

SATURDAY 8 SEPTEMBER 2018												
9:00-17:00	Pre-Congress Offsite Workshops										9:00-17:00	
19:00-21:30	IFSM Young Scientists Assembly Dinner										19:00-21:30	
SUNDAY 9 SEPTEMBER 2018												
9:00-17:00	IFSM Young Scientists Assembly					Pre-Congress Offsite Workshops						9:00-17:00
14:00-18:00	Registration Open <i>Outside Exhibition Hall 2 &amp; 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 &amp; Ground Level Foyer, International Convention Centre</i>											7:30
8:45	Opening Ceremony Welcome to Country Matthew Doyle of the Muruwari people Official Opening Remarks Dr Alan Finkel AO <i>Darling Harbour Theatre</i>											8:45
9:15	Plenary Lecture <i>Darling Harbour Theatre</i> <b>Prof Dan Shechtman</b> The Discovery of Quasi-Periodic Materials – The Role of TEM											9:15
10:15	Morning Tea, Exhibition and Poster Viewing <i>Exhibition Hall 2</i>											10:15
	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
	PS-5.1 - Ceramics and inorganic composites	PS-4.1 - Metals and alloys	LS-8 - Pathology and Immunocytochemistry & Biomolecular Labeling	PS-1.1 - Nanoscale, nanostructured and porous materials	IT-5.1 - In-situ, environmental and time-resolved microscopies	PS-13.1 - Physical science applications of in-situ microscopy	PS-7.1 - Semiconductors and materials for communication	LS-1.1 - Structure and Function of Cells & Organelles	PS-12.1 - Materials for energy production, storage and catalysis	IT-6.1 - Diffraction techniques	LS-2 - Multiplex Live Imaging of Cells, Tissues & Organisms	IT-1.1 - Instrumentation
	Chairpersons: Yuichi Ikuhara & Peter Crozier	Chairpersons: Xiaodong Han & Jianfeng Nie	Chairpersons: Paul Verkade & Danielle Jorgens	Chairpersons: Frances Ross & Ben Britton	Chairpersons: Patricia Kooyma & Prathiba Gai	Chairpersons: Masaki Takeguchi & Xiaozhou Liao	Chairpersons: David Muller & Jenny Wong-Leung	Chairpersons: Bram Koster & Sharon Grayer Wolf	Chairpersons: Christina Scheu & Paulo Ferreira	Chairpersons: Randi Holmestad & Kenji Tsuda	Chairpersons: Renee Whan & Paul Timpson	Chairpersons: Greg McMullan & Nestor Zaluzec
10:45	761: Enhanced thermoelectric and piezoelectric materials by aberration-corrected STEM <b>Invited Speaker: Prof Stephen Pennycook</b>	Invited Speaker <b>Prof Daniel Gianola</b>	429: Using Fluorescence Multiplexing and Spectral Unmixing to Characterise the Haematopoietic Stem Cell Microenvironment <b>Dr Gavin Tjin</b>	230: Correlative STEM and SEM Imaging of Nanostructured Materials in a Scanning Electron Microscope <b>Invited Speaker: Prof Dagmar Gerthsen</b>	755: Dynamic AC-ETEM observation of deactivation processes of platinum electrode catalysts in a proton exchange membrane fuel cell <b>Invited Speaker: Prof Kenta Yoshida</b>	Invited Speaker <b>Prof Julia R. Greer</b>	910: Understanding electronic and structural properties of III-V nanowires via aberration-corrected/monochromated STEM techniques <b>Dr Reza R. Zamani</b>	Invited Speaker <b>Dr Peijun Zhang</b>	Invited Speaker <b>Prof Barry Carter</b>	1325: Quantitative Convergent-Beam Electron Diffraction - The Nexus Between Electron and Quantum Crystallography <b>Invited Speaker: A/Prof Philip Nakashima</b>	Invited Speaker <b>Dr Teng-Leong Chew</b>	1921: Multi e-Beam Systems for Microscopy and Inspection <b>Invited Speaker: Prof Pieter Kruit</b>
11:00			1239: Immunogold detection of synaptic membrane proteins on grid-glued double replica pairs <b>Dr Jacqueline Montanaro-Punzengruber</b>				1438: Stable Defects in Semiconductor Nanowires <b>Dr Ana M Sanchez</b>					
11:15	1125: Imaging Point Defects in Complex Oxides Using Quantitative STEM <b>Invited Speaker: Prof Susanne Stemmer</b>	878: Automatic Dislocation Imaging in Scanning Electron Microscopy <b>Mr Clement Lafond</b>	Invited Speaker <b>Dr Kent McDonald</b>		1250: Nanoscale liquid phase in situ observations of structural transformations of Au and Au-Cu nanostructures <b>Dr Nabeel Ahmad</b>	1283: Elastic properties of Cerium Oxide nanocubes <b>Prof Karine Masenelli-Varlot</b>	75: Morphology dependent strain relaxation in horizontally grown semiconductor core-shell nanowires and its effect on electronic band alignment <b>Mrs Sara Marti-Sánchez</b>	592: Applications of Microscopy to Biosynthetic systems <b>Mrs Judith Mantell</b>	155: Revealing atomic structure and chemistry of sensitive battery materials and interfaces by cryo-TEM <b>Prof Benjamin Butz</b>	680: Principles and Applications of Scanning Convergent Beam Electron Diffraction (SCBED) for Characterizing Complex, Multi-element Crystals <b>Invited Speaker: Mr Yu-Tsun Shao</b>	Invited Speaker <b>Dr Beth Cimini</b>	691: Revitalizing uncorrected electron microscopes by a low-cost, plug-and-play spherical aberration corrector using a sculpted thin film <b>Mr Peng-Han Lu</b>
11:30		966: Elasto-chemical coupling at coherent interfaces in nano-precipitation strengthened steel revealed by atomic scale correlative microscopy <b>Dr Christian Liebscher</b>		638: Deposit formation in diesel fuel injectors <b>Dr Catriona Mcgilvery</b>	1115: Homoepitaxial growth of 2D titanium carbide MXenes <b>Dr Xiahua Sang</b>	209: In situ straining experiments in iron and iron alloys <b>Dr Daniel Caillard</b>	594: In-situ propagation of metal phases in germanium nanowires observed by transmission electron microscopy <b>Dr Martien Den Hertog</b>	260: Iron visualisation in the human brain with electron microscopy <b>Ms Mariella Sele</b>	1281: Low-dose aberration-free imaging of lithium-rich layered cathodes by electron ptychography in the STEM <b>Dr Juan G Lozano</b>			1454: Low-voltage TEM for quantitative analysis of low-dimensional materials on the atomic level <b>Prof Ute Kaiser</b>
11:45	1467: Elucidating Ion Transport in Lithium-Ion Conductors by Combining Vibrational Spectroscopy in STEM and Neutron Scattering <b>Dr Miaofang Chi</b>	1619: TEM investigation of nanostructured bainite subject to high-strain rate deformations <b>Prof Jer-Ren Yang</b>	708: Multiphotonic Imaging and Bismuth Ferrite Harmonic Nanoparticles (BFO HNP) to assess pre-clinically innovative therapeutic strategies through monitoring engraftment properties of injected cells <b>Dr Laurence Dubreil</b>	Invited Speaker <b>Dr Sophie Primig</b>	279: Direct insight on the dynamical behaviour of cobalt oxide electrocatalysts under operation conditions by electrochemical in situ STEM <b>Miss Nathaly Ortiz Peña</b>	166: Orientation mapping of nanoscale deformation processes using transmission Kikuchi diffraction <b>Mr Glenn Sneddon</b>	952: Towards an in-situ TEM based correlation of structural modifications and switching characteristics in filamentary type HfO <sub>2</sub> -RRAM <b>Mr Alexander Zintler</b>	1085: Structural Exploration of Ex Vivo Erythroblast Differentiation by Serial Block-Face Scanning Electron Microscopy and Electron Spectroscopic Imaging <b>Dr Maria A Aronova</b>	546: Determination of Al location in Ni-rich layered oxide Li-ion cathode by combined atomic resolution X-ray EDS and EELNES <b>Prof Frederic Cosandey</b>	Invited Speaker <b>Mr Robert S. Pennington</b>	1479: Making sense of mitochondria: Novel techniques for measuring dynamics, (dys)function and interaction. <b>Dr Claudette St. Croix</b>	1162: Atomic resolution observation and analysis of carbon materials at low acceleration voltages using aberration corrected microscope with cold field emission gun <b>Mr Hiroki Hashiguchi</b>
12:00	135: Chemical Analysis of Elemental Excess and Depletion at Grain Boundaries of Ba(Ce,Zr,Y)O <sub>3-δ</sub> Proton Conductors <b>Dr Dan Zhou</b>	1577: Characterization of helium and tritium filled bubbles in irradiated beryllium <b>Dr Michael Klimenkov</b>	774: Wide-area correlative light and electron microscopy (CLEM) applied to routinely prepared human pathology samples <b>A/Prof Murray Killingsworth</b>		1109: TEM Mechanical Testing in Liquid with Temperature Control <b>Dr Katherine Jungjohann</b>	526: In-situ Nanoscale Characterization of Catalytic Reactions Promoted by Localized Surface Plasmon Resonance Energy <b>Dr Renu Sharma</b>	1373: The Microstructure Observation of Brownian Motion in Thin Film as the Resistive Switching Memory with Ex-situ & In-situ TEM Research <b>Mr Hyoung Gyun Kim</b>	1210: Correlative Scanning Electron Microscopy (SEM)-Fluorescence Microscopy reveals the organisation of the red blood cell membrane skeleton in healthy and diseased states <b>Dr Adam Blanch</b>	871: Transmission Electron Microscopy Study of Layered Oxides <b>Mr Jiayu Liu</b>		863: Intravital optical window imaging of RhoA-, Rac1- and Akt-FRET biosensor mice monitoring drug treatment response in cancer. <b>Dr Max Nobis</b>	398: Ways and means, past, present and future, of open aperture ESTEM for atom-by-atom gas reaction catalyst research <b>Prof Edward Boyes</b>
12:15	248: Direct observation of element distribution across ionic oxide grain boundaries using atomic-resolution STEM-EDS <b>Dr Bin Feng</b>	1567: EBSD study on the recrystallization behaviour of the nickel-base superalloy Rene 65 <b>Mr Tomasz Wojcik</b>	Invited Speaker <b>Dr Thomas Sharp</b>	259: Advanced 3D Characterization of Semiconductor Devices: Hybrid Metrology Correlating STEM-EDXS and Atom Probe Tomography <b>Dr Paromita Kundu</b>	382: In-situ visualisation and analysis of single atom dynamics in chemical reactions by novel E(S)TEM <b>Prof Prathiba Gai</b>	649: Probing the surfaces of nanostructures under reactive environments <b>Dr Thomas Willum Hansen</b>	659: Aberration-Corrected STEM Imaging of Compound Semiconductors <b>Prof David J. Smith</b>	1242: New live imaging combined 3D-CLEM revealed a quick response of mitochondrial transformation from tubular to a globular form after loss of membrane potential <b>A/Prof Kaisu Ohta</b>	1247: Structural evolution of the LiNi <sub>0.9</sub> Mn <sub>1.0</sub> O <sub>4</sub> cathode material upon ex-situ and in-situ cycling by (S)TEM <b>Ms Elizaveta Tyukalova</b>	1051: Quantitative analysis of precipitate crystal structure evolution in Al-Mg-Si-Cu alloys using scanning precession electron diffraction <b>Mr Jonas Kristoffer Sunde</b>	567: Anionic Ultrasmall Quantum Dots for Long-term Intravital Vascular Imaging <b>Dr Xiaowen Liang</b>	1089: Monochromator and spectrometer design for ultra-high energy resolution EELS <b>Prof Ondrej L. Krivanek</b>
12:30	1020: Linking Macroscopic and Nanoscopic Ionic Conductivity: A New Paradigm for Characterizing Grain Boundary Conductivity in Polycrystalline Ceramics <b>Prof Peter A. Crozier</b>	1419: Transmission electron microscopy of the Fe-Al-Ti-B alloys with additions of Mo <b>Dr Darja Jenko</b>		1320: Identifying nucleation and growth mechanisms in nano-grained polycrystalline thin films <b>Dr Duncan T. L. Alexander</b>	927: The development of reproducible in situ electrical biasing of semiconductor materials using piezo-controlled electrical contacts and chip based systems. <b>Dr David Cooper</b>	1121: In situ observation of crystallization of materials with high solubilities <b>Dr Tomoya Yamazaki</b>	1049: Se-doped antimony telluride: Se sites position determination <b>Dr Alexander Meledin</b>	1630: Identification of nuclear lipid islet and their contribution to efficient RNA polymeraseII-dependent transcription <b>Prof Dr Pavel Hozak</b>	1512: Anisotropy of lithium K edge in LiCoO <sub>2</sub> studied by EELS <b>Dr Jun Kikkawa</b>	1420: Looking for the Potential in Digital Large Angle Electron Diffraction Patterns <b>Dr Richard Beanland</b>	758: Intravital single molecule microscopy for studying nanoscale actin cytoskeleton organisation and dynamics <b>Mr Marco Heydecker</b>	113: Development of a high brightness ultrafast Transmission Electron Microscope based on a laser-driven cold field emission source <b>Dr Florent Houdellier</b>
12:45		Myscope - Online Microscopy Workshops Session one - 12:45 - 1:15 Session two - 1:15 - 1:45										
	Lunch, Lunch Workshops, Exhibition and Poster Sessions/Viewing <i>Exhibition Hall 2</i>											12:45

MONDAY 10 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	
	PS-13.2 - Physical science applications of in-situ microscopy	PS-4.2 - Metals and alloys	LS-4 - Atomic Force Microscopy in Molecular and Cell Biology	IT-5.2 - In-situ, environmental and time-resolved microscopies	PS-1.2 - Nanoscale, nanostructured and porous materials	PS-5.2 - Ceramics and inorganic composites	PS-7.2 - Semiconductors and materials for communication	LS-1.2 - Structure and Function of Cells & Organelles	PS-12.2 - Materials for energy production, storage and catalysis	IT-6.2 - Diffraction techniques	IT-8.1 - Phase-related techniques	IT-1.2 - Instrumentation	
	Chairpersons: Masaki Takeguchi & Xiaozhou Liao	Chairpersons: Xiaodong Han & Jianfeng Nie	Chairpersons: Yves Dufrene & Peter Hinterdorfer	Chairpersons: Patricia Kooyman & Pratibha Gai	Chairpersons: Frances Ross & Ben Britton	Chairpersons: Yuichi Ikuhara & Peter Crozier	Chairpersons: David Muller & Jenny Wong-Leung	Chairpersons: Bram Koster & Sharon Gray Wolf	Chairpersons: Christina Scheu & Paulo Ferreira	Chairpersons: Randi Holmestad & Kenji Tsuda	Chairpersons: Etienne Snoeck & Nobuo Tanaka	Chairpersons: Greg McMullan & Nestor Zaluzec	
14:00	26: In situ TEM for inorganic nanomaterial property analysis <b>Invited Speaker: Prof Dmitri Golberg</b>	Invited Speaker <b>Dr Xiaoxu Huang</b>	Invited Speaker <b>Prof Toshio Ando</b>	Invited Speaker <b>Dr Marc Willinger</b>	Invited Speaker <b>Prof N. Ravishankar</b>	1236: A study of fission product migration paths in irradiated TRISO particle SiC <b>Dr Jaco Olivier</b>	1794: STEM-Cathodoluminescence for semi-conductors <b>Invited Speaker: Prof Mathieu Kociak</b>	91: The interplay between endoplasmic structure, dynamics and functions <b>Invited Speaker: Dr Eija Jokitalo</b>	1596: Development of photo(opto)-acoustic based microscopy for in vivo and in vitro studies of biological systems <b>Invited Speaker: Dr Elena Tchernychova</b>	Invited Speaker <b>Prof Xiaodong Zou</b>	1235: Advances in electromagnetic field observations using high-voltage electron holography <b>Invited Speaker: Dr Toshiaki Tanigaki</b>	Invited Speaker <b>A/Prof Benjamin McMorran</b>	14:00
14:15						846: Nanostructural characterization of superconductor joint between GdBa2Cu3Oy coated conductors <b>Dr Takeharu Kato</b>							14:15
14:30	520: In-situ Transmission Electron Microscopy Investigation of Ferroelectric Domain Switching <b>Invited Speaker: Dr Zibin Chen</b>	1369: Deformation mechanisms during plane strain compression of 17%Mn steel <b>Dr Azdiar Gazder</b>	Invited Speaker <b>Dr Felix Rico</b>	812: From In-Situ Surface Observation to Post-Test Sub-surface Microstructure and Chemical Analyses: Oxidation of Coated SOFC Steel <b>Mr Stéphane Poitel</b>	1374: Direct visualization of selective indium incorporation in InGaN/GaN core-shell nanorods using scanning transmission electron microscopy cathodoluminescence <b>Dr Gordon Schmidt</b>	964: Atomic scale characterisation of A-site deficient thermoelectric perovskites using high spatial and energy resolution EELS <b>Dr Demie Kepaptsoglou</b>	819: Fabrication and Tuning of Photonic Crystal Cavities in Hexagonal Boron Nitride by Electron Beam Induced Etching <b>Mr Johannes Froech</b>	1117: Non-thermal Effects of Microwaves on Fixation of Biological Samples <b>Mr Richard Webb</b>		Invited Speaker <b>Dr Marie-Ingrid Richard</b>	Invited Speaker <b>Prof Christoph Koch</b>	980: The role of spatial coherence for the creation of atom size electron vortex beams <b>Mr Sebastian Schneider</b>	14:30
14:45		1326: CHORD, an alternative method for orientation mapping: new features for phase discrimination <b>Mr Lafond Clement</b>		815: Nanowires growth in FIB-SEM reactor <b>Mr Libor Novak</b>	808: Initial Growth of Au Nanoparticles Investigated by Multimode Electron Tomography <b>Prof Sara Bals</b>	558: Dynamic behavior and atomic structure of twinning dislocations in sapphire <b>Dr Eita Tochigi</b>	1222: Cathodoluminescence study of stacking faults and dislocations in bulk GaN <b>Dr Wei Yi</b>					803: Introducing The 3D Leaf Cell <b>Mr Richard Harwood</b>	1187: Observing the Lithiation of MoS2 <b>Dr Shalini Tripathi</b>
15:00	195: Real-time observation of solid state electrochemical processes at atomic scale by in-situ TEM <b>Prof Xuedong Bai</b>	1300: Radiation induced recrystallization mechanism revealed by PED analysis in CrFeCoNiCu high entropy alloy <b>Dr Hye Jung Chang</b>	1519: Innovative experimental protocol based on the Atomic Force Microscope for probing the mechanical properties of cell membranes <b>Mr Anh Dung Nguyen</b>	1335: In-situ study on the Mechanical Properties of 3D Printed Nanoprobes for High Resolution Scanning Thermal Microscopy <b>Mr Johannes Froech</b>	182: Automated quantification of 2D and 3D STEM spectrum image data including thousands of nanoparticles <b>Mr Yi-Chi Wang</b>	358: Advances towards investigating electronic and optical transformation of La2CoMnO6 <b>Mr Wolfgang Wallisch</b>	1366: Investigation of GaN/AlN Quantum Dot Formation using Nanoscale Cathodoluminescence Microscopy <b>Dr Gordon Schmidt</b>	298: 3D imaging of microvessels as a tool to evaluate angiogenesis in prostate cancer <b>Dr Tzipi Hyams</b>	457: Nanoscale Dynamics of Electrochemical Sodiation of CF <sub>x</sub> Unveiled by in-situ TEM: A Comparative Study with Lithiation <b>Dr Jian Lin Wang</b>	797: Towards diffract-and-destroy electron crystallography: ab-initio structure determination of the pharmaceutical co-crystal Sofosbuvir-L-proline from single nanocrystals <b>Dr Petr Brazda</b>	1314: High resolution phase-shifting holography <b>Dr Chris Boothroyd</b>	1029: Measurement of the electron source brightness and the illumination semi-angle distribution in a transmission electron microscope <b>Dr Felix Börrnert</b>	15:00
15:15	1393: Operando TEM observation of lithium ion battery <b>Prof Yoshitumi Oshima</b>	1221: Nanoscale characterization of β* and Cu containing precipitates in a Cu added Al-Mg-Si alloy <b>Mr Takuya Maeda</b>	1524: Force Spectroscopy and High-Speed Bio-AFM reveal Dynamic and Nano-Mechanical Properties of Antibodies <b>Prof Peter Hinterdorfer</b>	900: Recent trends in in-situ heating in SEM and FIB/SEM systems. <b>Dr Petr Wandrol</b>	477: In situ electron microscopy of bio-nano interfaces <b>Miss Martha Ilett</b>	717: Momentum transfer resolved EELS study of anisotropic carrier plasmon in Cs0.33WO3 <b>Dr Yohei Sato</b>	1406: Low-kV EELS band gap measurements on indium monolayer structures in ZnO <b>Mr Thomas Aarholt</b>	337: EM observations on the 3-D structure of giant mitochondria in human non-alcoholic fatty liver disease (NAFLD) <b>Mr Gerry Shami</b>	1102: Probing the local electronic configurations in original tubular thermoelectric cobaltites <b>Dr Laura Bocher</b>	847: Local structure and dynamics of colloidal glasses probed with scanning small angle x-ray scattering <b>Dr Amelia Liu</b>	570: Optimized acquisition of off-axis holograms by dynamic computer control of the electron microscope <b>Dr Christophe Gatel</b>	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 <b>Dr Takeshi Kawasaki</b>	15:15
15:30	440: Surface-coating Mediated Electro-Chemical Performance in CuO-based Sodium Ion Batteries <b>Prof Jianbo Wang</b>	1058: Co-precipitation in a Si-containing 7xxx type Aluminium alloy <b>Prof Randi Holmestad</b>	1440: Investigation of bacterial adhesion mediated by a curli amyloid binding network using AFM. <b>Dr Yoojin Oh</b>	1494: Recording the composition and structure of the seed particle during growth of GaAs nanowires by in-situ TEM <b>Prof Reine Wallenberg</b>	105: Atomic resolution STEM imaging of organic surfactant molecules on CeO <sub>2</sub> nanocrystals <b>Mr Xiaodong Hao</b>	High-resolution Electron Energy Loss Spectroscopy of Functional Oxides <b>Invited Speaker: Prof Gianluigi Botton</b>	1292: Structural and spectroscopic characterisation of heterostructures for semiconductor spintronics applications <b>Dr Viado Lazarov</b>	1166: Quantitative analysis of morphological feature of cell nuclei in Cerebellum cortex using Array Tomography and Deep Learning <b>Dr Mitsuo Suga</b>	881: Understanding High Performance in Half-Heusler Thermoelectrics With Complementary Atom Probe Tomography and STEM-EELS <b>Dr John Halpin</b>	939: Mapping electromagnetic and strain fields by precession electron diffraction. <b>Dr David Cooper</b>	769: High Precision Phase-Shifting Electron Holography with Multiple Biprisms for GaN Semiconductors <b>Dr Kazuo Yamamoto</b>	955: Ultra fast direct electron detection for use in ptychography with (S)TEM <b>Prof Lothar Strueder</b>	15:30
15:45	1036: In-situ transmission electron microscopy on reversible lithium loading of bilayer graphene <b>Dr Felix Börrnert</b>	954: Advanced Analytical TEM Characterisation of Irradiation-Induced Nano-Scale Features in Low-Alloy Steel <b>Mr Alexander Carruthers</b>	1592: Bacterial biofilms: force matters! <b>Prof Yves Dufrene</b>	1308: Atoms in Motion: Electron Beam Driven Dynamics in Experiment and Simulation <b>Mr Daniel Knez</b>	1002: Self-assembled Nanoscale Modification of Metal and Metal-Oxide interfaces: Electron Microscopy and In-situ XRD study <b>Prof Satyam Parlapalli</b>		960: Morphological and optical variations induced by p-n dopants in Ga <sub>0.9</sub> In <sub>0.1-x</sub> P nanowires homojunctions monolithically integrated on Si (111) for photovoltaic applications <b>Mr Nicolas Bologna</b>	1475: Helium Ion Microscopy for Cells and Tissues <b>Dr John Notte</b>	607: Precipitation in the van der Waals gaps by adding transition metals to thermoelectric BiSbTe <b>Dr Hye Jung Chang</b>	1507: Nano-scale local structural study of BaTiO <sub>3</sub> using STEM-CBED with a fast pixelated STEM detector <b>Prof Kenji Tsuda</b>	768: 4D STEM Holography with an Amplitude-Division Diffraction Grating <b>Mr Fehmi Yasin</b>	1052: A high speed pixelated electron detector enabling <14 microsecond scanning diffraction readout and online data reconstruction <b>Dr Jim Ciston</b>	15:45
16:00	Afternoon Tea, Exhibition and Poster Viewing <i>Exhibition Hall 2</i>												16:00
16:30 - 18:00	Dedicated Poster Viewing Session <i>Exhibition Hall 2</i>												16:30 - 18:00
16:30 - 18:30	IMC20 Public Bid Presentation <i>Darling Harbour Theatre</i>												16:30 - 18:30

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 The Light Years: Combined optical and environmental electron microscopy to visualize photonic processes with atomic-scale resolution												
Morning Tea, Exhibition and Poster Viewing Exhibition Hall 2												
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LS-3.1 - 3-D Structures of Macromolecules & Supramolecular Assemblies	IT-7.1 - Multi-scale 3D imaging	IT-12.1 - Spectroscopy – High energy excitations and local chemical analysis	IT-5.3 - In-situ, environmental and time-resolved microscopies	PS-1.3 - Nanoscale, nanostructured and porous materials	PS-5.3 - Ceramics and inorganic composites	PS-7.3 - Semiconductors and materials for communication	PS-4.3 - Metals and alloys	PS-12.3 - Materials for energy production, storage and catalysis	IT-4 - Cryo-TEM techniques for biological material	IT-8.2 - Phase-related techniques	IT-1.3 – Instrumentation	
Chairpersons: Eric Hanssen & Gabriel Lander	Chairpersons: Paul Matsudaira & Sara Bals	Chairpersons: Gianluigi Botton & Gerald Kothleitner	Chairpersons: Patricia Kooymann & Prathiba Gai	Chairpersons: Frances Ross & Ben Britton	Chairpersons: Yuichi Ikuhara & Peter Crozier	Chairpersons: David Muller & Jenny Wong-Leung	Chairpersons: Xiaodong Han & Jianfeng Nie	Chairpersons: Christina Scheu & Paulo Ferreira	Chairpersons: Christopher Russo & Sara Sandin	Chairpersons: Etienne Snoeck & Nobuo Tanaka	Chairpersons: Greg McMullan & Nestor Zaluzec	
10:30	916: Observing catalyst structures and dynamics at atomic resolution <b>Prof Fu-Rong Chen</b>	Invited Speaker <b>Dr Marta Rossell</b>	1511: Probing Materials Functionality: Opportunities for In Situ Electron Microscopy <b>Invited Speaker: Prof Peter Crozier</b>	Invited Speaker <b>Dr Amy Gandy</b>	687: Direct electromagnetic field imaging of materials by advanced differential phase contrast STEM <b>Invited Speaker: Prof Naoya Shibata</b>	1538: New views of III-nitride wide band gap semiconductors enabled by advances in STEM imaging <b>Invited Speaker: Prof James Lebeau</b>	<b>Invited Speaker: Xiuliang Ma</b>	Invited Speaker <b>Dr Patricia Abellan</b>	Invited Speakers <b>Dr Nigel Unwin</b>	833: Exploring the inelastic interaction between phase-shaped electron beams and plasmonic resonances <b>Invited Speaker: Prof Jo Verbeeck</b>	Invited Speaker <b>Dr Si Chen</b>	
10:45	1415: Three-dimensional observation of dislocations in ferromagnetic iron using magnetic-field-free electron tomography <b>Prof Satoshi Hata</b>											
11:00	1544: Cryo-EM structure of the Triclosan efflux pump TriABx <sub>C</sub> of <i>Pseudomonas Aeruginosa</i> <b>Dr Isabelle Rouiller</b>	Invited Speaker <b>Prof Alfons Van Blaaderen</b>	479: High Spatial Resolution X-ray Microanalysis of Soft-Matter in the AEM <b>Dr Nestor Zaluzec</b>	133: Low-dose cryogenic O <sub>2</sub> and H <sub>2</sub> O mapping in organic photovoltaics <b>Mr Zino Leijten</b>	1064: Understanding flow and diffusion in porous networks combining electron tomography and pore-scale simulations <b>Dr Christian Kübel</b>	322: Identification of Rapid Oxygen Exchange through Site-Dependent Cationic Displacements on CeO <sub>2</sub> Nanoparticles <b>Mr Ethan Lawrence</b>	80: Novel method for strain measurements: moiré based technique by specimen design <b>Dr Nikolay Cherkashin</b>	688: Applications of HAADF-STEM and EDS-STEM techniques in Mg-Sn and Mg-Sn-Zn alloy <b>Mr Chaoqiang Liu</b>	509: Plasmonic nanowire arrays as a platform for photocatalytic testing <b>Prof Rik Drummond-Brydson</b>	62: Cryo-electron microscope developed for simultaneous STEM, SEM imaging and its application to biological samples <b>Prof Jiro Usukura</b>	700: Dynamic electron wavefront shaping by structured electrostatic fields: Twisted electrons with tunable orbital angular momentum <b>Mr Peng-Han Lu</b>	208: See the world with new eyes - Micro X-ray Fluorescence <b>Mr Samuel Scheller</b>
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 <b>Dr Andreas Schenk</b>		354: Analytical and imaging improvements with recent FEG microprobe <b>Mr Jean-Louis Longuet</b>	711: In-situ gas reaction of thicker materials in environmental HVEM <b>Prof Nobuo Tanaka</b>	12: Contribution of electron microscopy to study the nanoscale and porous organization of self-assembled gelled oil materials <b>Dr Sophie Franceschi</b>	60: Atomic and Electronic Structures of the (111) Diamond/Cubic Boron Nitride Interface <b>Prof Chunlin Chen</b>	1284: Composition and strain measurement in III-V semiconductor using convergent-beam electron diffraction <b>Dr Yueming Guo</b>	892: In-situ TEM Study of Dislocation Plasticity of a Single Crystal FeCoCrMnNi HEA <b>Prof Gerhard Dehm</b>	Invited Speaker <b>Prof Eric Stach</b>	205: Comparison of Hole-Free Phase Plates and Electrostatic Zach Phase Plates for Cryo-Electron Microscopy of Biological Specimens <b>Mr Martin Obermair</b>	1055: Toward a programmable phase plates for electrons <b>Dr Vincenzo Grillo</b>	1211: Combined Hyperspectral Soft X-ray and Hyperspectral Cathodoluminescence study of an Ureilite <b>Dr Nick Wilson</b>
11:30	311: CryoEM study of a bacterial multidrug efflux pump involved in antibiotic resistance <b>Dr Olivier Lambert</b>	7: Examination of strain evolution in compressed micropillars by HR-EBSD <b>Dr Szilvia Kalácska</b>	738: Comparison of electron and X-ray microscopies for characterizing perfluorosulfonic acid ionomer for fuel cell applications <b>Miss Lis Melo</b>	1199: PCM Materials & Devices: High Speed and Low-dose TEM Imaging <b>Dr Shalini Tripathi</b>	1157: Structural Study of Hyperbolic Surface Structures by Electron Microscopy <b>Dr Lu Han</b>	1113: Study of Order-Disorder Transformations in Yttria-Rich Tantalate Using Transmission Electron Microscopy <b>Dr Daesung Park</b>	950: Combining TEM and 3D scanning spreading resistance microscopy, a hybrid approach, to the analysis of Ge gate-all-around nano-wires <b>Dr Paola Favia</b>	597: Interface effects of nanolayered metallic composites <b>Prof Shijian Zheng</b>		293: Direct observation of three-dimensional ferritin crystallization with molecular resolution <b>Mr Lothar Houben</b>	1061: Atomic-Sized Electron Probes with Selectable Orbital Angular Momentum <b>Dr Jordan Hachtel</b>	286: New WDS Technology, modification of a WDS to a SD-WDS for more reliable results and where to next ? <b>Dr Richard Wuhrer</b>
11:45	276: Cryo-Electron Microscopy Investigations of Seneca Valley Virus <b>Dr Mihnea Bostina</b>	299: Accessing the 3D microstructure of complex geometric, biological structures using electron tomography and nano X-ray tomography <b>Dr Benjamin Apele Zubiri</b>	1068: STEM-EELS studies of defects and their evolution in the BaTi <sub>8</sub> O <sub>16</sub> hollandite system <b>Dr John Halpin</b>	247: In-situ chemical analysis using EELS measurements with single nanosecond electron pulses <b>Dr Thomas Lagrange</b>	173: Measurement of local crystal lattice strain variations in dealloyed nanoporous gold <b>Mr Christoph Mahr</b>	1339: The Growth of Super-Tetragonal Phase in BiFeO <sub>3</sub> on LaAlO <sub>3</sub> Substrate through Designer Defects <b>Dr Xuan Cheng</b>	650: Free-standing semiconductor nanostructures at atomic scale: from growth mechanisms to local properties at the nanoscale <b>Prof Jordi Arbiol</b>	928: Quantitative study of plastic deformation in aluminum using EBSD, TKD, and PED-based orientation imaging techniques <b>Mr Paul Fischione</b>	1352: Atomic surface structure of Mn <sub>3</sub> O <sub>4</sub> nanoparticle and origin of its high activity in oxygen evolution reaction <b>Dr Sangmoon Yoon</b>	348: Shrinkage of freeze-dried cryosections of cells : investigations by EFTEM and Cryo-CLEM <b>Prof Jean Michel</b>	1398: Measuring the orbital angular momentum spectrum of electron beams using a Dammann vortex grating <b>Prof Koh Saitoh</b>	112: Evaluation of TES microcalorimeter EDS for low-concentration phosphorus detection in steels <b>Ms Keiko Yamada</b>
12:00	782: Electron microscopy - powerful tool to study the 3D structure of human myeloma IgG subclasses. <b>Dr Sergey Ryazantsev</b>	114: Multiscale tomography on all-ceramic solid oxide fuel cells <b>Dr Matthias Meffert</b>	423: Soft X-ray transmission X-ray microscopy - fuel cell and magnetotactic bacteria applications <b>Invited Speaker: Prof Adam Hitchcock</b>	1334: The impact of the electron dose rate and temperature-dependent radiolysis products on the growth and dissolution of metal nanoparticles in LTEM <b>A/Prof Sašo Šturm</b>	1133: In situ edge engineering of two-dimensional transition metal dichalcogenides <b>Dr Raymond Unocic</b>	77: Nanoindentation-induced phase transformation between SiC polymorphs <b>Dr Tingting Yao</b>	303: In situ phase-shifting electron holography for precise measurement of electric potential, field, and charge density distributions across a biased p-n junction <b>Dr Satoshi Anada</b>	1289: Atom Probe Tomography Investigations of Oxygen/Nitrogen additions to Aerospace Ti-alloys <b>Dr Paul Alexander John Bagot</b>	37: Designing catalysts in the atomic scale - correlating the structure and catalytic activity <b>Prof Maya Bar Sadan</b>	1493: Cryo-FIB-Lift-out for Biological imaging - The impossible made 'merely difficult' <b>Dr Chris Parmenter</b>	390: Theoretical and numerical study of the interaction between phase-shaped electrons and plasmonic modes <b>Mr Hugo Lourenço Martins</b>	915: In Situ TEM: The Performance of EDXS at Elevated Sample Temperatures <b>Mr Robert Krisper</b>
12:15	1168: Chilling the courier: How cryo-EM can be used to improve therapeutic nano-delivery systems <b>Mr Lou Brillault</b>			158: Revealing nanoscale passivation and corrosion mechanisms of highly reactive Li metal by environmental TEM <b>Prof Benjamin Butz</b>	1471: Crystallography, Electron Microscopy and Functional Evolution of Atomically Thin Confined Nanowires <b>Dr Jeremy Sloan</b>	857: Structural relaxation and oxygen vacancies in Ca and Y co-doped bismuth iron garnet thin films <b>Mr Adrien Teurtre</b>	869: Insight in Mg dopant incorporation in GaN by atom probe tomography and off-axis electron holography <b>Miss Lynda Amichi</b>	668: Quantification of precipitate hardening of slip and twinning in Mg-5Zn using micro-pillar compression <b>A/Prof Nicole Stanford</b>	381: Transmission electron microscopy study of carbon/metal oxide hybrid materials for Energy Storage Application <b>Ms Anna Frank</b>	601: Design of phase plate for high contrast imaging in phase plate scanning transmission electron microscopy <b>Prof Hiroki Minoda</b>	257: A Standard Protocol and Specimen for Measuring the Effective Solid Angle of X-ray Detectors in the Analytical Electron Microscope <b>Dr Nestor Zaluzec</b>	
12:30		<b>Myscope - Online Microscopy Workshops</b> Session one - 12:45 - 1:15 Session two - 1:15 - 1:45										
Lunch, Lunch Workshops, Exhibition and Poster Sessions/Viewing Exhibition Hall 2												

**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	
	IT-7.2 - Multi-scale 3D imaging	IT-5.4 - In-situ, environmental and time-resolved microscopies	IT-12.2 - Spectroscopy – High energy excitations and local chemical analysis	LS-3.2 - 3-D Structures of Macromolecules & Supramolecular Assemblies	PS-1.4 - Nanoscale, nanostructured and porous materials	PS-4.4 - Metals and alloys	PS-10.1 - Magnetic, ferroelectric and multiferroic materials	LS-5 - Cellular Transport & Dynamics	PS-12.4 - Materials for energy production, storage and catalysis	LS-6 - Applications of Cryo Electron Microscopy in Biology	IT-8.3 - Phase-related techniques	IT-1.4 – Instrumentation	
	Chairpersons: Paul Matsudaira & Sara Bals	Chairpersons: Patricia Kooymán & Prathiba Gai	Chairpersons: Gianluigi Botton & Gerald Kotheleitner	Chairpersons: Eric Hanssen & Gabriel Lander	Chairpersons: Frances Ross & Ben Britton	Chairpersons: Xiaodong Han & Jianfeng Nie	Chairpersons: Shujun Zhang & Laura Bocher	Chairpersons: Rob Parton & Georg Ramm	Chairpersons: Christina Scheu & Paulo Ferreira	Chairpersons: Thomas Mueller-Reichert & Michel Steinmetz	Chairpersons: Etienne Snoeck & Nobuo Tanaka	Chairpersons: Greg McMullan & Nestor Zaluzec	
14:00	727: Multiscale 3-D Imaging Techniques Based on Focused Electron Probes with Applications to Biological Systems <b>Invited Speaker: Dr Richard Leapman</b>	369: Imaging Coherent Structural Dynamics with Ultrafast Electron Microscopy <b>Invited Speaker: A/Prof David Flannigan</b>	Invited Speaker <b>Dr Demie Kepaptsoglou</b>	Invited Speaker <b>Prof Jose Rodriguez</b>	484: Study of structural distortions in Eshelby twisted InP nanowires by precession electron diffraction <b>Prof Daniel Ugarte</b>	126: Interfaces and defects: their role during precipitation in Al-Ag alloys <b>Mr Zezhong Zhang</b>	574: Magnetic transition in temperature: inhomogeneities revealed by electron holography at the nanometer scale <b>Invited Speaker: Mr Christophe Gatel</b>	Invited Speaker <b>Prof Jennifer Stow</b>	1010: In situ Scanning Transmission Electron Microscopy with Atomic Resolution under Atmospheric Pressures <b>Invited Speaker: Prof Xiaoping Pan</b>	Invited Speaker <b>Prof Peter Peters</b>	969: In situ Observation of Lithiation of Ge Nanowires using Electron Holography <b>Prof Molly Mccartney</b>	Invited Speaker <b>Dr Damien Mcgrouther</b>	14:00
14:15					904: Microstructure evolution in nanotwinned copper under mechanical deformation <b>Prof Kui Du</b>	506: Ultrafine-grained multi-phase medium-Mn advanced high strength steels <b>Prof James Wittig</b>					1268: In-situ TEM Electrical Biasing of LAO/STO Interface-Devices Revealing Charge Modulation and Associated Structural and Chemical Changes <b>Mr Jinsol Seo</b>		14:15
14:30	366: Forward Models for 3D Materials Characterization by SEM and TEM Modalities <b>Invited Speaker: Prof Marc Degraef</b>	240: Gaseous Environmental TEM: a complementary study of nanocatalysts using a combined dedicated ETEM vs E-cell approach <b>Dr Thierry Epicier</b>	712: Direct observation of hole in cuprate superconductor using STEM-EELS <b>Dr Mitsutaka Haruta</b>	1131: Structure and function of the proteasome activator PA28 of the malaria parasite Plasmodium falciparum <b>A/Prof Eric Hanssen</b>	1071: New modes of imaging for in situ TEM nanomechanical testing <b>Invited Speaker: Prof Andrew Minor</b>	676: In situ and post mortem TEM characterization of creep deformation micromechanisms in the AD730 superalloy: influence of the stress level and grain size. <b>Prof Florence Pettinari-Sturmel</b>	1380: Direct observation of magnetic domain dynamics in Z-type cobalt hexaferrite <b>Dr Kyung Song</b>	Invited Speaker <b>Dr Kate Mearthar</b>	68: Differentiating the structures of PNi octahedral nanoparticles through combined ADF and EDX simulations <b>Dr Katherine Macarthur</b>	Invited Speaker <b>Prof Masahide Kikkawa</b>	500: Electron Holographic Measurement of the Three-Dimensional Electrostatic Potential Distribution of a Flat Capacitor <b>Mr Tolga Wagner</b>	624: Compressed sensing and other beam strategies to reduce electron dose in (S)TEM <b>Dr Armand Béché</b>	14:30
14:45		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 <b>Prof Shunsuke Muto</b>	845: Atomic scale charge compensation mechanism in Ca and Y co-doped bismuth iron garnet thin films <b>Mr Adrien Teurtre</b>	313: Local Resolution in cryo Electron Microscopy: Adding directionality <b>Prof Jose-Maria Carazo</b>		736: A novel design of hot rolled Al-Cu alloy through ordered L12 precipitates by minor addition of Nb and Zr <b>Prof Kamanio Chattopadhyay</b>					177: Time resolved Lorentz-TEM measurements of topological skyrmion decay in Fe <sub>0.5</sub> Co <sub>0.5</sub> Si <b>Mr Simon Pöllath</b>	660: Quantitative STEM of Catalyst Nanoparticles with Simultaneous ADF Imaging and Spectroscopy <b>Prof Peter Nellist</b>	153: Electron holography using femtosecond electron pulses <b>Dr Arnaud Arbouet</b>
15:00	1309: 3D Reconstruction of Magnetic Textures in Nanomagnets by Electron Holographic Tomography <b>Dr Axel Lubk</b>	1356: Single-shot three-dimensional electron imaging for in-situ dynamics <b>Dr Emad Oveisi</b>	121: Atomic resolution spatially-resolved inversion parameter in spinel oxides <b>Mr Pau Torruella Besa</b>	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. <b>Dr Wilson Wong</b>	1152: Wettability of the outer and inner surfaces of carbon nanotubes evaluated by single-nanotube-level force measurements and in-situ observations <b>Mr Konan Imadate</b>	759: Precipitate observation of Al-Mg-Si-Cu-Ag alloys by HRTEM and HAADF-STEM <b>A/Prof Seungwon Lee</b>	1286: TEM study of controlled localisation of skyrmion nucleation by focused ion beam irradiation <b>Miss Kayla Fallon</b>	1256: Assessing the red blood cell nursery <b>Mr Jia Hao Yeo</b>	1449: Catalyst nanomaterials studied by in situ heating and identical location transmission electron microscopy <b>Dr Francisco Ruiz Zepeda</b>	1932: Exploring the molecular landscape of Chlamydomonas with in situ cryo-electron tomography <b>Invited Speaker: Dr Ben Engel</b>	937: Off-axis electron holography phase-shifting techniques combined with summation for routine high sensitivity and high spatial resolution phase maps <b>Dr Victor Boureau</b>	1341: Crystalline orientation maps obtained from channeling contrast: focus on acquisition and image treatments <b>A/Prof Cyril Langlois</b>	15:00
15:15	236: A robust method to acquire tilt series in a few seconds for Fast Operando Nano-Tomography in ETEM <b>Dr Thierry Epicier</b>	462: Time-Resolved Electron Holography by Interference Gating <b>Mr Tolga Wagner</b>	524: Understanding High Contact Resistance in MoS <sub>2</sub> FETs Using STEM-EELS <b>Mr K. Andre Mkhoyan</b>	54: Near-atomic cryo-EM structure of the chaperonin CCT in complex with its substrate mLST8, a key component of the mTOR complex. <b>Dr Jorge Cuellar</b>	254: Direct measurement of the surface energy of bimetallic nanoparticles using in-situ heating TEM <b>Mr Adrian Chmielewski</b>	770: Effect of second cold rolling and intercritical annealing on a new medium Mn ultra-fine duplex AHSS <b>Mr Majid Parvizi</b>	550: Observation and analysis of current-driven motion of magnetic domain boundaries in a chiral-lattice helimagnet FeGe <b>Dr Kiyou Shibata</b>	1563: A novel combinatorial approach utilizing TIRF microscopy and Duolink for assessment of protein-protein interactions at the cell membrane <b>Dr Michael Lovelace</b>	1040: Modulating electron beams in space and time to probe for the genuine structures and function at the atomic scale <b>Dr Christian Kisielowski</b>		67: Vortex beam phases in real space studied by electron holography <b>Dr Ken Harada</b>	665: Utilization of Electron Channelling Contrast Imaging to Display Crystal Lattice Orientation in Scanning Electron Microscope <b>Mr Jan Cupera</b>	15:15
15:30	591: In situ 3D characterization of metal nanoparticles while heating <b>Prof Sara Bals</b>	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 <b>Mr Giuseppe Mario Caruso</b>	510: How sharp are atomically sharp interfaces in complex functional oxide heterostructures? <b>Invited Speaker: Prof Peter A. Van Aken</b>	575: Cryo-EM Structures of a Single Ring Chaperonin from Bacteriophage OBP P. fluorescence in Nucleotide-free and ADP-bound States <b>Prof Olga Sokolova</b>	275: STEM imaging and concomitant EDS mapping of in situ cation-exchange at solid state between diverse nanoparticles populations: how it actually works. <b>Prof Andrea Falqui</b>	861: Martensite and twin in Fe <sub>50</sub> Mn <sub>30</sub> Co <sub>10</sub> Cr <sub>10</sub> high entropy alloy <b>Miss Lin Qi</b>	1316: Cryogenic TEM Studies of Bloch and NEEL Skyrmion Textures in Lacunar Spinel and Cubic Helimagnets <b>Mr Felix Lucas Kern</b>	Invited Speaker <b>Prof John McGhee</b>	1032: Comparison of Atomic Scale Dynamics for 14 Kinds of Transition Metal Nanocatalysts <b>Mr Kechang Cao</b>	1315: Unsupervised deep learning approach for automated annotation of cellular electron cryo-tomograms <b>Prof Niels Volkman</b>	224: Electron wave front manipulation using patterned electrostatic mirrors <b>Mr Maurice Krielaart</b>	123: ShEM: Scanning Helium atom Microscopy A novel atom probe technique <b>Dr Sabrina Daniela Eder</b>	15:30
15:45	967: Joint reconstruction of multi-modal tomography data using total generalized variation <b>Dr Georg Haberfehlner</b>	720: HT BSE detector and EBAC electronics for ESEM. <b>Dr Grigore Moldovan</b>	598: The molecular basis for UV-damage recognition in chromatin <b>Dr Simone Cavadini</b>	320: Direct Atomic-Scale Observation of Nanoparticles Coalescence Driven Nucleation and Growth in the TEM <b>Dr Junjie Li</b>	867: High-pressure torsion triggered diffusive phase transformation in a twinning-induced plasticity steel <b>Dr Xianghai An</b>	190: Lorentz TEM observation of deformed skyrmions in supercooled state <b>Dr Daisuke Morikawa</b>	852: A Novel Technique to Investigate Ionomer Distribution in PEMFC: Differentiating Carbon by STEM-EELS <b>Mr Kang Yu</b>		1604: Multiscale 3D imaging of cilia by electron and X-ray cryo-microscopy <b>Dr Elisabeth Müller</b>	79: Towards an application of quasi non-diffractive electron Bessel beams in scanning transmission electron microscopy <b>Dr Simon Hettler</b>	609: Optimizing Data and Sample Connectivity for Cryo-EM Workflows <b>Mr Maarten Kuijper</b>	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
LS-12 - Multimodal Molecular Imaging in Health & Disease	IT-5.5 - In-situ, environmental and time-resolved microscopies	IT-12.3 - Spectroscopy – High energy excitations and local chemical analysis	FI-1 - Outreach	IT-8.4 - Phase-related techniques	PS-4.5 - Metals and alloys	PS-10.2 - Magnetic, ferroelectric and multiferroic materials	LS-7 - Embryology & Developmental Biology	PS-12.5 - Materials for energy production, storage and catalysis	IT-2.1 - Computational methods for data acquisition, analysis and visualization	PS-11 - Materials in geology, mineralogy and archeology	IT-14.1 – Advances in Atom Probe Tomography
Chairpersons: Peter Peters & Peijun Zhang	Chairpersons: Patricia Kooymann & Pratihba Gai	Chairpersons: Gianluigi Botton & Gerald Kothleitner	Chairpersons: Tim White & Jenny Whiting	Chairpersons: Etienne Snoeck & Nobuo Tanaka	Chairpersons: Xiaodong Han & Jianfeng Nie	Chairpersons: Shujun Zhang & Laura Bocher	Chairpersons: Louise Cole & Anastasios Pavlopoulos	Chairpersons: Christina Scheu & Paulo Ferreira	Chairpersons: Steven Ludtke & Nigel Browning	Chairpersons: Ashley Slattery & David Saxey	Chairpersons: David Larson & Leigh Stephenson
1046: Multimodal Microscopy to Study Plasma Membrane Microdomains <b>Invited Speaker: Prof Robert Parton</b>	1436: Radicals-assisted CVD implemented in a modified HR environmental TEM for in-situ real-time SWCNTs growth with a given chirality. <b>Invited Speaker: Dr Ileana Florea</b>	1290: Electron magnetic circular dichroism: state of the art and future prospects <b>Invited Speaker: Dr Jan Ruzs</b>	1224: Diamond Jubilee of Australia's first Microscopy Core Facility - the EMU/ACMM/SMM at 60 <b>Invited Speaker: Dr Guy Cox</b>	962: Bringing STEM into phase: new opportunities with focused-probe STEM ptychography <b>Invited Speaker: Prof Peter Nellist</b>	898: Microstructural evolution of 25Cr duplex stainless steel upon shot peening treatment <b>Miss Sijia Liu</b>	1629: Model-based iterative reconstruction of charge density and electric field using off-axis electron holography <b>Invited Speaker: Dr Rafal E. Dunin-Borkowski</b>	Invited Speaker <b>Dr Alexander Combes</b>	788: In-situ TEM Observation of Resistive Switching of Oxide Thin Film Devices <b>Invited Speaker: Prof Sang Ho Oh</b>	Invited Speaker <b>Mr Bryan Reed</b>	1265: Combining Atom Probe Tomography and Transmission Electron Microscopy in monazite reveals grain-scale-closed systems reset at nano-scale: toward nanogeochemistry. <b>Invited Speaker: Dr Anne-Magali Seydoux-Guillaume</b>	Invited Speaker <b>Dr Kathryn Grandfield</b>
1045					545: Atomic-scale HAADF-STEM Study of Symmetrical Tilt Boundaries in a Mg-Gd Alloy <b>Dr Yuman Zhu</b>						
11:00	1614: Routine determination of sub-100 kDa complexes with conventional cryo-EM <b>Invited Speaker: Dr Gabriel Lander</b>	1126: In situ crystallography and electrical dynamics of strained Ge-Si core-shell nanowires <b>Dr Chao Zhang</b>	1817: The good, the bad and the ugly of outreach stories: what works and why. <b>Invited Speaker: Dr Bronwen Cribb</b>	284: Boundary-artifact-free phase retrieval from Differential Phase Contrast image <b>Dr Kazuo Ishizuka</b>	161: Applications of Advanced Scanning Transmission Electron Microscopy Techniques in the Study of Light Alloys <b>Ms Yunhe Zheng</b>	850: Exploring the local structure of stress-written phases in polymorphic BiFeO3 <b>Dr Kristina Holsgrove</b>	Invited Speaker <b>Dr Neha Bhatia</b>	365: In situ TEM implementation of impedance spectroscopy on a model solid oxide electrolysis cell combining reactive gasses, high temperatures and electrical potentials <b>Dr Søren Bredmose Simonsen</b>		1108: Direct Observation of Dissimilar Dissolution Behaviours in a Radiation Field: An In-situ Study of Layered Aluminum Based Minerals <b>Dr Michele Conroy</b>	Invited Speaker <b>Dr Stefan Parviainen</b>
11:15		1285: Development of double-tilt heating holder for dynamical/atomic resolution AC-TEM and WB-STEM observations of ferromagnetic ferrous alloys <b>Dr Yusuke Shimada</b>	435: Atomic scale magnetic and structural imaging by achromatic electron microscopy <b>A/Prof Xiaoyan Zhong</b>	593: Theoretical and experimental study on detection precision and imaging quality of a PSD based non-pixelated COM detector for DPC <b>Mr Felix Schwarzhuber</b>	222: Experimental observation of novel long-period structures and phase transitions in fcc [111] tilt grain boundaries by atomic resolution STEM <b>Mr Thorsten Meiners</b>	679: Sub-nanoscale spatial mapping of magnetic moments by STEM-EMCD under symmetric 3-beam condition using convergent beam <b>Prof Shunsuke Muto</b>		32: Atomic-level In situ Imaging and Spectroscopy of Interfacial Interactions during Carbon Deposition on a Ni/CeO2 Catalyst <b>Mr Ethan Lawrence</b>	987: Processing very large pixelated STEM datasets: challenges and solutions <b>Dr Magnus Nord</b>	1504: Tracking Hydrothermal Alteration in Meteorites with Oxidation State Measurements by STXM-XANES and Aberration-Corrected STEM-EELS <b>Dr Bradley De Gregorio</b>	
11:30	838: Focused Ion Beam Milling as a Game Changer in in-situ Cryo-Electron Tomography of Frozen Hydrated Specimens <b>Invited Speaker: Dr Miroslava Schaffer</b>	836: In-situ tensile straining for two dimensional nanomaterials in the transmission electron microscope <b>Mr Ade Kismarhardja</b>	325: Symmetry-Constraints for Mapping Electronic States with EELS <b>Dr Stefan Löffler</b>	455: Atomic potential reconstruction from DPC signal of thick specimens <b>Dr Takehito Seki</b>	297: Combined Effect of Stacking Fault Energy and Specimen Size on the Mechanical Behaviors of Single Crystalline Face-Centered Cubic Metals <b>Mr Ranming Niu</b>	19: Atomic mappings of novel domain configurations in ferroelectric thin films <b>Invited Speaker: Prof Yinlian Zhu</b>	Invited Speaker <b>A/Prof Sebastian Streichan</b>	653: Microscopy Insights into Deactivation Mechanism of Au/CeZrO4 for Low-Temperature Water-Gas Shift Reaction <b>Dr Qian He</b>	387: Performance evaluation of compressed sensing set-ups for optical and transmission electron microscopy <b>Dr Wouter Van Den Broek</b>	895: Paleomagnetism of individual magnetite nanoparticles in a meteorite using electron holography <b>Prof Yuki Kimura</b>	843: First-Principles Calculations of Field Evaporation in Atom Probe Tomography <b>Dr Michael Ashton</b>
11:45-12:00		588: Combining environmental gas TEM and electron tomography <b>Dr Charles Hirtlmann</b>	684: Advantages of Direct Detection and Electron Counting for High-energy Resolution and Monochromated Electron Energy Loss Spectroscopy Data Acquisition <b>Dr Paolo Longo</b>	998: Simultaneous E-Field & Strain Mapping by Precession Electron Diffraction <b>Dr Benedikt Haas</b>	377: Formation of White Etching Areas during Rolling Contact Fatigue of SAE 52100 Bearing Steel - the Influence of Diffusible Hydrogen <b>Dr Alexander Schwedt</b>		427: Determining bandgap profiles and sub-gap defect levels in solar cells using high resolution electron energy-loss spectroscopy <b>Prof David Mccomb</b>	816: Low dose STEM for everyone using compressed sensing with regular scanning grids <b>Mr Jakob Spiegelberg</b>	822: Investigation of Exsolution in Titanomagnetite Grains in NWA 7533 Martian Meteorite by STEM-EELS and STEM-EDX <b>Mrs Maya Marinova</b>	677: Crystallography in Atom Probe Tomography <b>Mr Alec Day</b>	11:45-12:00
12:00	1565: Nanoscale sword and shield: recent developments of focused ion beam and 2D materials for multimodal imaging of cells <b>Dr Jing Fu</b>	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 <b>Dr B.layia Mehdi</b>	1431: Towards quantitative correlation of surface reconstruction and/or reduction of perovskite catalysts simultaneously by ELNES <b>Prof Vasiliki Tileli</b>	1280: Low-dose Electron Ptychography with a Fast Direct Electron Detector <b>Prof Peng Wang</b>	Late breaking session	206: Effect of single point defect on local properties in BiFeO3 thin film <b>Miss Xiaomei Li</b>	1535: Tweezing mechanical information out of the plasma membrane of uterine epithelial cells. <b>Ms Sadaf Kalam</b>	328: Imaging antisite defects in Ag-substituted Cu2ZnSnSe4 <b>Prof David Cherns</b>	Invited Speaker <b>Dr Andrew Stevens</b>	103: High resolution chemical analysis of grains from the Itokawa asteroid by FIB-ToF-SIMS <b>Dr William Rickard</b>	1430: The analysis of sulfide minerals by atom probe tomography <b>Dr David Saxey</b>
12:15	404: Cryo-electron microscopy extended into the quantum realms of photosynthetic energy transfer processes <b>Prof Andreas Holzenburg</b>	1181: Techniques for performing simultaneous in-situ Transmission Kikuchi Diffraction (TKD) and Digital Image Correlation (DIC) <b>Dr Vijay Bhatia</b>	282: Quantitative Atomic Scale Imaging of Conducting Filaments of Resistive Switching Memories Using Monochromated STEM-EELS Technique <b>Dr Hongchu Du</b>	662: Optical equivalency of focused probe STEM ptychography and TEM Fourier ptychography <b>Dr Emanuela Liberti</b>	Late breaking session	932: Nanoscale magnetic and structural characterization of Ne+ irradiated FeAl thin films using pixelated STEM <b>Dr Magnus Nord</b>	1625: Using a multi-modality imaging approach to investigate the role of platelets in neonatal stroke <b>Dr Alison Farley</b>	1541: Transmission electron microscope analysis for electron beam sensitive CH3NH3PbI3 organic-inorganic perovskites <b>Dr Wei Li</b>		107: Investigating life on land 1 billion years ago. <b>Ms Eva Sirahtoinen</b>	914: Correlative investigation of Mg dopant in GaN p-n junction by atom probe tomography and off-axis electron holography <b>Miss Lynda Amichi</b>
12:30		Myscope - Online Microscopy Workshops Session one - 12:45 - 1:15 Session two - 1:15 - 1:45		12:30 - 12:45 1547: High resolution smartphone microscopes as an educational and public engagement tool <b>Dr Amy Davies</b>  12:45 - 14:00 Hands-on exploration of Jim Cybulski and Amy Davies microscopes			Lunch, Lunch Workshops, Exhibition and Poster Sessions/Viewing Exhibition Hall 2				

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	
	<b>IT-9.1 - STEM and TEM imaging</b>	<b>IT-2.2 - Computational methods for data acquisition, analysis and visualization</b>	<b>FI-2 - Data management (storage, processing and sharing)</b>	<b>IT-10.1 - SEM, FIB, scanning probe and surface microscopy</b>	<b>IT-13.1 - Spectroscopy – Low energy excitations and ultrafast spectroscopy</b>	<b>LS-10 - Plant Science &amp; Mycology</b>	<b>PS-10.3 - Magnetic, ferroelectric and multiferroic materials</b>	<b>LS-13 - Invertebrate Biology &amp; Taxonomy</b>	<b>PS-2.1 - Carbon-based materials and 2D structures</b>	<b>PS-13.4 - Physical science applications of in-situ microscopy</b>	<b>IT-3 – Methods and workflows for correlative microscopy</b>	<b>IT-14.2 – Advances in Atom Probe Tomography</b>	
	Chairpersons: Richard Leapman & Peter Nellist	Chairpersons: Steven Ludtke & Nigel Browning	Chairpersons: Wojtek Goscinski & Dieter Weber	Chairpersons: Tomonobu Nakayama, Alex de Marco & Raynald Gauvin	Chairpersons: Odile Stephan & Javier Garcia de Abajo	Chairpersons: Rosemary White & Staffan Persson	Chairpersons: Shujun Zhang & Laura Bocher	Chairpersons: Andreas Holzenburg & Maria Byrne	Chairpersons: Ute Kaiser & Dougal McCulloch	Chairpersons: Masaki Takeguchi & Xiaozhou Liao	Chairpersons: Fei Sun & Saskia Lippens	Chairpersons: David Larson & Leigh Stephenson	
14:00	1209: Beyond the Diffraction Limit and below 0.4 Angstroms with a High Dynamic Range Pixel Array Detector <b>Invited Speaker: Prof David Muller</b>	<b>Invited Speaker Ms Perrine Paul-Gilloteaux</b>	1568: The Image Data Resource: a platform for publishing, integrating and mining biological imaging data at scale <b>Petr Walczyski</b>	388: Analytical STEM at 30 keV, EDS, EELS and CBED at the Nanoscale <b>Prof Raynald Gauvin</b>	<b>Invited Speaker Dr Sophie Meuret</b>	<b>Invited Speaker Dr Alexandra Brand</b>	200: Atomic mapping of domains and interfacial structures in ferroelectric thin films <b>Prof Xiuliang Ma</b>	<b>Invited Speaker Dr Alexander Ziegler</b>	<b>Invited Speaker Dr Rebecca Nicholls</b>	789: In-situ Microscopy for Sub-10nm Materials <b>Invited Speaker: Prof Litao Sun</b>	<b>Invited Speaker Dr Mark Ellisman</b>	<b>Invited Speaker Dr Austin Akey</b>	14:00
14:15			1357: A national network of trusted data repositories for the Australian National Imaging Facility <b>Dr Andrew Mehnert</b>	1097: Application of inverted fountain detector for downward secondary electron emitted from nanosheets in SEM <b>Prof Takashi Sekiguchi</b>									294: Observation of ferroelectric polarization in hybrid improper ferroelectric (Ca, Sr)Ti <sub>2</sub> O <sub>7</sub> <b>Dr Hiroshi Nakajima</b>
14:30	1560: Thick (3D) sample imaging using iDPC-STEM <b>Dr Ivan Lazić</b>	<b>Invited Speaker Dr Hans Emlund</b>	1078: Using Fiji / Image J to automate analysis of slide scanner generated files <b>Dr Michael Kuligowski</b>	1368: Cluster analysis for FIB tomography of nanoporous materials <b>Dr Martin Ritter</b>	1444: Visualization of surface plasmon propagation in a crystal waveguide by momentum-resolved cathodoluminescence spectroscopy <b>Dr Hikaru Saito</b>	929: Identification of the Icelandic accession of Arabidopsis thaliana <b>Prof Kesara Ananthawat-Jonsson</b>	940: Advanced electron microscopy and spectroscopy on ferroelectric thin films <b>Prof Peng Gao</b>	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 <b>Dr Brett Hamilton</b>	97: Interaction between 2D transition metal dichalcogenides and metal atoms for use in electrical contacting, investigated via atomic resolution HAADF Scanning Transition Electron Microscopy <b>Ms Eileen Courtney</b>	834: Industrial approach to in-situ electron microscopy of heterogeneous catalysts <b>Dr Manfred Schuster</b>	<b>Invited Speaker Dr Yannick Schwab</b>	<b>Invited Speaker A/Prof Baishakhi Mazumder</b>	14:30
14:45	1498: Atomic resolution STEM image contrast based on local point symmetry <b>Dr Matus Krajnak</b>		984: LiberTEM: An open software platform for pixelated scanning transmission electron microscopy <b>Dr Dieter Weber</b>	223: High-frequency noise artefacts in scanning microscopy – Identification and mitigation <b>Dr Asmus Meyer-Plath</b>	1021: Probing Resonant Photonic Modes in Oxide Nanoparticles with Focused Electron Beams <b>Prof Peter Crozier</b>	1934: Reaching out for the sun: molecular mechanisms enhancing light access in plants <b>Invited Speaker: Prof Christian Fankhauser</b>	1376: Visualisation of polar nano-regions and chemical composition fluctuations in BaTiO <sub>3</sub> and (Ba, Sr)TiO <sub>3</sub> ceramics above Curie temperature <b>Prof Goran Drazic</b>	785: Understanding impacts of environmental changes and anthropogenic activities on marine organisms <b>Invited Speaker: Dr Peta Clode</b>	1413: One-Dimensional Hexagonal Boron Nitride Semiconductor <b>Miss Hyoju Park</b>	599: Cryogenic analytical electron microscopy for native state imaging of nanomaterials <b>Dr Nicole Hondow</b>			14:45
15:00	1288: Electron tomography of cadherin-mediated progenitor cell-cell junctions <b>Dr Walter Kaufmann</b>	281: MIB 2: an updated version of the open-source platform for segmentation and analysis of multidimensional datasets <b>Dr Ilya Belevich</b>	958: Meeting the next-generation instrument data challenge with MyTardis <b>Dr Keith Schulze</b>	305: Optimisation of scattered electron imaging in the scanning electron microscope <b>Dr Ben Britton</b>	827: Momentum resolved spectroscopy of the dielectric response by TEM <b>Dr Frederic Fossard</b>		517: Dopant distribution and Jahn–Teller distortions at superconducting La <sub>2</sub> CuO <sub>4</sub> interfaces <b>Mr Y. Eren Suyolcu</b>		<b>Invited Speaker Prof Quentin Ramasse</b>	656: Direct observation of oxygen vacancy-driven structural and resistive phase transitions in La <sub>2</sub> /3Sr <sub>1</sub> /3MnO <sub>3</sub> <b>Dr Lide Yao</b>	553: Electron Radiolysis Effect for in-situ Electron Microscopy: Super-Dissolution and Direct Writing Transformation of Metal Oxides <b>Prof Manling Sui</b>	1044: Cross-correlative Microscopy to Understand Nanocrystalline Stability <b>Dr Xuyang Zhou</b>	15:00
15:15	1155: Aberration corrected STEM for interfacial strain and vacancy characterization <b>Prof Jian-Min Zuo</b>	335: Image restoration from single scanning transmission electron micrograph using deep convolutional neural networks <b>Dr Ivan Lobato</b>	1591: Solutions for the analysis of large microscopy multi-dimensional datasets in HyperSpy. <b>Invited Speaker: Dr Francisco de la Peña</b>	728: Ultra High Precision, High Resolution and Large Area SEM using Raith E-line Plus <b>Dr Han-Hao (elliott) Cheng</b>	1496: Optoelectronic measurements on atomically thin MoxW(1-x)S <sub>2</sub> nanoflakes <b>Dr Raul Arenal</b>	718: Phi thickenings in Brassica roots - an adaption to water stress? <b>Dr David Collings</b>	193: Biaxial tensile stress effect within epitaxial BiFeO <sub>3</sub> film grown on (100) KTaO <sub>3</sub> <b>Dr In-Tae Bae</b>	1053: Neurodegenerative modifications during perinatal asphyxia: correlative light and electron microscopy study. <b>Francisco Capani</b>				667: Electron beam effects on metal and semiconductor oxide films - structure and electrical properties <b>Dr Christian Kübel</b>	917: Correlative microscopy combining Electron Microscopy and Secondary Ion Mass Spectrometry <b>Dr Santhana Eswara</b>
15:30	1476: Striving for precise metrology with the modern STEM <b>Invited Speaker: Dr Lewys Jones</b>	373: Automated Imaging and Analysis of Pharmaceutical Particles Using a Tabletop Low Voltage TEM <b>Dr Mathieu Colomb-Delsuc</b>	<b>Late breaking talk</b>	534: Investigating immune responses using multi-spectral lightsheet microscopy of cleared kidneys <b>Dr Kirstin Eigass</b>	1627: Attosecond electron microscopy and diffraction <b>Invited Speaker: Prof Peter Baum</b>	<b>Invited Speaker Dr Christine Faulkner</b>	<b>Invited Speaker A/Prof Lena F. Kourkoutis</b>	<b>Late breaking talk</b>	446: Evidence of strain-induced plastic flow in the formation of phase-pure hexagonal diamond <b>Mr Sherman Wong</b>	118: Atomic-scale observation of oxidation and decomposition processes in nanocrystalline alloys via in-situ heating <b>Mr Jinning Guo</b>	504: A Hybrid Environmental Transmission Electron Microscope for Probing Plasmons and Excitons <b>Dr Renu Sharma</b>	1305: Direct observations of stable hydrides to solute hydrogen in metals using atom probe tomography <b>Dr Andrew Breen</b>	15:30
15:45	1165: A new algorithm for segmenting single adult cardiac cells from large-volume serial block-face scanning electron microscopy data <b>Dr Vijay Rajagopal</b>	352: Improved throughput of gold nanoparticle localization and imaging in the brain through the development of a novel SEM-STEM technique <b>Dr Paul Kempen</b>		667: Electron beam effects on metal and semiconductor oxide films - structure and electrical properties <b>Dr Christian Kübel</b>	917: Correlative microscopy combining Electron Microscopy and Secondary Ion Mass Spectrometry <b>Dr Santhana Eswara</b>								821: Tracing hydrogen in APT : Development of new in-situ approaches <b>Dr Daniel Haley</b>
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**

THURSDAY 13 SEPTEMBER 2018												
7:30	Registration Open Outside Exhibition Hall 2 & Ground Level Foyer, International Convention Centre											7:30
9:00	Plenary Speaker Darling Harbour Theatre <b>Dr Misty Jenkins</b> Understanding Serial Killers: Investigating the function of Cytotoxic T lymphocytes using microscopy											9:00
10:00	Morning Tea, Exhibition and Poster Viewing Exhibition Hall 2											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
	PS-13.3 - Physical science applications of in-situ microscopy	IT-10.2 - SEM, FIB, scanning probe and surface microscopy	PS-3.1 - Thin films, coatings and surfaces	IT-11 - Optical Nanoscopy and Spectral Imaging Techniques	IT-9.2 - STEM and TEM imaging	LS-9.1 - Applications in Correlative Microscopy of Biological Systems	PS-6.1 - Biomaterials, polymers and polymer-based composites	PS-8.1 - Phase transformations and corrosion	PS-2.2 - Carbon-based materials and 2D structures	LS-14.1 - Host-Pathogen Interactions, Microbiology & Virology	IT-13.2 - Spectroscopy – Low energy excitations and ultrafast spectroscopy	PS-9.1 - Amorphous and disordered materials, liquid crystals
	Chairpersons: Masaki Takeguchi & Xiaozhou Liao	Chairpersons: Tomonobu Nakayama, Alex de Marco & Raynald Gauvin	Chairpersons: Xiuliang Ma & Zonghan Xie	Chairperson: Colin Sheppard	Chairpersons: Richard Leapman & Peter Nellist	Chairperson: Yannick Schwab & Roger Wepf	Chairpersons: Cheng Yan & Yogambha Ramaswamy	Chairperson: James Howe & Jianqiang Zhang	Chairpersons: Ute Kaiser & Dougal McCulloch	Chairpersons: Melanie Rug & Salvatore Chiantia	Chairpersons: Odile Stephan & Javier Garcia de Abajo	Chairpersons: Paul Voyles & Amelia Liu
10:30	Using Sub-Sampling/Inpainting to Control the Kinetics and Observation Efficiency of Dynamic Processes in Liquids <b>Invited Speaker: Prof Nigel Browning</b>	Invited Speaker <b>Prof Mervyn Miles</b>	Invited Speaker <b>Prof Xavier Maeder</b>	Invited Speaker <b>A/Prof Michelle Digman</b>	1920: Maximising dose efficiency in quantitative STEM to reveal the 3D atomic structure of nanomaterials <b>Invited Speaker: Ms Sandra Van Aert</b>	Invited Speaker <b>Dr Gaia Pigino</b>	Invited Speaker: Peter Kingshott	989: Microstructural Analysis of the Preferential Intergranular Oxidation Behavior of Alloy 600 in H2-Steam Environment <b>Mr Liberato Volpe</b>	Invited Speaker <b>Prof Wu Zhou</b>	Invited Speaker <b>Dr Errin Johnson</b>	1720: Coherent Ultrafast Transmission Electron Microscopy: Development and Applications <b>Invited Speaker: Mr Armin Feist</b>	267: Correlative analytical transmission electron microscopy applied to the characterization of deformation features in amorphous materials <b>Invited Speaker: Dr Harald Rösner</b>
10:45								826: Spinodal Decomposition in Compositionally Modulated Ti-Mo Alloy <b>Mrs Alphy George</b>				
11:00	Invited Speaker <b>A/Prof Ryo Ishikawa</b>	809: Combined high-resolution FIB-Nanotomography and 3D-EDS of solid-oxide electrolysis cells <b>Dr Marco Cantoni</b>	218: Hardness and toughness enhancement of nanotwinned high entropy alloy FeMnNiCoCr coatings deposited by closed field unbalanced magnetron sputtering <b>Ms Chuhan Sha</b>		705: Overcoming the chromatic aberration resolution limit by monochromation <b>Dr Andrew L. Bleloch</b>	1586: Assessing the Autophagy Machinery and Cargo using Correlative Light and Electron Microscopy <b>A/Prof Ben Loos</b>		1427: Correlated in situ ETEM and Multiscale Computational Study of Dynamic Processes Characterizing the Initial Stage of Copper Oxidation <b>Prof Judy Yang</b>	81: Investigation of the Wagonwheel Effect in Graphene via atomic resolution HAADF and EELS <b>Mr Kalani Moore</b>	1470: Quantitative microscopy approaches for the study of the interactions between Influenza matrix protein and host plasma membrane <b>Dr Salvatore Chiantia</b>	1171: Hybridization of Surface Plasmon Resonance Modes in Sierpinski Fractal Triangles <b>Ms Isobel C. Bicket</b>	1362: Quantitative mapping of the nanoscale strain field in metallic glasses during in situ deformation <b>Dr Christoph Gammer</b>
11:15		1813: Submolecular resolution imaging with Si cantilever-based atomic force microscopy <b>Invited Speaker: Dr Tomoko Shimizu</b>	1350: Investigation of CVD TiCN/Ti <sub>1-x</sub> Al <sub>x</sub> N multilayer coatings by advanced electron microscopy <b>Mr Mohamed Ben Hassine</b>	745: Spatiotemporal Mapping of DNA Double Strand Break Repair Using Super Resolution Microscopy <b>Dr Donna Whelan</b>	466: Advantage of Co/Cs corrected LV-TEM for organic molecular imaging <b>Dr Kaname Yoshida</b>	1401: Characterization of metastasis related lysosomal subpopulations by correlative live cell-3D electron microscopy <b>Dr Nalan Liv</b>		1175: In-sit TEM observation of oxidation and radiation damage <b>Mr Yang Yang</b>	1458: Atomic Defects in Graphene and their Role in Proton Transport and Water Desalination <b>Dr Raymond Unocic</b>	1232: HIV and The Colorectal Mucosa - Investigating the Early Interactions of HIV with Mucosal Target Cells using Highly Multiplexed Microscopy <b>Mr Heeva Baharlou</b>	630: Plasmon field tomography of coupled metallic nanoparticles <b>Dr Georg Haberfehlner</b>	936: Medium-range order of amorphous CuZr-crystalline Cu composites studied by correlated HAADF and nano-beam diffraction <b>Dr Martin Peterlechner</b>
11:30	581: Visualized effects of oxidation and temperature on pseudo-single-domain Fe <sub>3</sub> O <sub>4</sub> particles examined by environmental TEM and off-axis electron holography <b>Dr Trevor Almeida</b>		74: STEM-based direct observation of dislocation-pipe diffusion in metal/semiconductor nitride superlattice thin films <b>Dr Magnus Garbrecht</b>	1585: Assessing the Autophagy Machinery and Cargo - A Super-Resolution Approach <b>A/Prof Ben Loos</b>	357: ISTEM - Strongly Incoherent Imaging for Ultra-High Resolution TEM <b>Dr Florian F. Krause</b>		469: Characterizing the calcination behaviours of Ni-Fe layered double hydroxide materials via in-situ transmission electron microscopy <b>Mr Christopher Hobbs</b>	421: In Situ Manipulation of Topological Defects in Bilayer Graphene <b>Mr Peter Schweizer</b>	1322: Super-Resolution Characterization of Microtubule Architecture in Cells Expressing Lyssavirus Phosphoprotein <b>Mr Ashley Rozario</b>	568: Nanoplasmonic TEM Sample Design with Full Location- and Chemistry Control <b>A/Prof Michel Bosman</b>	84: HRTEM study of rejuvenation in metallic glasses under cryothermal cycling <b>Dr Iurii Ivanov</b>	
11:45	1027: Realistic electrochemistry in liquid cell microscopy <b>Dr Daan Hein Alsem</b>	109: Investigation of dislocations by STEM in a scanning electron microscope <b>Miss Cheng Sun</b>	781: Inhomogeneous Strain Distribution in Epitaxial SiGe/Si Multilayers Visualized by Dark-field Inline Electron Holography <b>Dr Bumsu Park</b>	715: Live quantitative BSE acquisition with standard-less calibration <b>Dr Grigore Moldovan</b>	333: Downsampling of STEM Images: a study on the effect of electron dose reduction on the quality of 3D reconstructions <b>Dr Sylvain Trepout</b>		Invited Speaker <b>Dr Lorna Hodgson</b>	704: Evidence of sulphur-enriched grain boundaries in a chromia scale <b>Ms Ingrid Mccarroll</b>	1220: Understanding atom-by-atom the dynamics and the properties for the evolution of point and extended defects in single-layer 2H-MoTe <sub>2</sub> by Co/Cs-corrected 40 kV high-resolution TEM <b>Mr Tibor Lehnert</b>	651: Investigating the role of the different NS3 functional domains in the AHSV infection cycle in mammalian cells. <b>Mrs Linda Ferreira-Venter</b>	385: Self-hybridization within non-Hermitian localized plasmonic systems <b>Mr Hugo Lourenço Martins</b>	48: Nanoscopic Dynamics in a Supercooled Liquid from Electron Correlation Microscopy <b>Prof Paul Voyles</b>
12:00	253: In-situ E-TEM study of bimetallicTiO <sub>2</sub> supported copper-gold nanocatalysts under oxidizing (O <sub>2</sub> ) and reducing (H <sub>2</sub> ) atmosphere <b>Mr Adrian Chmielewski</b>			1189: Comparison of Spectral Imaging Modalities and Quantitative Data Analysis Techniques <b>Dr Tala Kaplinovsky</b>			489: Correlative Strategies for the Identification and Intracellular Localization of Polymer Nanoparticles <b>Dr Ingo Lieberwirth</b>	392: SEM, TEM, STEM and AFM microscopy of the human tooth enamel crystallites <b>Prof José Reyes-Gasga</b>	1501: Functionalization of carbon nanotubes investigated by spatial-resolved EELS <b>Dr Raul Arenal</b>	314: Application of FIB-SEM tomography, serial sectioning TEM and STEM tomography gives insight into herpesvirus egress dynamics and the process of secondary envelopment <b>Dr Clarissa Villinger</b>	912: Ultrafast Electron Spectroscopy with Slow and Fast Electrons <b>Invited Speaker: Dr Nahid Talebi</b>	422: Correlating Structural Heterogeneity to Deformation of Metallic Glasses Using 4-D Scanning Nanodiffraction and Mesoscale Simulation <b>Invited Speaker: Prof Jinwoo Hwang</b>
12:15	229: Wet Etch Dynamics of Silicon Nanopillars Visualized in the TEM <b>Dr Zainul Aabdin</b>	1303: Application and prospect of electron-beam-induced current technique: from defect characterization to device diagnosis <b>Invited Speaker: Dr Jun Chen</b>	Invited Speaker <b>Prof Han Huang</b>		407: Microscopy with illumination and detector arrays <b>Prof Colin Sheppard</b>	Invited Speaker <b>Dr Knut Mueller-Caspary</b>	1337: Splenic capture and in vivo subcellular degradation of thin, biological-grade graphene oxide sheets studied by correlative microscopy <b>Dr Eric Prestat</b>	813: Exploring biomineral chemistry at the nanometer scale <b>Dr Marta De Frutos</b>	985: Structural properties of Double Wall Carbon Nanotubes as revealed by TEM <b>Dr Loiseau Annick</b>	1703: Tracking bundling of influenza A virus genome segments in infected host cells at single molecule level <b>Prof Dr Andreas Herrmann</b>		
12:30	Lunch, Lunch Workshops, Exhibition and Poster Sessions/Viewing Exhibition Hall 2			Data-based animations <b>Mr Chris Hammang</b>	Effective colour-enhancement strategies for EM images <b>Dr Jenny Whiting</b>	Lunch, Lunch Workshops, Exhibition and Poster Sessions/Viewing Exhibition Hall 2						
				Hands-on colouring session – bring your images and laptop								

THURSDAY 13 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-11 - Innovations in Light / Laser Microscopy and Optical Nanoscopy	IT-10.3 - SEM, FIB, scanning probe and surface microscopy	PS-3.2 - Thin films, coatings and surfaces	FI-3 - Facility management	IT-9.3 - STEM and TEM imaging	IT-13.3 - Spectroscopy – Low energy excitations and ultrafast spectroscopy	PS-6.2 - Biomaterials, polymers and polymer-based composites	PS-8.2 - Phase transformations and corrosion	PS-2.3 - Carbon-based materials and 2D structures	LS-14.2 - Host-Pathogen Interactions, Microbiology & Virology	LS-9.2 - Applications in Correlative Microscopy of Biological Systems	PS-9.2 - Amorphous and disordered materials, liquid crystals
	Chairpersons: Katharina Gaus & Jan Ellenberg	Chairpersons: Tomonobu Nakayama, Alex de Marco & Raynald Gauvin	Chairpersons: Xiuliang Ma & Zonghan Xie	Chairpersons: Angus Netting & David Bell	Chairpersons: Richard Leapman & Peter Nellist	Chairpersons: Odile Stephan & Javier Garcia de Abajo	Chairpersons: Cheng Yan & Yogambha Ramaswamy	Chairperson: James Howe & Jianqiang Zhang	Chairpersons: Ute Kaiser & Dougal McCulloch	Chairpersons: Melanie Rug & Salvatore Chiantia	Chairperson: Yannick Schwab & Roger Wepf	Chairpersons: Paul Voyles & Amelia Liu
14:00	Invited Speaker <b>Dr Senthil Arumugam</b>	Invited Speaker <b>Mr Milos Toth</b>	453: Atomic-resolution electron microscopy for aluminum alloys as high performance industry materials <b>Invited Speaker: Prof Jianghua Chen</b>	287: Designing, Managing and Running a Multipurpose Advanced Materials Characterisation Facility <b>Invited Speaker: Dr Richard Wuhrer</b>	Invited Speaker <b>Prof Steven Ludtke</b>	Invited Speaker <b>Prof Philip Batson</b>	344: Advanced amphiphilic nanobiomaterials for drug delivery: From design to preclinical evaluation <b>Invited Speaker: A/Prof Alejandro Sosnik</b>	Invited Speaker <b>Prof Grace Burke</b>	Invited Speaker <b>A/Prof Pinshane Huang</b>	Invited Speaker <b>Prof Bruno Humbel</b>	Invited Speaker <b>Dr Kristina Micheva</b>	1589: Hybrid reverse Monte Carlo modelling of disordered solids using electron microscopy <b>Invited Speaker: Dr Timothy Petersen</b>
14:15												
14:30	613: Optical Nanoscopy and Raman Spectroscopy Using an Integrated Photonic Chip Platform <b>Mr David André Coucheron</b>	460: Development of an Electrostatic Spherical Aberration Corrector dedicated for SEMs <b>Dr Tadahiro Kawasaki</b>	675: Secrets of plasma deposited polyoxazoline functionality lies in the plasma phase <b>Dr Melanie Macgregor</b>	494: A flagship South African facility for a double Cs-corrected TEM - From management to micrograph <b>Invited Speaker: Prof Johannes Neethling</b>	211: Extending Geometric Phase Analysis (GPA) to measure elastic stresses and strains across nanocrystals, grain boundaries and heterostructures <b>Dr Martin Hytch</b>	1159: Temperature Measurement by a Nanoscale Electron Probe Using Energy Gain and Loss Spectroscopy <b>Dr Juan Carlos Idrobo</b>	864: Unraveling the molecular structure of 2D polymers by low-dose diffraction and imaging <b>Dr Haoyuan Qi</b>	938: Understanding the mechanisms of environmental degradation by high-resolution microscopy <b>Prof Sergio Lozano-Perez</b>	947: Novel bending phenomena in van der Waals materials <b>Dr Aidan Rooney</b>	1466: Bacterial adhesion at the nanoscale -probing the required cell-surface contact area and role of fibrinogen using a gradient in surface nanotopography <b>Dr Mats Hulander</b>	454: Identifying stem cell phenotypes involved in brain repair using immunocorrelative light electron microscopy methods. <b>Ms Viola Oorschot</b>	1484: Revisiting EELS investigations and its coupling with Raman spectroscopy: chemical inhomogeneities at the nanoscale of hydrogenated amorphous carbon thin films <b>Dr Raul Arenal</b>
14:45	Invited Speaker <b>Dr Francisco Balzarotti</b>	83: Comparison of Secondary Electron Energy Filtering Techniques in Scanning Electron and Ion Beam Microscopy <b>Mr James Mcgladdery</b>	1381: Nanochannelled graphene membranes for effective water purification <b>Dr Adrian Murdock</b>	180: Composition and Atomic Arrangement of Binary-Element Atom Columns through Analytical Transmission Electron Microscopy <b>Dr Dan Zhou</b>	1038: Momentum-resolved phonon spectroscopy in the transmission electron microscope <b>Dr Fredrik S. Hage</b>	529: Understanding the corrosion response of 6xxx series Al-alloys at near atomic to nanometer scale using advanced characterisation techniques. <b>Dr Shravan Kairy</b>	1332: Effects of electron-beam generated lattice defects on the structure of charge density waves in 1T-TaSe <sub>2</sub> and 1T-TaS <sub>2</sub> <b>Dr Michael Kinyanjui</b>	28: Nanobody labeling and super resolution gSTED nanoscopy of the bacterial cell division machinery <b>Dr Bill Söderström</b>	22: Processing zebrafish for correlated light and electron microscopy studies <b>Ms Delfine Cheng</b>	674: Dose limited TEM and STEM characterisation of electron beam sensitive inorganic nanomaterials <b>Mr Rob Hooley</b>		
15:00		1070: High Aspect Ratio Silicon Nanowires and 3D Nanostructures via Selective Focused Ion Beam Implantation and Wet Etching: Fabrication and Characterization <b>Mr Vivek Garg</b>	324: Correlative TEM and XRD study of the role of Au on the solid state dewetting behavior of Au/Ni bilayers on $\alpha$ -Al <sub>2</sub> O <sub>3</sub> <b>Dr Johannes Will</b>	156: Using fast-readout pixel detectors to overcome the multiple scattering problem in scanning transmission electron microscopy <b>Dr Hamish Brown</b>	968: Screening effects on phonon scattering at interfaces <b>Dr Maureen Joel Lagos</b>	703: Machine learning methods for EELS spectrum imaging in identifying complex phases in Zr-O system <b>Dr Jing Hu</b>	1301: Advanced electron microscopy techniques in structure characterization of mercury dichloride one-dimensional encapsulated crystals <b>Dr Andrey Orekhov</b>	1273: Macromolecular dynamics of malaria parasite adhesion <b>Invited Speaker: Dr Matthew Dixon</b>	1065: Large area automated image acquisition for integrated CLEM <b>Dr Sangeetha Hari</b>	965: Following the crystallisation of GeTe nano particles using in-situ HRTEM techniques <b>Dr David Cooper</b>		
15:15	452: Removing physiological motion from intravital and clinical fluorescence imaging data <b>Dr Sean Warren</b>	1460: New tools for advance in thermal nanometrology using scanning thermal microscopy <b>Miss Eloise Guen</b>	90: Correlations between Structure, Composition and Electrical Properties of Tungsten / Tungsten Oxide Periodic Nanolaminates <b>A/Prof Valerie Potin</b>	136: Measuring Local Electric Fields and Charge Densities using 4D STEM <b>Dr Manveer Munde</b>	655: Nanoscale vibrational spectroscopy of liquid water by monochromated aloe EELS <b>Dr Jacob Jokisaari</b>	1435: Crystal Growth of Amorphous Calcium Phosphate to Apatite in Bone-Mimetic Nanocomposites <b>Dr Antiopi Lotsari</b>	1245: Anisotropic Evaporation of ZnO Observed by In-situ Cs-Corrected High Resolution Transmission Electron Microscopy <b>Mr Zhen Wang</b>	959: Comparing TEM and resonant Raman spectroscopy for diameter distribution assessment of single wall carbon nanotubes <b>Dr Frederic Fossard</b>	1153: Automated CLEMing in BioSciences <b>Mrs Joanne Lee</b>	641: Probing chemical pathways in polyamide reverse osmosis membranes <b>Dr Catriona Mcgilvery</b>		
15:30	Invited Speaker: Elizabeth Hinde	Invited Speaker <b>Dr Stefan Zaeferrer</b>	1545: Direct Imaging of Electron Transfer and Its Influence on Superconducting Pairing at FeSe/SrTiO <sub>3</sub> Interface <b>Invited Speaker: A/Prof Yimei Zhu</b>	Invited Speaker <b>Dr Heinz Schwarz</b>	920: Quantification of Pt-based chemotherapeutics using HAADF STEM <b>Ms Alexandra Sheader</b>	640: A loof beam vibrational EELS: a tool for probing hydrogen/defect heterogeneity in graphitic carbon nitrides <b>Prof Peter Crozier</b>	Invited Speaker <b>A/Prof Tamar Segal-Peretz</b>	Invited Speaker <b>Dr Daniel Schreiber</b>	1196: 4D Microscopy of red blood cell membrane biophysics during Plasmodium falciparum invasion <b>Dr Niall Geoghegan</b>	426: Correlative workflow for murine pulmonary valve extracellular matrix imaging <b>Prof David Mccomb</b>	Invited Speaker <b>Dr Konstantin Borisenko</b>	
15:45					1253: Analytical 4D STEM with the pnCCD camera <b>Dr Martin Simson</b>	804: Probing Low-energy Hyperbolic Polaritons In Van Der Waals Crystals With An Electron Microscope <b>Mrs Andrea Konecna</b>			1329: In situ surface termination modification of 2D Ti <sub>3</sub> C <sub>2</sub> MXene in an environmental TEM <b>Mr Ingemar Persson</b>	117: 3D Electron Imaging Reveals Structural Development of Malaria Parasites <b>Dr Boyin Liu</b>	1575: Correlative X-ray phase contrast and X-ray fluorescence nanotomography for label-free exploration of tissues, cells and model organisms <b>Dr Alexandra Pacureanu</b>	
16:00	Afternoon Tea, Exhibition and Poster Viewing Exhibition Hall 2											
14:00-17:00	IFSM General Assembly Meeting Room E.1 & E3.2 Afternoon tea served in room											
16:30-18:00	Dedicated Poster Viewing Session Exhibition Hall 2											
19:00-23:00	Congress Dinner Doltone House, Darling Island											
FRIDAY 14 SEPTEMBER 2018												
7:30	Registration Open Outside Exhibition Hall 2 & Ground Level Foyer, International Convention Centre											
8:30	IFSM Symposium Emeritus Prof. Archie Howie Dr. Christian Colliex Prof. Les J. Allen											
10:30	Morning Tea Exhibition Hall 2											
1:45	IFSM Symposium Dr. Frances Ross Prof. Yuichi Ikuhara Prof. Richard Henderson Prof. Jacques Dubochet Prof. Joachim Frank											
13:00	Closing Awards and Ceremony											
13:40-14:15	AMMS Silver Jubilee Celebration / Closing Drinks											