

WEDNESDAY				
	LIFE	NEW FRONTIERS	MATERIALS	SATELLITE
Symposia title	L2.1 Optical Manipulation and Single Molecule Imaging	N2.1 Dynamic Experiments in Materials Science	M2.1 3D reconstruction in Materials Science	S2.1 Advanced SEM I: Tools and Techniques
Organisers	Dr Justin Molloy (MRC)	Prof Pratibha L. Gai (University of York) and Prof. Eva Olsson (Chalmers, Sweden)	Dr Guenter Möbus (University of Sheffield)	Dr Debbie Stokes (FEI) and Prof Ed Boyes (University of York)
9.00am	Plenary - Professor Sir John Meurig Thomas (University of Cambridge) 'The Genius of Michael Faraday'			
10.00am	Break			
10.30am	INVITED High-speed holographic tweezers and imaging, Dr Miles Padgett (University of Glasgow)	INVITED In-situ TEM studies of multifunctional properties in oxide perovskites: Colossal resistance effects and catalytic processes in PrCaMnO, Prof Christian Joob (University of Goettingen)	INVITED Accessing the crystal structure of nano particles "ab initio" by automated electron diffraction, Dr Ute Kolb (University of Mainz)	INVITED Low-voltage high-resolution imaging in the scanning electron microscope, Dr Joe Michael (Sandia National Lab, USA)
10.45am				
11.00am	Single molecule imaging with light sheet-based microscopy in living tissue, Mr Jörg Ritter (University of Bonn)	Angstrom analysis with in-situ dynamic aberration corrected electron microscopy, Prof Pratibha L. Gai and Prof Edward D. Boyes (University of York)	3D X-ray diffraction imaging with 5 nm resolution of embedded nanoparticles, Dr Daniele Pelliccia (Monash University)	Seeing through contamination and damage layers using Energy Selective Scanning Electron Microscopy, Dr Cornelia Rodenburg (University of Sheffield)
11.15am	Single-molecule nanoimaging of inter-receptor distances in cells and tissue, Dr Sarah Needham (Science & Technology Facilities Council)	A new dynamic characterization method for membranes in the ESEM, Mr Herbert Reingruber (University of Technology Graz)	Scanning Confocal Electron Microscopy (SCEM), Dr Peng Wang (University of Oxford)	3D EBSD – An extra dimension Mr Keith Dicks (Oxford Instruments Analytical)
11.30am	Single Molecule FRET studies of DNA Nanoswitches, Dr Alex Knight (National Physical Laboratory)	INVITED Physical measurements on individual nanostructures in a TEM nanolaboratory, Dr Mathieu Kociak (Université Paris Sud)	A Piezoactuated TEM Goniometer inside a TEM Goniometer, Dr Wei Guan (University of Sheffield)	Transparent Combination of SEM with Online Scanned Probe Microscopy Aaron Lewis (Hebrew University of Jerusalem, Israel)
11.45am	Two-color TIRF microscopy and single particle tracking to study the interplay between the membrane skeleton and B cell receptor, Dr Andreas Bruckbauer (Cancer Research UK London Research Institute)		High-resolution, bright-field TEM-tomography of carbon materials, Mr Jens Leschner (Central Facility of Electron Microscopy)	In-situ atomic force microscopy: SEM Meets AFM, Dr Stephan Kleindiek (Kleindiek Nanotechnik)
12.00pm	INVITED Advances in single-molecule FRET microscopy, Dr Achilles Kapanidis (University of Oxford)	Dispensing and surface-induced crystallization of zeptoliter liquid metal alloy drops, Dr Eli Sutter (Brookhaven National Laboratory)	INVITED STEM-HAADF tomography and generalized stereoscopy 3D studies of nano-particles in Transmission Electron Microscopy, Dr Thierry Picier (INSA, France)	Mechanical mapping of a composite surface using combined AFM-FIB, Mr Russell Bailey (Queen Mary University of London)
12.15pm		Real-time nanoscale fatigue and fracture of carbon thin films using a TEM triboprobe, Dr Beverley Inkson (University of Sheffield)		The SEM/FIB Workbench: Nanorobotics system inside of scanning electron or focused ion beam microscopes, Dr Volker Klocke (Klocke Nanotechnik GmbH)
12.30pm	UK SPM Plenary 1: Professor Toshio Ando, Kanazawa University, Japan Dynamic visualization of protein molecules in action by high-speed AFM			
Symposia title	L2.2 Applications of Tomography in Life Sciences	N2.2 Super-resolution fluorescence microscopy	M2.2 Advanced SEM II: Applications	
Organisers	Prof Chris Hawes (Oxford Brookes University) & Kim Findlay (John Innes Centre)	Dr Michelle Peckham (Leeds University) and Dr David Stephens (University of Bristol)	Dr Debbie Stokes (FEI) and Prof Ed Boyes (University of York)	
2.30pm	INVITED 3D ultrastructural architecture and morphogenesis of the flagellar pocket area of Trypanosoma brucei Sue Vaughan (Oxford Brookes University)	INVITED Super-Resolution fluorescence imaging of intracellular structure and dynamics, Prof Sam Hess (University of Maine)	INVITED Applications of advanced SEM to solving key problems in semiconductors: from dopant contrast to CL, Dr Colin Humphreys (University of Cambridge)	
2.45pm				
3.00pm	Electron tomography of the intercalated disc, Ms Amanda Wilson (Kings College London)		Assessment of waveguiding properties of Ga2O3 nanowires by Angle Resolved Cathodoluminescence in the SEM, Prof Bianchi Mendez, (Universidad Complutense de Madrid)	
3.15pm	Analysis of the spatial route of transport through the nuclear pore complex channel using immunogold labelling of transport cargoes in high pressure frozen yeast, Dr Martin Goldberg (Durham University)	Single-Molecule photoswitching microscopy using only a single excitation wavelength, Dr Marcelle Koenig (PicoQuant GmbH)	Identification of Icosahedral Quasicrystalline Phase using Scanning Electron Microscopy, Mrs Tonica Boncina (University of Maribor)	
3.30pm	Break			
4.00pm	Ebola virus: cryo-electron tomographic analysis, Dr Tim Booth (National Microbiology Laboratory)	INVITED Imaging turnover, co-operativity and mechanochemistry in a macromolecular complex, Dr Richard Berry (University of Oxford)	Direct humidity sensing for ESEM, Mr Rowan Leary (University of Leeds)	
4.15pm	Electron Tomography: marker-free alignment procedure, 3D-reconstruction with iterative algorithms on a multi-GPU architecture then data visualization by Digisens, Mr Maxime Wiot (Digisens, France)		Imaging wet particle mixtures, Dr Sergio Lourenco (Cardiff University)	
4.30pm	INVITED Capturing plant development in 3D with optical projection tomography, Dr Karen Lee (BBSRC)		VP-SEM for Failure Analysis-Optimising charge control to reveal hidden information, Dr Stephen Pitman (Cobham Technical Services)	
4.45pm				
5.00pm				