-free phase retrieval from Differential Phase Contrast image Dr Kazuo Ishizuka	1108: Direct Observation of Dissimilar Dissolution Behaviours in a Radiation Field: An In-situ Study of Layered Aluminum Based Minerals Dr Michele Conroy
				11:15	222: Experimental observation of novel long-period structures and phase transitions in fcc [111] tilt grain boundaries by atomic resolution STEM Mr Thorsten Meiners	679: Sub-nanoscale spatial mapping of magnetic moments by STEM-EMCD under symmetric 3-beam condition using convergent beam Prof Shunsuke Muto	1285: Development of double-tilt heating holder for dynamical/atomic resolution AC-TEM and WB-STEM observations of ferromagnetic ferrous alloys Dr Yusuke Shimada	32: Atomic-level In situ Imaging and Spectroscopy of Interfacial Interactions during Carbon Deposition on a Ni/CeO2 Catalyst Mr Ethan Lawrence	987: Processing very large pixelated STEM datasets: challenges and solutions Dr Magnus Nord	435: Atomic scale magnetic and structural imaging by achromatic electron microscopy A/Prof Xiaoyan Zhong	593: Theoretical and experimental study on detection precision and imaging quality of a PSD based non-pixelated COM detector for DPC Mr Felix Schwarzhuber
11:30 Invited Speaker Juan Pablo Hurtado Padilla	843: First-Principles Calculations of Field Evaporation in Atom Probe Tomography Dr Michael Ashton	Invited Speaker A/Prof Sebastian Streichan	838: Focused Ion Beam Milling as a Game Changer in in-situ Cryo-Electron Tomography of Frozen Hydrated Specimens Invited Speaker: Dr Miroslava Schaffer	297: Combined Effect of Stacking Fault Energy and Specimen Size on the Mechanical Behaviors of Single Crystalline Face-Centered Cubic Metals Mr Ranming Niu	19: Atomic mappings of novel domain configurations in ferroelectric thin films Invited Speaker: Prof Yinlian Zhu	836: In-situ tensile straining for two dimensional nanomaterials in the transmission electron microscope Mr Ade Kismarhardja	653: Microscopy Insights into Deactivation Mechanism of Au/CeZrO4 for Low-Temperature Water-Gas Shift Reaction Dr Qian He	387: Performance evaluation of compressed sensing set-ups for optical and transmission electron microscopy Dr Wouter Van Den Broek	325: Symmetry-Constraints for Mapping Electronic States with EELS Dr Stefan Löffler	455: Atomic potential reconstruction from DPC signal of thick specimens Dr Takehito Seki	895: Paleomagnetism of individual magnetite nanoparticles in a meteorite using electron holography Prof Yuki Kimura
	11:45-12:00		677: Crystallography in Atom Probe Tomography Mr Alec Day	377: Formation of White Etching Areas during Rolling Contact Fatigue of SAE 52100 Bearing Steel - the Influence of Diffusible Hydrogen Dr Alexander Schwedt	588: Combining environmental gas TEM and electron tomography Dr Charles Hirlmann	1102: Probing the local electronic configurations in original tubular thermoelectric cobaltites Dr Laura Bocher	816: Low dose STEM for everyone using compressed sensing with regular scanning grids Mr Jakob Spiegelberg	684: Advantages of Direct Detection and Electron Counting for High-energy Resolution and Monochromated Electron Energy Loss Spectroscopy Data Acquisition Dr Paolo Longo	998: Simultaneous E-Field & Strain Mapping by Precession Electron Diffraction Dr Benedikt Haas	822: Investigation of Exsolution in Titanomagnetite Grains in NWA 7533 Martian Meteorite by STEM-EELS and STEM-EDX Mrs Maya Marinova	
12:00 Invited Speaker Mr Jim Cybulski	1430: The analysis of sulfide minerals by atom probe tomography Dr David Saxey	1535: Tweezing mechanical information out of the plasma membrane of uterine epithelial cells. Ms Sadaf Kalam	1565: Nanoscale sword and shield: recent developments of focused ion beam and 2D materials for multimodal imaging of cells Dr Jing Fu	Late breaking session	206: Effect of single point defect on local properties in BiFeO3 thin film Miss Xiaomei Li	1482: Detailed Investigation of the Interfacial Electrode/Electrolyte Reactions and the Effect of Additives in Li-ion, Li-Sulfur and Li-Air Batteries by Operando ec-(S)TEM Dr B.layla Mehdi	881: Understanding High Performance in Half-Heusler Thermoelectrics With Complementary Atom Probe Tomography and STEM-EELS Dr John Halpin	Invited Speaker Dr Andrew Stevens	1431: Towards quantitative correlation of surface reconstruction and/or reduction of perovskite catalysts simultaneously by ELSNES Prof Vasiliki Tileli	1280: Low-dose Electron Ptychography with a Fast Direct Electron Detector Prof Peng Wang	103: High resolution chemical analysis of grains from the Itokawa asteroid by FIB-ToF-SIMS Dr William Rickard
	12:15	914: Correlative investigation of Mg dopant in GaN p-n junction by atom probe tomography and off-axis electron holography Miss Lynda Amichi	1625: Using a multi-modality imaging approach to investigate the role of platelets in neonatal stroke Dr Alison Farley	404: Cryo-electron microscopy extended into the quantum realms of photosynthetic energy transfer processes Prof Andreas Holzenburg	Late breaking session	932: Nanoscale magnetic and structural characterization of Ne+ irradiated FeAl thin films using pixelated STEM Dr Magnus Nord	1181: Techniques for performing simultaneous in-situ Transmission Kikuchi Diffraction (TKD) and Digital Image Correlation (DIC) Dr Vijay Bhatia		607: Precipitation in the van der Waals gaps by adding transition metals to thermoelectric BiSbTe Dr Hye Jung Chang	282: Quantitative Atomic Scale Imaging of Conducting Filaments of Resistive Switching Memories Using Monochromated STEM-EELS Technique Dr Hongchu Du	662: Optical equivalency of focused probe STEM ptychography and TEM Fourier ptychography Dr Emanuela Liberti
12:30 1547: High resolution smartphone microscopes as an educational and public engagement tool Dr Amy Davies	Lunch, Lunch Workshops, Exhibition and Poster Sessions/Viewing Exhibition Hall 2										12:30
12:45 - 14:00 Hands-on exploration of Jim Cybulski and Amy Davies microscopes											12:30

WEDNESDAY 12 SEPTEMBER 2018

	Darling Harbour Theatre	Meeting Room C4.1	Meeting Room C4.2	Meeting Room C4.3	Meeting Room C4.4	Meeting Room C4.5	Meeting Room C4.6	Meeting Room C4.7	Meeting Room C4.8	Meeting Room C4.9	Meeting Room C4.10	Meeting Room C4.11	
	IT-10.1 - SEM, FIB, scanning probe and surface microscopy	IT-14.2 – Advances in Atom Probe Tomography	LS-13 - Invertebrate Biology & Taxonomy	PS-2.1 - Carbon-based materials and 2D structures	LS-10 - Plant Science & Mycology	PS-10.3 - Magnetic, ferroelectric and multiferroic materials	PS-13.4 - Physical science applications of in-situ microscopy	FI-2.1 - Data Management	IT-2.2 - Computational methods for data acquisition, analysis and visualization	IT-3 – Methods and workflows for correlative microscopy	IT-9.1 - STEM and TEM imaging	IT-13.1 - Spectroscopy – Low energy excitations and ultrafast spectroscopy	
	Chairpersons: Tomonobu Nakayama, Alex de Marco & Reynald Gauvin	Chairpersons: David Larson, Ross Marceau & Leigh Stephenson	Chairpersons: Andreas Holzenburg & Maria Byrne	Chairpersons: Ute Kaiser & Dougal McCulloch	Chairpersons: Rosemary White & Staffan Persson	Chairpersons: Shujun Zhang & Laura Bocher	Chairpersons: Masaki Takeguchi & Xiaozhou Liao	Chairpersons: Wojtek Goscinski & Dieter Weber	Chairpersons: Steven Ludtke & Nigel Browning	Chairpersons: Fei Sun & Saskia Lippens	Chairpersons: Richard Leapman & Peter Nellist	Chairpersons: Odile Stephan & Javier Garcia de Abajo	
14:00	388: Analytical STEM at 30 keV, EDS, EELS and CBED at the Nanoscale Prof Reynald Gauvin	Invited Speaker Dr Austin Akey	Invited Speaker Dr Alexander Ziegler	Invited Speaker Dr Rebecca Nicholls	Invited Speaker Dr Alexandra Brand	200: Atomic mapping of domains and interfacial structures in ferroelectric thin films Prof Xiuliang Ma	789: In-situ Microscopy for Sub-10nm Materials Invited Speaker: Prof Litao Sun	1568: The Image Data Resource: a platform for publishing, integrating and mining biological imaging data at scale Dr Gabriella Rustici	Invited Speaker Ms Perrine Paul-Gilloteaux	Invited Speaker Dr Mark Ellisman	1209: Beyond the Diffraction Limit and below 0.4 Angstroms with a High Dynamic Range Pixel Array Detector Invited Speaker: Prof David Muller	Invited Speaker Dr Sophie Meuret	14:00
14:15	1097: Application of inverted fountain detector for downward secondary electron emitted from nanosheets in SEM Prof Takashi Sekiguchi					294: Observation of ferroelectric polarization in hybrid improper ferroelectric (Ca, Sr)Ti ₂ O ₇ Dr Hiroshi Nakajima		1357: A national network of trusted data repositories for the Australian National Imaging Facility Dr Andrew Mehnert					14:15
14:30	1368: Cluster analysis for FIB tomography of nanoporous materials Dr Martin Ritter	Invited Speaker A/Prof Baishakhi Mazumder	1190: Analysis of nudibranch microstructures using ultrathin cryomicrotome sectioning and Mass Spectrometry Imaging allows spatial distribution of molecular species to be determined at nanometer resolution Dr Brett Hamilton	661: Aberration-corrected electron microscopy of new nano material phases Prof Moon Kim	929: Identification of the Icelandic accession of Arabidopsis thaliana Prof Kesara Ananthawat-Jonsson	940: Advanced electron microscopy and spectroscopy on ferroelectric thin films Prof Peng Gao	834: Industrial approach to in-situ electron microscopy of heterogeneous catalysts Dr Manfred Schuster	1078: Using Fiji / Image J to automate analysis of slide scanner generated files Dr Michael Kulligowski	Invited Speaker Dr Hans Eimlund	Invited Speaker Dr Yannick Schwab	1560: Thick (3D) sample imaging using IDPC-STEM Dr Ivan Lazić	1444: Visualization of surface plasmon propagation in a crystal waveguide by momentum-resolved cathodoluminescence spectroscopy Dr Hikaru Saito	14:30
14:45	223: High-frequency noise artefacts in scanning microscopy – Identification and mitigation Dr Asmus Meyer-Plath		1413: One-Dimensional Hexagonal Boron Nitride Semiconductor Miss Hyuju Park	785: Understanding impacts of environmental changes and anthropogenic activities on marine organisms Invited Speaker: Dr Peta Clode	Invited Speaker Prof Christian Frankhauser	1376: Visualisation of polar nano-regions and chemical composition fluctuations in BaTiO ₃ and (Ba, Sr)TiO ₃ ceramics above Curie temperature Prof Goran Drazic	599: Cryogenic analytical electron microscopy for native state imaging of nanomaterials Dr Nicole Hondow	984: LiberTEM: An open software platform for pixelated scanning transmission electron microscopy Dr Dieter Weber			1498: Atomic resolution STEM image contrast based on local point symmetry Dr Matus Krajnak	1021: Probing Resonant Photonic Modes in Oxide Nanoparticles with Focussed Electron Beams Prof Peter Crozier	14:45
15:00	305: Optimisation of scattered electron imaging in the scanning electron microscope Dr Ben Britton	1044: Cross-correlative Microscopy to Understand Nanocrystalline Stability Dr Xuyang Zhou	Invited Speaker Prof Quentin Ramasse			718: Phi thickenings in Brassica roots - an adaptation to water stress? Dr David Collings	517: Dopant distribution and Jahn-Teller distortions at superconducting La ₂ CuO ₄ interfaces Mr Y. Eren Suyolcu	656: Direct observation of oxygen vacancy-driven structural and resistive phase transitions in La ₂ /3Sr ₁ /3MnO ₃ Dr Lide Yao	958: Meeting the next-generation instrument data challenge with MyTardis Dr Keith Schulze	281: MIB 2: an updated version of the open-source platform for segmentation and analysis of multidimensional datasets Dr Ilya Belevich	Invited Speaker Mr Wei Ji	1288: Electron tomography of cadherin-mediated progenitor cell-cell junctions Dr Walter Kaufmann	827: Momentum resolved spectroscopy of the dielectric response by TEM Dr Frederic Fossard
15:15	728: Ultra High Precision, High Resolution and Large Area SEM using Raith E-line Plus Dr Han-Hao (elliott) Cheng	1459: Superconducting Delay Line Detector for Time of Flight Spectrometry and Atom Probe Tomography Mr Joseph Suttle		1053: Neurodegenerative modifications during perinatal asphyxia: correlative light and electron microscopy study. Francisco Capani	193: Biaxial tensile stress effect within epitaxial BiFeO ₃ film grown on (100) KTaO ₃ Dr In-Tae Bae		553: Electron Radiolysis Effect for in-situ Electron Microscopy: Super-Dissolution and Direct Writing Transformation of Metal Oxides Prof Manling Sui	1591: Solutions for the analysis of large microscopy multi-dimensional datasets in HyperSpy. Invited Speaker: Dr Francisco de la Peña	335: Image restoration from single scanning transmission electron micrograph using deep convolutional neural networks Dr Ivan Lobato	1155: Aberration corrected STEM for interfacial strain and vacancy characterization Prof Jian-Min Zuo		1496: Optoelectronic measurements on atomically thin MoW(1-x)S ₂ nanoflakes Dr Raul Arenal	15:15
15:30	534: Investigating immune responses using multi-spectral lightsheet microscopy of cleared kidneys Dr Kirstin Elgass	821: Tracing hydrogen in APT : Development of new in-situ approaches Dr Daniel Haley	Late breaking talk	397: Compression induced modification of boron nitride layers: a conductive two-dimensional BN compound Prof Bernardo Neves	Invited Speaker Dr Christine Faulkner	667: Electron beam effects on metal and semiconductor oxide films - structure and electrical properties Dr Christian Kübel	Invited Speaker A/Prof Lena F. Kourkoutis	667: Electron beam effects on metal and semiconductor oxide films - structure and electrical properties Dr Christian Kübel	373: Automated Imaging and Analysis of Pharmaceutical Particles Using a Tabletop Low Voltage TEM Dr Mathieu Colomb-Delsuc	917: Correlative microscopy combining Electron Microscopy and Secondary Ion Mass Spectrometry Dr Santhana Eswara	1476: Striving for precise metrology with the modern STEM Invited Speaker: Dr Lewys Jones	1627: Attosecond electron microscopy and diffraction Invited Speaker: Prof Peter Baum	15:30
15:45	352: Improved throughput of gold nanoparticle localization and imaging in the brain through the development of a novel SEM-STEM technique Dr Paul Kempen	1305: Direct observations of stable hydrides to solute hydrogen in metals using atom probe tomography Dr Andrew Breen	Late breaking talk	446: Evidence of strain-induced plastic flow in the formation of phase-pure hexagonal diamond Mr Sherman Wong		118: Atomic-scale observation of oxidation and decomposition processes in nanocrystalline alloys via in-situ heating Mr Jinming Guo		Late breaking talk	1165: A new algorithm for segmenting single adult cardiac cells from large-volume serial block-face scanning electron microscopy data Dr Vijay Rajagopal	504: A Hybrid Environmental Transmission Electron Microscope for Probing Plasmons and Excitons Dr Renu Sharma	15:45		
16:00	Afternoon Tea, Exhibition and Poster Viewing Exhibition Hall 2												16:00
16:30 - 18:00	Dedicated Poster Viewing Session Exhibition Hall 2												16:30 - 18:00

THURSDAY 13 SEPTEMBER 2018

7:30													7:30
Registration Open Outside Exhibition Hall 2 & Ground Level Foyer, International Convention Centre													
9:00													9:00
Plenary Speaker Darling Harbour Theatre Dr Misty Jenkins Understanding Serial Killers: Investigating the function of Cytotoxic T lymphocytes using microscopy													
10:00													10:00
Morning Tea, Exhibition and Poster Viewing Exhibition Hall 2													
Darling Harbour Theatre	Meeting Room C4.1	Meeting Room C4.2	Meeting Room C4.3	Meeting Room C4.4	Meeting Room C4.5	Meeting Room C4.6	Meeting Room C4.7	Meeting Room C4.8	Meeting Room C4.9	Meeting Room C4.10	Meeting Room C4.11		
IT-10.2 - SEM, FIB, scanning probe and surface microscopy	PS-9.1 - Amorphous and disordered materials, liquid crystals	PS-8.1 - Phase transformations and corrosion	PS-2.2 - Carbon-based materials and 2D structures	IT-11 - Optical Nanoscopy and Spectral Imaging Techniques	PS-6.1 - Biomaterials, polymers and polymer-based composites	LS-14.1 - Host-Pathogen Interactions, Microbiology & Virology	PS-3.1 - Thin films, coatings and surfaces	PS-13.3 - Physical science applications of in-situ microscopy	LS-9.1 - Applications in Correlative Microscopy of Biological Systems	IT-9.2 - STEM and TEM imaging	IT-13.2 - Spectroscopy – Low energy excitations and ultrafast spectroscopy		
Chairpersons: Tomonobu Nakayama, Alex de Marco & Reynald Gauvin	Chairpersons: Paul Voyles & Amelia Liu	Chairperson: James Howe & Jianqiang Zhang	Chairpersons: Ute Kaiser & Dougal McCulloch	Chairperson: Colin Sheppard	Chairpersons: Cheng Yan & Gurvinder Singh	Chairpersons: Melanie Rug & Salvatore Chiantia	Chairpersons: Xiuliang Ma & Zonghan Xie	Chairpersons: Masaki Takeguchi & Xiaozhou Liao	Chairperson: Yannick Schwab	Chairpersons: Richard Leapman & Peter Nellist	Chairpersons: Odile Stephan & Javier Garcia de Abajo		
10:30	10:30	10:30	10:30	10:30	10:30	10:30	10:30	10:30	10:30	10:30	10:30	10:30	
Invited Speaker Prof Mervyn Miles	267: Correlative analytical transmission electron microscopy applied to the characterization of deformation features in amorphous materials Invited Speaker: Dr Harald Rösner	Invited Speaker Prof Nick Birbilis	Invited Speaker Prof Wu Zhou	Invited Speaker A/Prof Michelle Digman	Invited Speaker Dr Errin Johnson	Invited Speaker Prof Xavier Maeder	Using Sub-Sampling/Inpainting to Control the Kinetics and Observation Efficiency of Dynamic Processes in Liquids Invited Speaker: Prof Nigel Browning	Invited Speaker Dr Gaia Pigino	Invited Speaker Ms Sandra Van Aert	1720: Coherent Ultrafast Transmission Electron Microscopy: Development and Applications Invited Speaker: Mr Armin Feist			
10:45	10:45	10:45	10:45	10:45	10:45	10:45	10:45	10:45	10:45	10:45	10:45	10:45	
809: Combined high-resolution FIB-Nanotomography and 3D-EDS of solid-oxide electrolysis cells Dr Marco Cantoni	1362: Quantitative mapping of the nanoscale strain field in metallic glasses during in situ deformation Dr Christoph Gammer	1427: Correlated in situ ETEM and Multiscale Computational Study of Dynamic Processes Characterizing the Initial Stage of Copper Oxidation Prof Judy Yang	81: Investigation of the Wagonwheel Effect in Graphene via atomic resolution HAADF and EELS Mr Kalani Moore	392: SEM, TEM, STEM and AFM microscopy of the human tooth enamel crystallites Prof José Reyes-Gasga	1470: Quantitative microscopy approaches for the study of the interactions between Influenza matrix protein and host plasma membrane Dr Salvatore Chiantia	1456: Nucleation studies of electrochemically grown metals and compounds on BDD Dr Reza Kashtiban	1586: Assessing the Autophagy Machinery and Cargo using Correlative Light and Electron Microscopy A/Prof Ben Loos	705: Overcoming the chromatic aberration resolution limit by monochromation Dr Andrew L. Bleloch	1171: Hybridization of Surface Plasmon Resonance Modes in Sierpinski Fractal Triangles Ms Isobel C. Bicket				
11:00	11:00	11:00	11:00	11:00	11:00	11:00	11:00	11:00	11:00	11:00	11:00	11:00	
1813: Submolecular resolution imaging with Si cantilever-based atomic force microscopy Invited Speaker: Dr Tomoko Shimizu	936: Medium-range order of amorphous CuZr-crystalline Cu composites studied by correlated HAADF and nano-beam diffraction Dr Martin Peterlechner	1175: In-situ TEM observation of oxidation and radiation damage Mr Yang Yang	1458: Atomic Defects in Graphene and their Role in Proton Transport and Water Desalination Dr Raymond Unocic	745: Spatiotemporal Mapping of DNA Double Strand Break Repair Using Super Resolution Microscopy Dr Donna Whelan	1232: HIV and The Colorectal Mucosa - Investigating the Early Interactions of HIV with Mucosal Target Cells using Highly Multiplexed Microscopy Mr Heeva Baharlou	1350: Investigation of CVD TiCN/Ti-xAlxN multilayer coatings by advanced electron microscopy Mr Mohamed Ben Hassine	1401: Characterization of metastasis related lysosomal subpopulations by correlative live cell- 3D electron microscopy Dr Nalan Liv	466: Advantage of Co/Cs corrected LV-TEM for organic molecular imaging Dr Kaname Yoshida	630: Plasmon field tomography of coupled metallic nanoparticles Dr Georg Haberfehrner				
11:15	11:15	11:15	11:15	11:15	11:15	11:15	11:15	11:15	11:15	11:15	11:15	11:15	
84: HRTEM study of rejuvenation in metallic glasses under cryothermal cycling Dr Iurii Ivanov	469: Characterizing the calcination behaviours of Ni-Fe layered double hydroxide materials via in-situ transmission electron microscopy Mr Christopher Hobbs	421: In Situ Manipulation of Topological Defects in Bilayer Graphene Mr Peter Schweizer	1585: Assessing the Autophagy Machinery and Cargo - A Super-Resolution Approach A/Prof Ben Loos	1322: Super-Resolution Characterization of Microtubule Architecture in Cells Expressing Lyssavirus Phosphoprotein Mr Ashley Rozario	74: STEM-based direct observation of dislocation-pipe diffusion in metal/semiconductor nitride superlattice thin films Dr Magnus Garbrecht	581: Visualized effects of oxidation and temperature on pseudo-single-domain Fe3O4 particles examined by environmental TEM and off-axis electron holography Dr Trevor Almeida	357: ISTEM - Strongly Incoherent Imaging for Ultra-High Resolution TEM Dr Florian F. Krause	568: Nanoplasmonic TEM Sample Design with Full Location- and Chemistry Control A/Prof Michel Bosman					
11:30	11:30	11:30	11:30	11:30	11:30	11:30	11:30	11:30	11:30	11:30	11:30	11:30	
109: Investigation of dislocations by STEM in a scanning electron microscope Miss Cheng Sun	48: Nanoscopic Dynamics in a Supercooled Liquid from Electron Correlation Microscopy Prof Paul Voyles	704: Evidence of sulphur-enriched grain boundaries in a chromia scale Ms Ingrid Mccarroll	1220: Understanding atom-by-atom the dynamics and the properties for the evolution of point and extended defects in single-layer 2H-MoTe2 by Cc/Cs-corrected 40 kV high-resolution TEM Mr Tibor Lehnert	715: Live quantitative BSE acquisition with standard-less calibration Dr Grigore Moldovan	813: Exploring biomineral chemistry at the nanometer scale Dr Marta De Frutos	651: Investigating the role of the different NS3 functional domains in the AHSV infection cycle in mammalian cells. Mrs Linda Ferreira-Venter	781: Inhomogeneous Strain Distribution in Epitaxial SiGe/Si Multilayers Visualized by Dark-field Inline Electron Holography Dr Bumsu Park	1027: Realistic electrochemistry in liquid cell microscopy Dr Daan Hein Alsem	333: Downsampling of STEM images: a study on the effect of electron dose reduction on the quality of 3D reconstructions Dr Sylvain Trepout	385: Self-hybridization within non-Hermitian localized plasmonic systems Mr Hugo Lourenço Martins			
11:45	11:45	11:45	11:45	11:45	11:45	11:45	11:45	11:45	11:45	11:45	11:45	11:45	
1303: Application and prospect of electron-beam-induced current technique: from defect characterization to device diagnosis Invited Speaker: Dr Jun Chen	422: Correlating Structural Heterogeneity to Deformation of Metallic Glasses Using 4-D Scanning Nanodiffraction and Mesoscale Simulation Invited Speaker: Prof Jinwoo Hwang	1278: Interface chemistry and transport in alumina using TEM and APT Invited Speaker: Prof Krystyna Stiller	1501: Functionalization of carbon nanotubes investigated by spatial-resolved EELS Dr Raul Arenal	1189: Comparison of Spectral Imaging Modalities and Quantitative Data Analysis Techniques Dr Tala Kaplinovsky	Invited Speaker Prof Ying Chen	314: Application of FIB-SEM tomography, serial sectioning TEM and STEM tomography gives insight into herpesvirus egress dynamics and the process of secondary envelopment Dr Clarissa Villinger	Invited Speaker Prof Han Huang	253: In-situ E-TEM study of bimetallicTiO2 supported copper-gold nanocatalysts under oxidizing (O2) and reducing (H2) atmosphere Mr Adrian Chmielewski	489: Correlative Strategies for the Identification and Intracellular Localization of Polymer Nanoparticles Dr Ingo Lieberwirth	Invited Speaker Dr Knut Mueller-Caspary	912: Ultrafast Electron Spectroscopy with Slow and Fast Electrons Invited Speaker: Dr Nahid Talebi		
12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00	
12:15	12:15	12:15	12:15	12:15	12:15	12:15	12:15	12:15	12:15	12:15	12:15	12:15	
985: Structural properties of Double Wall Carbon Nanotubes as revealed by TEM Dr Loiseau Annick	407: Microscopy with illumination and detector arrays Prof Colin Sheppard	1703: Tracking bundling of influenza A virus genome segments in infected host cells at single molecule level Prof Dr Andreas Herrmann	229: Wet Etch Dynamics of Silicon Nanopillars Visualized in the TEM Dr Zainul Aabdin	1337: Splenic capture and in vivo subcellular degradation of thin, biological-grade graphene oxide sheets studied by correlative microscopy Dr Eric Prestat									
12:30	12:30	12:30	12:30	12:30	12:30	12:30	12:30	12:30	12:30	12:30	12:30	12:30	
Data-based animations Mr Chris Hammang Effective colour-enhancement strategies for EM images Dr Jenny Whiting Hands-on colouring session – bring your images and laptop	Lunch, Lunch Workshops, Exhibition and Poster Sessions/Viewing Exhibition Hall 2											12:30	

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	Darling Harbour Theatre	Meeting Room C4.1	Meeting Room C4.2	Meeting Room C4.3	Meeting Room C4.4	Meeting Room C4.5	Meeting Room C4.6	Meeting Room C4.7	Meeting Room C4.8	Meeting Room C4.9	Meeting Room C4.10	Meeting Room C4.11			
	IT-10.3 - SEM, FIB, scanning probe and surface microscopy	PS-9.2 - Amorphous and disordered materials, liquid crystals	PS-8.2 - Phase transformations and corrosion	PS-2.3 - Carbon-based materials and 2D structures	LS-11 - Innovations in Light / Laser Microscopy and Optical Nanoscopy	PS-6.2 - Biomaterials, polymers and polymer-based composites	LS-14.2 - Host-Pathogen Interactions, Microbiology & Virology	PS-3.2 - Thin films, coatings and surfaces	FI-2.2- Data Management	LS-9.2 - ApplB38:M39lications in Correlative Microscopy of Biological Systems	IT-9.3 - STEM and TEM imaging	IT-13.3 - Spectroscopy – Low energy excitations and ultrafast spectroscopy			
	Chairpersons: Tomonobu Nakayama, Alex de Marco & Reynald Gauvin	Chairpersons: Paul Voyles & Amelia Liu	Chairperson: James Howe & Jianqiang Zhang	Chairpersons: Ute Kaiser & Dougal McCulloch	Chairpersons: Katharina Gaus & Jan Ellenberg	Chairpersons: Cheng Yan & Hala Zreiqat	Chairpersons: Melanie Rug & Salvatore Chiantia	Chairpersons: Xiuliang Ma & Zonghan Xie	Chairpersons: David Bell & Angus Netting	Chairperson: Yannick Schwab	Chairpersons: Richard Leapman & Peter Nellist	Chairpersons: Odile Stephan & Javier Garcia de Abajo			
14:00	Invited Speaker Mr Milos Toth	1589: Hybrid reverse Monte Carlo modelling of disordered solids using electron microscopy Invited Speaker: Dr Timothy Petersen	Invited Speaker Prof Grace Burke	Invited Speaker A/Prof Pinshane Huang	Invited Speaker Dr Senthil Arumugam	344: Advanced amphiphilic nanobiomaterials for drug delivery: From design to preclinical evaluation Invited Speaker: A/Prof Alejandro Sosnik	Invited Speaker Prof Bruno Humbel	453: Atomic-resolution electron microscopy for aluminum alloys as high-performance industry materials Invited Speaker: Prof Jianghua Chen	287: Designing, Managing and Running a Multipurpose Advanced Materials Characterisation Facility Invited Speaker: Dr Richard Wuhrrer	Invited Speaker Dr Kristina Miceva	Invited Speaker Prof Steven Ludtke	Invited Speaker Prof Philip Batson	14:00		
14:15													14:15		
14:30	460: Development of an Electrostatic Spherical Aberration Corrector dedicated for SEMs Dr Tadahiro Kawasaki	1484: Revisiting EELS investigations and its coupling with Raman spectroscopy: chemical inhomogeneities at the nanoscale of hydrogenated amorphous carbon thin films Dr Raul Arenal	938: Understanding the mechanisms of environmental degradation by high-resolution microscopy Prof Sergio Lozano-Perez	947: Novel bending phenomena in van der Waals materials Dr Aidan Rooney	613: Optical Nanoscopy and Raman Spectroscopy Using an Integrated Photonic Chip Platform Mr David André Coucheron	864: Unraveling the molecular structure of 2D polymers by low-dose diffraction and imaging Dr Haoyuan Qi	1466: Bacterial adhesion at the nanoscale - probing the required cell-surface contact area and role of fibrinogen using a gradient in surface nanotopography Dr Mats Hulander	675: Secrets of plasma deposited polyoxazoline functionality lies in the plasma phase Dr Melanie Macgregor	494: A flagship South African facility for a double Cs-corrected TEM - From management to micrograph Invited Speaker: Prof Johannes Neethling	454: Identifying stem cell phenotypes involved in brain repair using immunocorrelative light electron microscopy methods. Ms Viola Oorschot	211: Extending Geometric Phase Analysis (GPA) to measure elastic stresses and strains across nanocrystals, grain boundaries and heterostructures Dr Martin Hytch	1159: Temperature Measurement by a Nanoscale Electron Probe Using Energy Gain and Loss Spectroscopy Dr Juan Carlos Idrobo	14:30		
14:45	83: Comparison of Secondary Electron Energy Filtering Techniques in Scanning Electron and Ion Beam Microscopy Mr James Mcgladdery	674: Dose limited TEM and STEM characterisation of electron beam sensitive inorganic nanomaterials Mr Rob Hooley		1332: Effects of electron-beam generated lattice defects on the structure of charge density waves in 1T-TaSe ₂ and 1T-TaS ₂ Dr Michael Kinyanjui	Invited Speaker Dr Francisco Balzarotti	Invited Speaker Prof Gangadhara Prusty	28: Nanobody labeling and super resolution gSTED nanoscopy of the bacterial cell division machinery Dr Bill Söderström			22: Processing zebrafish for correlated light and electron microscopy studies Ms Delfine Cheng	180: Composition and Atomic Arrangement of Binary-Element Atom Columns through Analytical Transmission Electron Microscopy Dr Dan Zhou	1038: Momentum-resolved phonon spectroscopy in the transmission electron microscope Dr Fredrik S. Hage	14:45		
15:00	1070: High Aspect Ratio Silicon Nanowires and 3D Nanostructures via Selective Focused Ion Beam Implantation and Wet Etching: Fabrication and Characterization Mr Vivek Garg	965: Following the crystallisation of GeTe nano particles using in-situ HRTEM techniques Dr David Cooper	703: Machine learning methods for EELS spectrum imaging in identifying complex phases in Zr-O system Dr Jing Hu	1465: Atomic defects and exciton physics in transition metal dichalcogenides probed by aberration corrected TEM and EELS Dr Jinhua Hong				324: Correlative TEM and XRD study of the role of Au on the solid state dewetting behavior of Au/Ni bilayers on α -Al ₂ O ₃ Dr Johannes Will			1065: Large area automated image acquisition for integrated CLEM Dr Sangeetha Hari	156: Using fast-readout pixel detectors to overcome the multiple scattering problem in scanning transmission electron microscopy Dr Hamish Brown	968: Screening effects on phonon scattering at interfaces Dr Maureen Joel Lagos	15:00	
15:15	1460: New tools for advance in thermal nanometrology using scanning thermal microscopy Dr Séverine Gomes	641: Probing chemical pathways in polyamide reverse osmosis membranes Dr Catriona Mcdilvery	1245: Anisotropic Evaporation of ZnO Observed by In-situ Cs-Corrected High Resolution Transmission Electron Microscopy Mr Zhen Wang	959: Comparing TEM and resonant Raman spectroscopy for diameter distribution assessment of single wall carbon nanotubes Dr Frederic Fossard	452: Removing physiological motion from intravital and clinical fluorescence imaging data Dr Sean Warren	1435: Crystal Growth of Amorphous Calcium Phosphate to Apatite in Bone-Mimetic Nanocomposites Dr Antiopi Lotsari		1273: Macromolecular dynamics of malaria parasite adhesion Invited Speaker: Dr Matthew Dixon			1153: Automated CLEMing in BioSciences Dr Melanie Rug	136: Measuring Local Electric Fields and Charge Densities using 4D STEM Dr Manveer Munde	655: Nanoscale vibrational spectroscopy of liquid water by monochromated aloof EELS Dr Jacob Jokisaari	15:15	
15:30	Invited Speaker Dr Stefan Zaefferer	Invited Speaker Dr Konstantin Borisenko	Invited Speaker Dr Daniel Schreiber	1502: Patterning Two-dimensional Crystals with Atomic Precision Dr Amin Azizi		Invited Speaker A/Prof Tamar Segal-Peretz	1196: 4D Microscopy of red blood cell membrane biophysics during Plasmodium falciparum invasion Dr Niall Geoghegan				Invited Speaker Dr Heinz Schwarz	426: Correlative workflow for murine pulmonary valve extracellular matrix imaging Prof David McComb	920: Quantification of Pt-based chemotherapeutics using HAADF STEM Ms Alexandra Sheader	640: Aloof beam vibrational EELS: a tool for probing hydrogen/defect heterogeneity in graphitic carbon nitrides Prof Peter Crozier	15:30
15:45				1329: In situ surface termination modification of 2D Ti ₃ C ₂ MXene in an environmental TEM Mr Ingemar Persson			117: 3D Electron Imaging Reveals Structural Development of Malaria Parasites Dr Boyin Liu				1575: Correlative X-ray phase contrast and X-ray fluorescence nanotomography for label-free exploration of tissues, cells and model organisms Dr Alexandra Pacureanu	1253: Analytical 4D STEM with the pnCCD camera Dr Martin Simson	804: Probing Low-energy Hyperbolic Polaritons in Van Der Waals Crystals With An Electron Microscope Mrs Andrea Konecna	15:45	
16:00	Afternoon Tea, Exhibition and Poster Viewing <i>Exhibition Hall 2</i>												16:00		
16:00-19:00	IFSM General Assembly <i>Afternoon tea served in room</i>												16:00-19:00		
16:30-18:00	Dedicated Poster Viewing Session <i>Exhibition Hall 2</i>												16:30-18:00		
19:00-23:00	Congress Dinner <i>Doltone House, Darling Island</i>												19:00-23:00		

FRIDAY 14 SEPTEMBER 2018

7:30	Registration Open <i>Outside Exhibition Hall 2 & Ground Level Foyer, International Convention Centre</i>												7:30
8:30	IFSM Symposium Emeritus Prof. Archie Howie Dr. Christian Colliex Prof. Les J. Allen												8:30
10:30	Morning Tea and Exhibition <i>Exhibition Hall 2</i>												10:30
11:00	IFSM Symposium Dr. Frances Ross Prof. Yuichi Ikuhara Prof. Richard Henderson Prof. Jacques Dubochet Prof. Joachim Frank												11:00
13:00	Closing Awards and Ceremony												13:00
13:40-14:15	AMMS Silver Jubilee Celebration Drinks / Closing Drinks												13:40-14:15