

List of Symposia and Sessions

Instrumentation and Methods

Symposium	Session	Symposium and Session Chairs	Invited Speakers	Session Time and Room	Poster Session
I1 TEM and STEM Instrumentation and Electron Optics		M. Haider			
	I1.1 Aberration Correctors	C. Hetherington, P. Nellist	M. Haider, O. Krivanek	Thu AM Room Berlin	Wed/Thu
	I1.2 Filters, Spectrometers, Monochromators and Sources	E. Plies, P. Tiemeijer	E. Essers, P. Kruit	Wed AM Room Aachen	Wed/Thu
	I1.3 Phase Plates and Detectors	J. Pitzko, R. Schröder	R. Henderson, R. Schröder, L. Strueder	Fri AM Room Toledo	Wed/Thu
I2 TEM and STEM Methods		D. van Dyck			
	I2.1 Quantitative HRTEM and STEM	M. Hytch, A. Rosenauer	S. van Aert, V. Grillo, C. Koch	Thu PM Room Berlin	Wed/Thu
	I2.2 Quantitative Diffraction and Crystallography	J. Labar, J-P. Morniroli,	U. Kolb, S. Nicolopoulos	Mon PM Room Aachen	Mon/Tue
	I2.3 Holography	M. Lehmann, M. McCartney	M. Linck, J. Verbeeck	Wed PM Room Toledo	Wed/Thu
	I2.4 Tomography	Bram Koster, P. Midgley	S. Bals, R. Leapman	Tue PM Room Berlin	Mon/Tue
	I2.5 EELS/EFTEM	F. Hofer V. Serin	D. Muller, P. Schattschneider	part 1: Mon PM ; part 2: Tues AM Room Berlin	Mon/Tue
	I2.6 In-situ TEM and Dynamic TEM	P. Gai L.-M. Peng	G. Campbell, K. Chattopadhyay, J. de Hosson, R. Sinclair	part 1: Tue PM ; part 2: Wed AM Room Aachen	Mon/Tue
I3 SEM/FIB Instrumentation and Methods		L. Frank		Symp. in memory of G. Merli	
	I3.1 SEM Instrumentation and Methods	I. Müllerova	J. Cazaux, V. Morandi, J. Zach	part 1: Wed. AM ; part 2: Wed. PM Room Berlin	Mon/Tue
	I3.2 FIB and Dual Beam – Instrumentation and Methods	Ed Boyes, L. Giannuzzi, C. Volkert	D. Gianola B. Humbel, W.J. Moberlychan, S. Zaefferer	Fri AM Room Berlin	Wed/Thu
I4 Other Microscopies		A. Howie			
	I4.1 Light and X-rays	O. Renault	C. Larabell, G. Schönhense	Wed AM Room Toledo	Wed/Thu
	I4.2 Scanning Probe Microscopy	O. Marti,	F. Besenbacher, R. Wiesendanger,	Thu AM Room Toledo	Wed/Thu
	I4.3 Field Ion Microscopy and Atom Probe	K. Stiller	A. Cerezo T.F. Kelly	Thu PM Room Toledo	Wed/Thu
	I4.4 Surface Analytical Techniques	C. van Haesendonck, John Watts	F. Meyer zu Heringdorf, Chris Grovenor, R. Tromp	Thu PM Room Toledo	Wed/Thu
I5 Image Analysis and Processing		J.M. Carazo			
	I5.1 New Image Processing Developments in Materials Science and Beyond	S. Hovmöller	J.P. Abrahams, J. Sun	Thu AM Room Maastricht	Wed/Thu
	I5.2 New 2D and 3D Image Processing and Analysis Developments in Life Science	S. Lanzavecchia	A. Frangakis, S. Scheres	Tue AM Room Aachen	Mon/Tue
I6 Sample Preparation for Materials Science and Biology		J. Ayache, J. Schroeder	H. Gnaegi, H.-J. Penkalla, H. Schwarz	Fri AM Room Aachen	Wed/Thu

Materials Science

Symposium	Session	Symposium and Session Chairs	Invited Speakers	Session Time	Poster Session
M1 Materials for Information Technology		D. Gerthsen			
	M1.1 Si-based Semiconductors	R. Dunin-Borkowski, J.-L. Rouviere	F. Andrieu, M. Hytch	Mon PM Room Lüttich	Mon/Tue
	M1.2 Compound Semiconductors	A. Craven, P. Ruterana	C. Humphreys, C. Kisielowski	Wed PM Room Lüttich	Wed/Thu
	M1.3 Data Storage/Non-volatile Memories	S. McVitie, J. Zweck	D. Hesse, H.-J. Hug	Tue AM Room Lüttich	Mon/Tue
	M1.4 Nanotubes, Nanowires and Molecular Devices	J. Sloan, M. Terrones	D. Golberg, A.N. Khlobystov	Thu PM Room Aachen	Wed/Thu
M2 Nanomaterials and Catalysts		E. Olsson			
	M2.1 Carbon-based	M. Monthieux	J. Robertson, J.-N. Rouzard	Fri AM Room Lüttich	Wed/Thu
	M2.2 Nanoparticles and Catalysts	S. Giorgio	F. Cadete Santos Aires, J. Calvino	Fri AM Room Maastricht	Wed/Thu
	M2.3 Nanostructured Materials and Nanolab	E. Olsson	C. Colliex, A. Minor	Thu AM Room Lüttich	Wed/Thu
	M2.4 Thin Films and Interfaces	G. Van Tendeloo	P. Boullay, D. McComb	Tue PM Room Lüttich	Mon/Tue

Symposium	Session	Symposium and Session Chairs	Invited Speakers	Session Time	Poster Session
M3 Structural and Functional Materials		H.P. Karthaler			
	M3.1 Alloys and Intermetallics	D. Edmonds, V. Radmilovic	D. Schryvers, K. Tsuchiya	part 1: Wed PM ; part 2: Thu AM Room Aachen	Wed/Thu
	M3.2 Ceramic Materials	M. Ceh, M. Rainforth	D. Cockayne, W. Kaplan	Mon PM Room Toledo	Mon/Tue
	M3.3 Magnetic Materials	J. Chapman, E. Snoeck	R. Dunin-Borkowski, J. Zweck	Thu PM Room Lüttich	Wed/Thu
	M3.4 Dislocations, Interfaces and other Defects	W. Kaplan, J. Thibault	Daniel Caillard, J.M. Howe	Wed AM Room Lüttich	Wed/Thu
	M3.5 Coatings and Graded Materials	A. Czyrska-Filemonowicz, T. Gemming	P.A. Buffat M. Cheynet	Tue AM Room Toledo	Mon/Tue
	M3.6 Biomaterials	L. Hobbs	A. Porter, D. Pum	Wed AM Room Maastricht	Wed/Thu
M4 Soft Matter and Polymers		W. Heckmann, C. Kübel, J. Loos	A. Hitchcock, H. Jinnai, R. Spontak	Tue PM Room Toledo	Mon/Tue
M5 Materials in Mineralogy, Geology and Archaeology		P. van Aken, H.-J. Kleebe	P. Cordier, F. Langenhorst	Tue AM Room Maastricht	Mon/Tue

Life Science

Symposium	Session	Symposium and Session Chairs	Invited Speakers	Session Time	Poster Session
L1 Analysis of Macromolecules and their Supramolecular Assemblies		W. Baumeister		Symposium in Memory of N. Boisset	
	L1.1 Cryo-electron Microscopy of Macromolecular Complexes and Supramolecular Assemblies/ Fitting Atomic Structures into TEM Density Maps	R. Beckmann, O. Medalia, P. Schultz, H. Stark	M. Beck, B. Böttcher, J.L. Carrascosa, F. Tama	Wed PM Room Maastricht	Wed/Thu
	L1.2 New 2D and 3D Image Processing and Analysis Developments	S. Lanzavecchia	A. Frangakis, S. Scheres	Tue AM Room Aachen	Mon/Tue
L2 Cell Structure and Dynamics		J. Roth			
	L2.1 Tomography of Cells and Organelles	B. Koster	M. Barcena L. van Niftrik	Wed AM Room Hasselt	Wed/Thu
	L2.2 Functional Organisation of Micro-organisms, Cells and Tissues	P. Hozak	P. Friedl Z. Vertesy	Mon PM Room Hasselt	Mon/Tue
	L2.3 Tracking Molecular Events in vivo/ Tracking the Dynamics of Cells and Organelles	A. Diaspro, M. Hof, C. Schultz	K. Breackmans, V.R. Caiolfa, J. Dobrucki	Tue AM Room Hasselt	Mon/Tue
	L2.4 Imaging Cells and Tissues in vivo	E. Manders, J. Salamero	M.C. Cardoso W. de Vos	Tue PM Room Maastricht	Mon/Tue
L3 Microscopy Advances in the Life Sciences		A. Engel			
	L3.1 High-resolution Fluorescence and Confocal Microscopy/Nonlinear Microscopy	H.C. Gerritsen, J.-P. Timmermans	Stefan Jakobs, Peter So, P. Vandenabeele, M. van Zandvoort	Wed PM Room Hasselt	Wed/Thu
	L3.2 Biological Nanomachines and Nanomanipulation	J.L. Carrascosa	C. Schmidt, G. Wuite	Thu PM Room Hasselt	Wed/Thu

Symposium	Session	Symposium and Session Chairs	Invited Speakers	Session Time	Poster Session
	L3.3 Microscopy in Human Health and Disease	H. Gelderblom, B. Hauröder, A. Warley	A. Curry, G. Griffiths, A. LeFurgey	part 1: Thu PM ; part 2: Fri AM Room Hasselt	Wed/Thu
L4 Sample Preparation and Identification of Molecular Targets		J. Dubochet			
	L4.1 Ultrastructural Localization of Molecules and Elements	H. Schwarz	A. Al-Amoudi, G. Posthuma	Thu AM Room Hasselt	Wed/Thu
	L 4.2 Recombinant in situ Labelling for Light and Electron Microscopy /Advanced Methods of Sample Preparation for the Life Sciences	J. Nebesarova, J. Schröder, P. Verkade	M.G. Botelho, B. Giepmans, P.J. Peters, B. Zuber	Tue PM Room Hasselt	Mon/Tue
L5 Hybrid Methods and Approaches in Microscopy		A. Verkleij			
	L5.1 Correlative Light, Electron and Scanning Probe Microscopy	R. Wepf	A.V. Agronskaia, H. Hohenberg, M. Lucas	Mon PM Room Maastricht	Mon/Tue
	L5.2 Cellular Imaging and Nano-analytics	D. Ploton	A. Croisy J. Michel	Thu PM Room Hasselt	Wed/Thu

EMC 2008 Week Schedule

Time-of-day	Mo	Tue	Wed	Thu	Fr
8:30	9:00 Opening Ceremony	Plenary Lectures PL3 & PL4	Plenary Lectures PL5 & PL6	Plenary Lectures PL7 & PL8	Sessions I1.3, I3.2, I6, M2.1, M2.2, L3.3
9:30		Sessions I2.5, I5.2, M1.3, M3.5, M5, L1.2, L2.3	Sessions I1.2, I2.6, I3.1, I4.1, M3.4, M3.6, L2.1	Sessions I1.1, I4.2, I5.1, M2.3, M3.1, L4.1	
10:30	Tea & Coffee	Tea & Coffee	Tea & Coffee	Tea & Coffee	Tea & Coffee
11:00	Plenary Lectures PL1 & PL2	Sessions continued	Sessions continued	Sessions continued	Sessions continued
12:30	Technical Lectures	Technical Lectures	Technical Lectures	Technical Lectures	Closing Ceremony
13:30	Posters, Tea & Coffee I2.2, I2.4, I2.5, I2.6, I3.1, I5.2, M1.1, M1.3, M2.4, M3.2, M3.5, M4, M5, L1.2, L2.2, L2.3, L2.4, L2.5, L4.2, L4.3, L5.1		Posters, Tea & Coffee I1.1, I1.2, I1.3, I2.1, I2.3, I3.2, I4.1, I4.2, I4.3, I4.4, I5.1, I6, M1.2, M1.4, M2.1, M2.2, M2.3, M3.1, M3.3, M3.4, M3.6, L1.1, L1.3, L2.1, L3.1, L3.2, L3.3, L3.4, L4.1, L5.2		
15:30	Sessions I2.2, I2.5, M1.1, M3.2, L5.1, L2.2	Sessions I2.4, I2.6, M2.4, M4, L2.4, L4.2	Sessions I2.3, I3.1, M1.2, M3.1, L1.1, L3.1	Sessions I2.1, I4.3, I4.4, M1.4, M3.3, L3.2, L3.3, L5.2	
18:00–18:30					

Sunday Courses

The Sunday Courses will be given on 31 August 2008 from 14:00 to 17:00 in the Eurogress Centre. Participation is free of charge for all registered delegates, however participants have to sign up for the chosen course in order to facilitate the planning and the preparation of course materials.

The following Sunday Courses will be given:

Title	Lecturer	Room
Advanced Electron Diffraction Techniques	Jean-Paul Morniroli	Lüttich
Electron Energy Loss Spectroscopy	Odile Stephan	Toledo
Aberration Corrected TEM and Exit Wave Reconstruction	Andreas Thust	Aachen
Applications of FIB in Specimen Preparation and Nanostructuring	Beverley Inkson	Hasselt
Tomography	Paul Midgley	Maastricht
Confocal Microscopy in Life Sciences	Markus Duerrenberger	Eifel

Opening Ceremony and FEI Award Presentation

Monday 1 September 2008
from 9:00 to 10:30, Room Berlin

Professor Joachim Mayer, Chairman EMC 2008
Professor Ernst Schmachtenberg, Rector of RWTH Aachen University
Dr. Jürgen Linden, Mayor of Aachen
Dr. Michael Stückradt, Secretary of State,
North-Rhine Westphalia
Professor Ueli Aebi, EMS President
Professor Helmut Kohl, DGE President

FEI Award Lecture:
Physical and Materials Science
Martin Hytch, CEMES-CNRS, Toulouse:
“Geometric Phase and the Electron Microscope”

FEI Award Lecture: Life Science
Ohad Medalia, The Ben-Gurion University,
Beer-Sheva : “The Molecular Architecture of
Integrin-mediated Cell Adhesion Revealed by
Cryo-Electron Tomography”

Plenary Lectures

Plenary Lectures – Schedule

Time	Speaker	Title
Mon 1 September 2008 (start time 11:00)	PL1: A. Bleloch	Aberration Corrected STEM and EELS: Atomic Scale Chemical Mapping (Room Berlin)
	PL2: W. Baumeister	Cryoelectron Microscopy: from Molecules to Systems (Room Aachen)
Tue 2 September 2008 (start time 8:30)	PL3: K. Urban	Atomic Studies on Ferroelectric Oxides by Aberration Corrected Transmission Electron Microscopy (Room Berlin)
	PL4: A. Engel	Progress in High-resolution Scanning Probe Microscopy (Room Aachen)
Wed 3 September 2008 (start time 8:30)	PL5: U. Dahmen	An Update on the TEAM Project – First Results from the TEAM 0.5 Microscope, and its Future Development (Room Berlin)
	PL6: J. Susini	Synchrotron Based X-ray Microscopy: State of the Art and Applications (Room Aachen)
Thur 4 September 2008 (start time 8:30)	PL7: K. Suenaga	Direct Observation of Atomic Defects in Carbon Nanotubes and Fullerenes (Room Berlin)
	PL8: E. Umbach	High-resolution Spectro-Microscopy with Low-voltage Electrons and Double Aberration Correction (Room Aachen)

Day-by-Day Schedule (Oral Presentations)

Monday afternoon	Room: Berlin	Room: Aachen	Room: Toledo
	12.5 EELS/EFTEM (Part I)	12.2 Quantitative Diffraction and Crystallography	M3.2 Ceramic Materials
Symp. Chair	D. van Dyck	D. van Dyck	H.P. Karnthaler
Session Chairs	F. Hofer, V. Serin	J.-P. Morniroli, J. Labar	M. Ceh, M. Rainforth
15.30	100 Atomic-Scale Chemical Imaging of Composition and Bonding by Aberration-Corrected Microscopy David Muller (invited), Lena Fitting Kourkoutis, Matthew Murfitt, Jong-Hyun Song, Harold Y. Hwang, John Silcox, Niklas Delby, Ondrej Krivanek	110 Advances in automated diffraction tomography Ute Kolb (invited), T. Gorelik, E. Mugnaioli, G. Matveeva, M. Otten	120 Grain Boundary Interfaces in Ceramics David Cockayne (invited), Shao-Ju Shih, Karleen Dudeck, Neil Young
15.45	Cornell University, 274 Clark Hall 14853 Ithaca, NY United States	Johannes Gutenberg-University, Welderweg 11 55099 Mainz Germany	University of Oxford, Parks Road OX13PH Oxford United Kingdom
16.00	101 Sub-0.5 eV EFTEM Mapping using the Zeiss SESAM Christoph T. Koch, Wilfried Sigle, Jaysen Nelayah, Lin Gu, Vesna Srot, Peter A. van Aken Stuttgart Center for Electron Microscopy, Max Planck Institute for Metals Research Heisenbergstraße 3, 70569 Stuttgart Germany	111 Identification/ fingerprinting of nanocrystals by precession electron diffraction Stavros Nikolopoulos (invited), P.Moeck, Y. Maniette, P.Oleynikov	121 Structure and chemistry of nanometer-thick intergranular films at metal-ceramic interfaces Wayne Kaplan (invited), Mor Baram
16.15	102 Dual energy range EELS spectrum imaging using a fast beam switch Maureen MacKenzie, Alan Craven , Sam McFadzean University of Glasgow, University Avenue G12 8QQ Glasgow United Kingdom	NanoMEGAS, Blvd Edmond Machtens 79 B-1080 Brussels Belgium	Technion - Israel Institute of Technology, Dept. of Materials Eng. Technion 32000 Haifa Israel
16.30	103 EELS fine structure tomography using spectrum imaging Zineb Saghi , Xiaojing Xu, Gunter Moebus University of Sheffield, Hadfield Building, Mappin Street S1 3JD Sheffield United Kingdom	112 Towards a quantitative understanding of precession electron diffraction Alexander Eggeman , Thomas White, Paul Midgley University of Cambridge, Pembroke Street CB2 3QZ Cambridge United Kingdom	122 The structural origin of the antiferroelectric properties and relaxor behavior of Na _{0.5} Bi _{0.5} TiO ₃ Vincent Dorcet , Gilles Trolliard, Philippe Boullay ENSICAEN, 6 boulevard du Maréchal Juin 14050 Caen France
16.45	104 Investigation of the valency distribution in Cu _{1.2} Mn _{1.8} O ₄ using quantitative EELS near-edge structures analysis Christian Maunders , Boris Martin, Ping Wei, Anthony Petric, Gianluigi Botton McMaster University, 1280 Main St West L8S 4L8 Hamilton Canada	113 Software Precession Electron Diffraction Christoph Koch , Paul Bellina, Peter A. van Aken Max Planck Institute for Metals Research, Heisenbergstr. 3 70569 Stuttgart Germany	123 Transmission Electron Microscopy Studies of Lead-Free Ferroelectrics in the System BNT-BT-KNN Stefan Lauterbach, Hans-Joachim Kleebe , Jens Kling, Ljuba Schmitt, Hartmut Fuess Institut für Angewandte Geowissenschaften, Schnittpahnstrasse 9 64287 Darmstadt Germany
17.00	105 Local Analysis of BaTiO ₃ /SrTiO ₃ interfaces by STEM-EELS Hiroki Kurata , Ryohei Kozawa, Masanori Kawai, Yuichi Shimakawa, Seiji Isoda Institute for Chemical Research, Kyoto University, Gokasho Uji, Kyoto 611-0011 Japan	114 On the Origin and Asymmetry of High Order Laue Zone Lines Splitting in Convergent Beam Electron Diffraction Jean-Luc Rouvière , Armand Béché, Laurent Clément CEA-Grenoble, 17 rue des Martyrs 38054 Grenoble France	124 ReO ₃ -Related Aluminum Tungsten Oxides Showing a Novel Type of Crystallographic Shear Structure Frank Krumeich , Greta Patzke ETH Zurich, HCI-H111 8093 Zurich Switzerland
17.15	106 Smart acquisition EELS Kasim Sader , Peng Wang, Andrew Bleloch, Andy Brown, Rik Brydson SuperSTEM, Keckwick Lane WA4 4AD Warrington United Kingdom	115 Differential Electron Diffraction Philip Nakashima Monash University, Department of Materials Engineering Monash University, Victoria 3800 Clayton Australia	125 Structural characterisation of a new rich iron layered oxide Tl ₂ Sr ₂₅ -yFe ₃₀₀₇₆ -x Christophe Lepoittevin , Sylvie Malo, Sylvie Hebert, Maryvonne Hervieu, Gustaaf Van Tendeloo University of Antwerp-EMAT laboratory, Groenenborgerlaan 171 2020 Antwerpen Belgium
17.30	107 Atomic-resolution studies of complex oxide materials using in-situ scanning transmission electron microscopy Robert Klie , Guang Yang, Yuan Zhao University of Illinois, 845 W Taylor Street M/C 273 60607 Chicago United States	116 Structural studies of amorphous materials using RDF, RMC and DFT refinement David Cockayne , Konstantin Borisensko, Yixin Chen, Guoqiang Li, Se Ahn Song University of Oxford, Parks Road OX13PH Oxford United Kingdom	126 Diagnostic of Li battery cathode by EELS, first principles calculation and spectrum-imaging with multi-variate analysis Kazuyoshi Tatsumi , Yusuke Sasano, Shunsuke Muto, Tsuyoshi Sasaki, Yoji Takeuchi, Kayo Horibuchi, Yoshio Ukyo Nagoya University, Furo-cho, Chikusa-ku, Nagoya 464-860 Nagoya Japan
17.45		117 Electron crystallography by quantitative CHEF Florent Houdellier , Martin J Hÿtch CEMES-CNRS, 29 rue Jeanne Marvig 31005 Toulouse France	127 Local chemical inhomogeneities in NaNb _{1-x} TaxO ₃ as observed by HRTEM and HAADF-STEM Almudena Torres-Pardo , Ester García-González, Jose M. González-Calbet, Frank Krumeich, Reinhard Nesper Universidad Complutense de Madrid, Av. Complutense s/n Facultad de Ciencias Químicas 28040 Madrid Spain

Room: Lüttich	Room: Maastricht	Room: Hasselt
M1.1 Si-based Semiconductors	L5.1 Correlative Light, Electron and Scanning Probe Microscopy	L2.2 Functional Organization of Microorganisms, Cells and Tissues
D. Gerthsen	A. Verkleij	J. Roth
J-L. Rouviere, R. Dunin-Borkowski	R. Wepf	P. Hozak
130 Dark-field electron holography for the measurement of strain in nanostructures and devices Martin Hytch (invited), Florent Houdellier, Florian Hue, Etienne Snoeck CEMES/CNRS, 29 rue Jeanne Marvig 31055 Toulouse France	140 Integrated laser and transmission electron microscopy Alexandra Agronskaia (invited), Jack Valentijn, Linda van Driel, Bruno Humbel, Arie Verkleij, Bram Koster, Hans Gerritsen Utrecht University, Princetonplein 1 3584 CC Utrecht Netherlands	150 Iridovirus-like viruses of Lacerta monticola from Serra da Estrela, Portugal António Alves de Matos , Maria Caeiro, Guilherme Costa, Teresa Granja, Tibor Papp, Rachel Marschang Lisbon University, Cidade Universitária 1649-003 Lisboa Portugal 151 Surface layers of ore-leaching Bacteria and Archaea Reinhard Rachel , Andreas Klingl, Cordula Neuner, Wulf Depmeier, Gottfried Schmalz, Michael Thomm, Harald Huber University of Regensburg, Universitaetsstr 31 D-93053 Regensburg Germany
131 Some device challenges towards the 22nm CMOS technology François Andrieu (invited) CEA-LETI Minattec, 17 rue des Martyrs 38054 Grenoble Cedex 9 France	141 Analysis of multimodal 3D microscopy measurements Martin Ritter , Axel Kranzmann, Matthias Hemmleb Bundesanstalt für Materialforschung und -prüfung (BAM), Fachgruppe V.1 Unter den Eichen 87 12205 Berlin Germany	152 Multimodality of pericellular proteolysis in cancer cell invasion Peter Friedl (invited) Department of Cell Biology, Nijmegen Center for Molecular Life Science, Radboud University Nijmegen Netherlands
132 Challenges to TEM in high performance microprocessor manufacturing Hans-Juergen Engelmann , Holm Geisler, René Huebner, Pavel Potapov, Dirk Utess, Ehrenfried Zschech AMD Saxony LLC & Co. KG, Wilschdorfer Landstrasse 101 MS E23-MA D-01109 Dresden Germany	142 Discovery of a Nuclear Structure in UVC-induced Apoptotic Cells by Integrated Laser Electron Microscopy Matthia A. Karreman, Alexandra V. Agronskaia, Hans C. Gerritsen, Arie J. Verkleij, Fons F.M. Cremers, Bruno M. Humbel Utrecht University, Padualaan 8 3584 CH Utrecht Netherlands	153 Photonic crystal type nanoarchitectures in butterfly wing scales Zofia Vértesy (invited), Krisztián Kertész, Zsolt Bálint, Géza Márk, Levente Tapasztó, Jean Pol Vigneron, László Péter Biró MTA MFA, 1121 Budapest Konkoly Thege M. 29-33 49 1525 Budapest Hungary
133 Strain study in transistors with SiC and SiGe source and drain by STEM nano beam diffraction Paola Favia , Dmitri Klenov, Geert Eneman, Peter Verheyen, M. Bauer, D. Weeks, S.G. Thomas, Hugo Bender IMEC, Kapeldreef 75 3001 Leuven Belgium	143 Denaturation of metaphase chromatin plates observed by transmission electron microscopy and atomic force microscopy in aqueous solution Isaac Gállego , Xavier Sisquella, Xavier Fernández-Busquets, Joan Ramon Daban Universitat Autònoma de Barcelona, Facultat de Biociències, Edifici Cs 08193 Bellaterra (Cerdanyola del Vallés) Spain	154 Structure of Bacillus anthracis spores analyzed by CemoVis Martin Sachse , Gerard Pehau-Arnaudet, Evelyne Couture-Tosi, Jean-Luc Ranck, Patricia Sylvestre, Michel Mock Institute Pasteur, 25 - 28 Rue du Dr Roux 75724 Paris Cedex 15 France
134 Comparison of 3D potential structures at different pn- junctions in FIB-prepared silicon and germanium samples measured by electron-holographic tomography Andreas Lenk , Daniel Wolf, Hannes Lichte TU Dresden, Zum Triebenberg 50 01328 Dresden Germany	144 Correlative 3D microscopy: CLSM and FIB/SEM tomography used to study cellular entry of vaccinia virus Miriam Lucas (invited), Philippe Gasser, Maja Günthert, Jason Mercer, Ari Helenius, Roger Wepf ETH Zurich, EMEZ Electron Microscopy ETH Zurich Wolfgang-Pauli-Str. 16 HPT C108 8093 Zurich Switzerland	155 Insights into the role of pUL71 during HCMV morphogenesis Paul Walther, Martin Schauflinger , Sandra Landwehr, Thomas Mertens, Jens von Einem University of Ulm, Z. E. Elektronenmikroskopie Albert-Einstein-Allee 11 89069 Ulm Germany
135 STEM EELS/EDX dopant analysis of nm-scale Si devices Germain Servanton , Roland Pantel, Marc Juhel, François Bertin STMicroelectronics, 850 rue Jean Monnet 38926 Crolles France	145 Strategies for the morphological analysis of hydrated and life-like preserved biomedical material in the SEM Heinrich Hohenberg (invited) University of Hamburg, Martinistr. 52 20251 Hamburg Germany	156 The Role Of Insulin Signaling In Skin Cell Cytoskeleton Assembly Effy Wertheimer , Ekatherine Palekhin, Galina Weingarten, Dina Amihai, Ilan Hammel Tel Aviv University Sackler Medical School, Dept of Pathology Sackler School of Medicine Tel Aviv University, Ramat Aviv, Tel Aviv 69978 Israel

Tuesday morning	Room: Berlin
8:30	Plenary Lecture K. Urban Atomic Studies on Ferroelectric Oxides By Aberration Corrected Transmission Electron Microscopy

Tuesday morning	Room: Berlin	Room: Aachen	Room: Toledo
	I2.5 EELS / EFTEM (Part II)	I5.2 / L1.2 New 2D and 3D Image Processing and Analysis Developments in Life Science	M3.5 Coatings and Graded Materials
Symp. Chair Session Chairs	D. van Dyck F. Hofer, V. Serin	J.M. Carazo S. Lanzavecchia	H.P. Karnthaler A. Czyska-Filemonowicz, T. Gemming
9:30	200 EMCD with nm Resolution and Below: Experiments, Proposals, and a Paradox Peter Schattschneider (invited), Michael Stöger-Pollach, Feng Tian, Johan Verbeeck Vienna University of Technology, Wiedner Hauptstr. 8-10 / E138 A-1040 Wien Austria	210 Multiple protein structures in one shot: maximum-likelihood image classification in 3D-EM Sjors Scheres (invited), J.M. Carazo Centro Nacional de Biotecnología - CSIC, Calle Darwin, 3 28049 Madrid Spain	220 Advanced analytical transmission electron microscopy to investigate nano-graded materials properties Marie Cheynet de Beaupré (invited), Simone Pokrant, Lucile Joly-Pottuz, Jean-Michel Martin CNRS, Domaine Universitaire BP 75 38402 Grenoble France
9:45			
10:00	201 Experimental conditions and data evaluation for quantitative EMCD measurements in the TEM Hans Lidbaum , Ján Ruzs, Andreas Liebig, Björgvin Hjörvarsson, Peter M. Oppeneer, Ernesto Coronel, Olle Eriksson, Klaus Leifer Uppsala University, Ångström laboratory, Lägerhyddsvägen 1 Box 534 75121 Uppsala Sweden	211 Implementation of common algorithms for 3D electron microscopy on the GPU Achilleas Frangakis (invited)	221 New Fullerene like materials for tribological applications: TEM and EELS study Virginie Serin , Nathalie Brun, Christian Colliex CEMES-CNRS, 29 rue J. Marvig 31055 Toulouse France
10:15	202 EELS mapping of surface plasmons in star-shaped gold nanoparticles: morphological behaviour of optical properties from star to sphere Stefano Mazzucco , Odile Stéphan, Mathieu Kociak, Christian Colliex Laboratoire de Physique des Solides, Université Paris-Sud, Batiment 510 91405 Orsay France		222 Structural and interface studies of a nano-scale TiAlN/CrN/alumina coating Ian Ross University of Sheffield, Sir Robert Hadfield Building Mappin Street, Sheffield S1 3JD Sheffield United Kingdom
10:30	Coffee	Coffee	Coffee
11:00	203 Low-loss EELS Measurements on an Oxide Multilayer System using Monochrome Electrons Gerald Kothleitner , Bernhard Schaffer, Martina Dienstleder Graz University of Technology, Steyrergasse 17 8010 Graz Austria	212 Measurement of surface area of biological structures, based on 3D microscopic image data Lucie Kubinova , Jiri Janacek Institute of Physiology, ASCR, Videnska 1083 CZ-14220 Prague 4 Czech Republic	223 Optimizing Electron Diffraction and EDS for Phase Identification in Complex Structures: Application to Multilayered Ti-Ni-P Coatings Philippe A. Buffat (invited), Aleksandra Czyska-Filemonowicz
11:15	204 Distortion corrections of ESI data cubes for magnetic studies Christophe Gatel , Bénédicte Warot-Fonrose, Florent Houdellier, Peter Schattschneider CNRS, 29, rue Jeanne Marvig BP 94347 31055 Toulouse France	213 The imaging function for tilted samples: simulation, image analysis and correction strategies Valerio Mariani , A. Schenk, A. Engel, A. Philippsen University of Basel, Klingelbergstr. 70, 4056 Basel, Switzerland	Ecole Polytechnique Fédérale de Lausanne, CIME Station 12 CH-1015 Lausanne Switzerland
11:30	205 Obtaining the Loss Function from Angle Resolved-Electron Energy Loss Spectra Giovanni Bertoni , Jo Verbeeck, Fons Brosens EMAT, University of Antwerp, Groenenborgerlaan 171 2000 Antwerp Belgium	214 Advances in Biological Microprobe Analysis using Event Streamed Spectrum Imaging and Programmed Beam Acquisition Peter Ingram , Scott Davilla, Ann LeFurgey Duke University Medical Center, 90319 LaSalle Street Ext. 27708 Durham NC United States	224 Phase determination of nanocrystalline Al-Cr-O coatings by analytical TEM Jürgen Thomas , J. Ramm, B. Arnold, B. Widrig, T. Gemming IFW Dresden PF 270116 01171 Dresden Germany
11:45	206 Band gap mapping using monochromated electrons Lin Gu , Wilfried Sigle, Christoph Koch, Vesna Srot, Jaysen Nelayah, Peter van Aken Max-Planck Institute for Metals Research, Heisenbergstr. 3 70569 Stuttgart Germany	215 Structure of OprM-MexA interacting complex revealed by cryo electron tomography Sylvain Trepout , Jean-Christophe Taveau, Houssain Benabdelhak, Arnaud Ducruix, Achilleas Frangakis, Olivier Lambert CBMN, Bat B8, Université Bordeaux 1 Avenue des Facultés 33405 TALENCE France	225 Contribution of electron microscopy techniques to the chemical and structural characterization of TiC/a-C nanocomposite coatings Carlos López Cartes , Diego Martínez Martínez, Juan Carlos Sánchez López, Asunción Fernández Universidad de Sevilla, Avda. Américo Vespucio nº49 41092 Seville Spain

Room: Aachen

Plenary Lecture

A. Engel

Progress in High-resolution Scanning Probe Microscopy

Room: Lüttich	Room: Maastricht	Room: Hasselt
M1.3 Data Storage/Non-volatile Memories	M5 Materials in Mineralogy, Geology and Archaeology	L2.3 Tracking Molecular Events in vivo / Tracking the Dynamics of Cells and Organelles
D. Gerthsen	H.-J. Kleebe, P. van Aken	J. Roth
J. Zweck, S. McVitie		M. Hof, A. Diaspro, K. Schultz
230 Mapping uncompensated spins in exchange-biased systems by high resolution and quantitative magnetic force microscopy Hans-Josef Hug (invited) Empa, Überlandstrasse 129 8600 Dübendorf Switzerland	240 TEM applied on the interface characterisation of the replacement reaction chlorapatite by hydroxyapatite Ute Golla-Schindler , Ane Engvik, Hakon Austrheim, Andrew Putnis University of Muenster, Corrensstrasse 24, 48149 Muenster, Germany 241 An examination of Van Gogh's painting grounds using analytical electron microscopy - sem/fib/tem/edx Ralph Haswell , Ulrike Zeile, Cees Mensch Shell Global Solutions International BV, Shell Research and Technology centre, Amsterdam 38000 1030BN Amsterdam Netherlands	250 Confocal Microscopy Reveals Molecular Interactions Between DNA-binding Drugs and Chromatin in Live Cells Jurek Dobrucki (invited), Krzysztof Wojcik Jagiellonian University, Gronostajowa 7 30-387 Krakow Poland
231 Exploring structural dependence of magnetic properties in FePt nanoparticle by Cs-corrected HRTEM zaoli Zhang , Johannes Biskupek, Ute Kaiser, Ulf Ulf Wiedwald, Luyang Han, Paul Ziemann2 Ziemann Ulm University, Albert-Einstein-Allee 11, D-89081 Ulm Germany	242 Amorphisation in fersnoite compounds - a combined ELNES and XANES study Thomas Höche , Frank Heyroth, Peter A. van Aken, Frank Schrepel, Grant S. Henderson, Robert I.R. Blyth Leibniz-Institut für Oberflächenmodifizierung e.V., Permoserstraße 15, D-04318 Leipzig Germany	251 Fluorescence microscopy methods for measuring the mobility and stability of molecules in 3-D samples Kevin Braeckmans (invited), Dries Vercauteren, Hendrik Deschout, Davide Mazza, Alberto Diaspro, Stefaan De Smedt, Jo Demeester Ghent University, Lab General Biochemistry and Physical Pharmacy Harelbekestraat 72 9000 Gent Belgium
232 Transmission Electron Microscopy Analysis of Tunnel Magneto Resistance Elements with Amorphous CoFeB Electrodes and MgO Barrier Michael Seibt , Gerrit Eilers, Marvin Walter, Kai Ubben, Karsten Thiel, Volker Drewello, Andy Thomas, Günter Reiss, Markus Münzenberg Georg-August-University Göttingen, Friedrich-Hund-Platz 1 D-37077 Göttingen Germany	243 Micro- and nano-diamond particles in carbon spherules found in soil samples Zhiqing Yang, Dominique Schryvers , Wolfgang Rösler, Nicu Tarcea, Jürgen Popp University of Antwerp, Groenenborgerlaan 171 B-2020 Antwerp Belgium	
Coffee	Coffee	Coffee
233 Ferroelectric Materials and Structures Suitable for Data Storage: The Role of Microscopies in Establishing Preparation-Microstructure-Property Relations Dietrich Hesse (invited), Marin Alexe, Ksenia Boldyreva, Hee Han, Woo Lee, Andriy Lotnyk, Brian Rodriguez, Stephan Senz, Ionela Vrejoiu, Nikolai Zakharov Max Planck Institute of Microstructure Physics, Weinberg 2 D-06120 Halle Germany	244 New insights into ultra-high pressure metamorphism from TEM studies Falko Langenhorst (invited), Alberto Escudero Bayerisches Geoinstitut, Universitätsstr. 30, 95447 Bayreuth Germany	252 Phasor-FLIM analysis of FRET for homotypic and heterotypic non-covalent interactions: stimulated membrane receptors in live cells Valeria R. Caiolfa (invited), Enrico Gratton, Moreno Zamai San Raffaele Scientific Institute, Via Olgettina 58 20132 Milano Italy
	245 Characterization of a (021) twin in coesite using LACBED and precession electron diffraction Patrick Cordier (invited) Université des Sciences et Technologies de Lille, Cite scientifique 59655 Villeneuve d'Ascq, France	253 The freeze-fracture replica immunolabeling technique for the study of lipid droplet biogenesis and function Horst Robenek , Insa Buers, Oliver Hofnagel, Mirko J. Robenek, David Troyer, Nicholas J. Severs Leibniz-Institute for Arteriosclerosis Research, Domagkstr. 3, 48167 Münster Germany

Tuesday afternoon	Room: Berlin	Room: Aachen	Room: Toledo
	12.4 Tomography	12.6 In-situ TEM and Dynamic TEM (part 1)	M4 Soft Matter and Polymers
Symp. Chair Session Chairs	D. van Dyck P. Midgley, B. Koster	D. van Dyck P. Gai, L.M. Peng	W. Heckmann, C. Kübel, J. Loos
15.30	300 Quantitative electron tomography of biological structures using elastic and inelastic scattering Richard Leapman (invited), Maria Aronova, Alioscka Sousa, Guofeng Zhang, Martin Hohmann-Marriott	310 Observing Nanosecond Phenomena at the Nanoscale with the Dynamic Transmission Electron Microscope Geoffrey Campbell (invited), Nigel Browning, Judy Kim, Thomas LaGrange, Bryan Reed, Mitra Taheri, J. S. Kim	320 Transmission Electron Microtomography of Nonequilibrium Polymer Surfaces and Interfaces Richard Spontak (invited)
15.45	National Institutes of Health, Bldg. 13, Rm. 3N17 13 South Drive MD 20892 Bethesda United States	Lawrence Livermore National Laboratory, MS-356 7000 East Ave. PO Box 808 94550 Livermore, CA United States	Department of Materials Science and Engineering, North-Carolina State University, Raleigh, NC 27695, United States
16.00	301 STEM electron tomography of gold nanostructures Juan Carlos Hernandez , M. Sergio Moreno, Eduardo A. Coronado, Paul A. Midgley University of Cambridge, Pembroke Street CB2 3QZ Cambridge United Kingdom	311 Pulsed-mode Photon and Electron Microscopy Surveyed Archie Howie University of Cambridge, Cavendish Laboratory Madingley Road CB3 0HE Cambridge United Kingdom	321 Self-assembled block copolymer structures studied by transmission electron microtomography Hiroshi Jinnai (invited), Takeshi Kaneko, Clarissa Abetz Volker Abetz
16.15	302 Four-dimensional STEM-EELS Tomography Konrad Jarausch , Donovan Leonard, Ray Twesten, Paul Thomas Hitachi High Technologies America, 5100 Franklin Dr. Pleasanton, CA 94588 United States	312 Dynamic in situ experiments in a double aberration corrected environment Pratibha Gai , Edward Boyes University of York, York JEOL Nanocentre, Department of Physics, Heslington YO10 5DD YORK United Kingdom	Kyoto Institute of Technology, Matsugasaki 606-8585 Kyoto Japan
16.30	303 Tomographic imaging ultra-thick specimens with nanometer resolution Joachim Loos, Erwan Sourty , Bert Freitag, David Wall, Dong Tang, Kangbo Lu Eindhoven University of Technology, P.O.Box 513, 5600MB Eindhoven, Netherlands	313 Some Recent Materials Applications of In Situ High Resolution Electron Microscopy Robert Sinclair (invited), S.K. Kang, K.H. Kim, J.S. Park	322 High voltage electron micro-tomography and quantitative image analysis of carbon nanotube (CNT) network in conductive polycarbonate composites. Hajime Matsumoto Mitsubishi Chemical Co., 1000 Kamoshida-cho, Aoba-ku 2278502 Yokohama Japan
16.45	304 Discrete tomography in materials science: less is more? Sara Bals (invited), Joost Batenburg, Gustaaf Van Tendeloo	Stanford University, 496 Lomita Mall Durand Materials Science 94305 Stanford United States	323 Analysis of nano-composites based on carbon nanoparticles imbedded in polymers Kangbo Lu Chinese 5600 MB, Eindhoven 5600 MB Eindhoven Netherlands
17.00	EMAT-University of Antwerp, Groenenborgerlaan 171 2020 Antwerp Belgium	314 In situ Lorentz microscopy in an alternating current magnetic field Zentaro Akase , Hiroaki Kakinuma, Daisuke Shindo, Masao Inoue Tohoku University, 2-1-1 Katahira Aobaku 980-8577 Sendai Japan	324 Quantitative Chemistry and Orientation of Polymers in 2-d and 3-d by Scanning Transmission X-ray Microscopy Adam Hitchcock (invited), Goran Johansson, Daniel Hernández Cruz, Ebrihim Najafi, Jeffrey Li, Harald Stöver
17.15	305 Quantification of Nanoparticle Tomograms Zineb Saghi , Xiaojing Xu, Gunter Moebus University of Sheffield, Hadfield Building, Mappin Street S1 3JD Sheffield United Kingdom	315 Melting and solidification of alloys embedded in a matrix at nanoscale Kamania Chattopadhyay (invited), Victoria Bhattacharya, Krishanu Biswas	McMaster University, BIMR 1280 Main St W L8S 4M1 Hamilton Canada
17.30	306 Towards atomic-scale bright-field electron tomography for the study of fullerene-like nanostructures Maya Bar Sadan , Lothar Houben, Sharon G. Wolf, Andrey Enyashin, Gotthard Seifert, Reshef Tenne, Knut Urban Institute of Solid State Research, Research Centre Juelich GmbH 52425 Juelich Germany	Indian Institute of Science 560012 Bangalore India	325 Multilamellar nanoparticles from PS-b-PVME copolymers Christelle Lefebvre, Jean-Luc Putaux , Michel Schappacher, Alain Deffieux, Redouane Borsali CERMAV-CNRS, BP 53 38041 Grenoble Cedex 9 France
17.45	307 Three-dimensional potential mapping of nanostructures with electron-holographic tomography Daniel Wolf , Andreas Lenk, Hannes Lichte Technische Universität Dresden, Zum Triebenberg 50, 01328 Dresden Germany	316 In-situ engineering of nanostructures with near atomic precision and property measurements Lian-Mao Peng , M.S. Wang, Y. Liu, Q. Chen Peking University, School of Information Science and Technology Beijing Beijing China	326 Morphological study on three kinds of two-dimensional spherulites of PBT Taiyo Yoshioka , Masaki Tsuji Kyoto University, Uji, Kyoto-fu 611-0011, Japan
18.00		317 In situ HRTEM – Image corrected and monochromated Titan equipped with environmental cell Jakob Wagner , Jörg R. Jinschek, Thomas W. Hansen, Chris B. Boothroyd, Rafal E. Dunin-Borkowski Technical University of Denmark, Fysikvej, building 307 2800 Kgs. Lyngby Denmark	

Room: Lüttich	Room: Maastricht	Room: Hasselt
M2.4 Thin Films and Interfaces	L2.4 Imaging Cells and Tissues in vivo	L4.2 Recombinant in situ Labeling for Light and Electron Microscopy / Advanced Methods of Sample Preparation for the Life Sciences
E. Olsson	J. Roth	J. Dubochet
G. van Tendeloo	E. Manders, J. Salamero	P. Verkade, J. Nebesarova
330 Strain in SrTiO ₃ Layers Embedded in a Scandate/Titanate Multilayer System David Ávila , Markus Boese, Tassilo Heeg, Jürgen Schubert, Martina Luysberg Forschungszentrum Jülich, Wilhem Johnen Strasse 52425 Jülich Germany	340 Dynamics of epigenome duplication, accessibility and translation M. Cristina Cardoso (invited) Max Delbrueck Center for Molecular Medicine, Robert Roessle Str.10, 13125 Berlin Germany	350 Exploring HPF/FS methods for sensitive immunogold labeling on resin sections Pavel Hozák , Anatoly Philimonenko, Jiri Janacek, Pavel Janda Institute of Molecular Genetics, v.v.i., Videnska 1083 14220 Prague 4 Czech Republic
331 Anisotropic growth of CGO islands on the (001)-LaAlO ₃ surface Alessandro Benedetti , Marta Gibert, Felip Sandiumenge, Teresa Puig, Xavier Obradors Institut Ciencia de Materials Barcelona (ICMAB), Campus UAB 08193 Bellaterra, Barcelona Spain		351 Integrating automated single, double and triple in situ molecular detection with imaging for the analysis of inter- and intracellular events in the seminiferous tubule Yevgeniy Romin , Afsar Barlas, Sandra Gonzalez, Mesruh Turkecul, Tao Tong, Sungwook Suh, Volodia Gueorgiev, Zsolt Lazar, Katia Manova-Todorova SK1, Memorial Sloan Kettering Cancer Center, 1275 York Avenue 333 10065 New York United States
332 CTEM diffraction contrast of biaxially-textured LaZr ₂ O ₇ buffer layers on nickel substrates Leopoldo Molina , S.Engel, B. Holzapfel, O. Eibl University of Tuebingen, Auf der Morgenstelle 10, 72076 Tuebingen Germany	341 Controlled Light Exposure Microscopy Reveals Telomeric Microterritories Throughout the Cell Cycle Winnok De Vos (invited), Ron Hoebe, Greg Joss, Erik Manders, Patrick Van Oostveldt Ugent, Coupure links 653 9000 Ghent Belgium	352 A symbiosis: tracking cell signaling with expression probes, quantum dots and a programmable array microscope (PAM) Michelle Gralle Botelho (invited) Max-Planck Institute for Biophysical Chemistry Department Molecular Biology Göttingen
333 An investigation of Al-Pb interfaces using probe-corrected high-resolution STEM Harald Rösner , Sergei Lopatin, Bert Freitag, Gerhard Wilde Westfälische Wilhelms-Universität Münster, Institut für Materialphysik, Wilhelm-Klemm-Str. 10 D-48149 Münster Germany		353 A symbiosis: tracking cell signaling with expression probes, quantum dots and a programmable array microscope (PAM) Michelle Gralle Botelho (invited) Max-Planck Institute for Biophysical Chemistry Department Molecular Biology Göttingen
334 Investigation of organic/inorganic interfaces using nano-analytical transmission electron microscopy David McComb (invited) Imperial College London, SW7 2AZ London United Kingdom	342 In vivo imaging and quantification of the continuous keratin filament network turnover R. Windoffer , A. Kölsch, S. Wöll, T. Würflinger, T. Aach and R.E. Leube Department of Anatomy and Cell Biology, Johannes Gutenberg-University, Becherweg 13, 55128 Mainz, Germany	353 Golgi twins in mitosis revealed by genetically encoded tags for live cell imaging and correlated electron microscopy Ben Giepmans (invited), Guido Gaietta, Thomas Deerinck, Stephen Adams, Roger Tsien, Mark Ellisman UMCG, A. Deusinglaan 1 9713 AV Groningen Netherlands
335 Cationic ordering and interface effects in superlattices and nanostructured materials Philippe Boullay (invited), W. C. Sheets, Wilfrid Prellier, Eva-Leena Rautama, Asish K Kundu, Vincent Caignaert, Bernard Mercey, Bernard Raveau CRISMAT – UMR 6508 CNRS/ENSICAEN, 6 Bd du Maréchal JUIN 14050 Caen Cedex 4 France		354 Understanding the 3D architecture of organelle bound protein complexes using cryo-electron tomography of frozen hydrated sections and immunogold; our next great challenge. Peter Peters (invited) Netherlands Cancer Institute, Plesmanlaan 121 - H4 1066CX Amsterdam Netherlands
336 Statistical Tomography of 3D Thin Film Structure using Transmission Electron Microscopy Erdmann Specker , Radmilovic Velimir, Dahmen Ulrich University of Kiel, Kaiserstr. 2 24143 Kiel Germany		355 Cryo-electron microscopy of vitreous sections Benoît Zuber (invited), Mohamed Chami, Christine Houssin, Jacques Dubochet, Gareth Griffiths, Mamadou Daffé MRC Laboratory of Molecular Biology, Hills Road CB2 0QH Cambridge United Kingdom
337 Comparison of transmission electron microscopy methods to measure layer thicknesses to sub-monolayer precision Thomas Walther University of Sheffield, Mappin Street S1 3JD Sheffield United Kingdom		

Wednesday morning	Room: Berlin
8:30	Plenary Lecture Uli Dahmen An Update on the TEAM Project – First Results from the TEAM 0.5 Microscope, and its Future Development

Wednesday morning	Room: Berlin	Room: Aachen	Room: Toledo
Symp. Chair Session Chairs	L. Frank I. Müllerova	D. van Dyck P. Gai, L-M. Peng	I4.1 Light and X-rays A. Howie O. Renault
9:30	400 Aberration Correction in SEM: Relaunching an old Project Joachim Zach (invited) CEOS GmbH, Englerstr. 28 D-69126 Heidelberg Germany	410 Advances in transmission electron microscopy: in situ nanoindentation and in situ straining experiments Jeff De Hosson (invited) University of Groningen, Nijenborgh 4 9747 AG Groningen Netherlands	420 Time-resolved photoemission electron microscopy Gerd Schoenhense (invited) Univ. Mainz, Staudingerweg 7 55099 Mainz Germany
9:45			
10:00	401 Changes and reversals of contrasts in SEM Jacques Cazaux (invited) University of Reims, Department of Physics, Faculty of Sciences, BP 1039, 51687 Reims, France	I1.2 Filters, Spectrometers, Monochromators and Sources M. Haider E. Piles, P. Tiemeijer	421 Enhancing contrast of Al traces on Si substrates using low-voltage SEM-hosted XRM John Hunt, Bryan Gundrum Gatan, 5794 W. Las Positas Blvd CA 94588 Pleasanton United States
10:15		411 Optimum operation of Schottky electron sources: brightness, energy spread and stability Pieter Kruit (invited), Merijn Bronsgeest, Greg Schwind Delft University, Lorentzweg 1 2611CJ Delft Netherlands	422 HRTEM and STXM, a combined study of an individual focused-ion-beam patterned CNT Carla Bittencourt, Alexandre Felten, Xiaoxing Ke , Jean-Jacques Pireaux, Ebrahim Najafi, Adam Hitchcock, Gustaaf Van Tendeloo, X. Gillon UMH, Parc Initialis Av. Nicolas Copernic, 1 7000 Mons Belgium
10:30	Coffee	Coffee	Coffee
11:00	402 Scanning electron microscopy techniques for cross-sectional analyses of thin-film solar cells Daniel Abou-Ras , Uwe Jahn, Jürgen Bundesmann, Raquel Caballero, Christian A. Kaufmann, Jo Klaer, Melanie Nichterwitz, Thomas Unold, Hans-Werner Schock Hahn-Meitner-Institut Berlin, Glienicke Strasse 100 14109 Berlin Germany	412 The MANDOLINE filter and its performance Erik Essers (invited), Dieter Mittmann, Thilo Mandler, Gerd Benner Carl Zeiss NTS GmbH, Carl-Zeiss-Str. 56 73447 Oberkochen Germany	423 The fine structure of bioreactor liver tissue seen through the eyes of X-ray micro-computed tomography Filip Braet , Carina Fernandes, Dennis Dwarthe, Keisuke Nagatsuma, Masaya Saito, Tomokazu Matsuura The University of Sydney, Electron Microscope Unit Madsen Building F09 Room Lg8 2006 Sydney Australia
11:15	403 Helium ion microscope: advanced contrast mechanisms for imaging and analysis of nanomaterials David Bell , Lewis Stern, Lou Farkas, John Notte Harvard University, 11 Oxford Street LISE B56 02138 Cambridge United States		424 An Optical Demonstration of Ptychographical Imaging of a Single Defect in a Model Crystal Andrew Hurst , Fucai Zhang, John Rodenburg The University of Sheffield, Kroto Research Institute North Campus, Broad Lane S3 7HQ Sheffield United Kingdom
11:30	404 SEM-EDS for effective surface science and as a next generation defect review tool for nanoparticle analysis? Ed Boyes University of York, Department of Physics, Heslington YO10 5DD YORK United Kingdom	413 Using a Monochromator to improve the Resolution in Focal-series Reconstructed TEM down to 0.5Å Peter Tiemeijer, Maarten Bischoff , Bert Freitag, Christian Kisielowski FEI Company, PO Box 80066 5600 KA Eindhoven Netherlands	425 Quantitative 3D imaging of cells at 50 nm resolution using soft x-ray tomography Carolyn Larabell (invited), D.Y. Parkinson, W. Gu, C. Knoechel, G. McDermott, M.A. Le Gros University of California, 513 Parnassus Box 0452 94143 San Francisco United States
11:45	405 E-beam hardening SEM glue for fixation of small objects in the SEM Stephan Kleindiek , A. Rummel and K. Schock Kleindiek Nanotechnik GmbH, Aspenhastr. 25 72770 Reutlingen Germany	414 Third-rank computation of electron and ion optical systems with several and rotated Wien filters Karin Marianowski , Erich Pliès University of Tübingen, Auf der Morgenstelle 10 72076 Tübingen Germany	
12:00		415 Wavelength dispersive Soft X-ray emission spectroscopy attached to TEM using multi-capillary X-ray lens Shun Muto , Kazuyoshi Tatsumi, HIKARU Takahashi Nagoya University, Furo-cho, Chikusa-ku 464-8603 Nagoya Japan	

Room: Aachen

Plenary Lecture

J. Susini
Synchrotron Based X-ray Microscopy: State of the Art and Applications

Room: Lüttich	Room: Maastricht	Room: Hasselt
M3.4 Dislocations, Interfaces and Other Defects	M3.6 Biomaterials	L2.1 Tomography of Cells and Organelles
H.P. Karthaler	H.P. Karthaler	J. Roth
J. Thibault, W. Kaplan	L. Hobbs	B. Koster
430 Characterization of a-plane GaN films grown on r-plane sapphire substrate by electron microscopy Yadira Arroyo Rojas Dasilva , Tiankai Zhu, Denis Martin, Nicolas Grandjean, Pierre Stadelmann CIME-EPFL, Bat. MXC-136, Station 12 1015 Lausanne Switzerland	440 Bioinspired Synthesis of Nanostructures based on S-layer Lattices Dietmar Pum (invited), Nicola Ilk, Uwe B. Sleytr Universität für Bodenkultur Wien, Gregor Mendelstr. 33 A-1180 Vienna Austria	450 Pleiomorphic viruses revealed by cryo tomography: the structure of coronaviruses Montserrat Barcena (invited) Leiden University Medical Center, Einthovenweg 20 Postal zone S1-P, room R-90-021 9600 2300 RC Leiden Netherlands
431 Interfaces in Cu(In,Ga)Se ₂ thin film solar cells Gustaf Ostberg , Eva Olsson Chalmers University Of Technology, Fysikgränd 3 41296 Gothenburg Sweden	441 Ceramic-loaded mineralizing bioresorbable polymers for orthopaedic applications Linn Hobbs MIT, Room 13-4054 77 Massachusetts Avenue 02139 Cambridge, MA United States	451 STEM tomography of high-pressure frozen cell monolayers Paul Walther , Sandra Landwehr, Holge Krisp, Thomas Seufferlein, Thomas Mertens, Guido Adler University of Ulm, Albert-Einstein-Allee 11 89069 Ulm Germany
432 Dislocations in AlPdMn quasicrystals: contrast in TEM and physical properties Daniel Caillard (invited), Frederic Mompou CNRS, 29 rue Jeanne Marvig BP4347 31055 Toulouse France	442 AFM and TEM Study of Ag Coated Insulin-Derived Amyloid fibrils Frederic Leroux , Maarten Gysemans, Johan Snauwaert, Chris Van Haesendonck, Bart Goris, Sara Bals, Gustaaf Van Tendeloo University of Antwerp, Groenenborgerlaan 171 2000 Antwerpen Belgium	452 Novel Techniques with Cryo Electron Tomography of Vitreous Sections allow Visualization of Macromolecular Machines Jason Pierson , Jose Jesus Fernandez, Erik Bos, Helmut Gnaegi, Jose Carrascosa, Matthijn Vos, Peter Peters Netherlands Cancer Institute, Plasmanlaan 121 1066 CX Amsterdam Netherlands
Coffee	Coffee	Coffee
433 Metadislocations in complex metallic alloys: core structures investigated by aberration-corrected scanning transmission electron microscopy Michael Feuerbacher , Lothar Houben, Marc Heggen Forschungszentrum Juelich, Leo-Brandt-Str. 52425 Juelich Germany	443 Direct Imaging of Carbon Nanoparticles Alexandra Porter (invited), Crystal Cheng, Mhairi Gass, Karin Muller, Jeremy Skepper, Paul Midgley, Mark Welland Imperial College, Exhibition Road South Kensington SW7 2AZ London United Kingdom	453 Combined Structural and Chemical Analysis of Unique Anammox Bacteria that Contain A Prokaryotic Organelle Laura van Niftrik (invited), Willie Geerts, Elly van Donselaar, Bruno Humbel, Arie Verkleij, Marc Strous, Mike Jetten Radboud University Nijmegen, Department of Microbiology Heyendaalseweg 135 6525 AJ Nijmegen Netherlands
434 Defect generation and characterization in 4H-SiC Michaël Texier , Jean-Pierre Ayoub, Gabrielle Regula, Maryse Lancin, Bernard Pichaud Aix-Marseille Université, IM2NP, Faculté des Sciences et Techniques de Saint Jérôme av. Escadrille Normandie Niemen F-13397 Marseille France	444 Hidden hierarchy of microfibrils within 3d-periodic fluorapatite-gelatine nanocomposites Paul Simon , Rüdiger Kniep Max Planck Institute for Chemical Physics of Solid, Nöthnitzer Str. 40 01187 Dresden Germany	454 Correlated Microscopy: From Dynamics to Structure Simone Lepper , Misha Kudryashev, Anna Sartori, Stefan Bohn, Marek Cyrklaff, Freddy Frischknecht University of Heidelberg, Im Neuenheimer Feld 324 69120 Heidelberg Germany
435 Determining the nanoscale chemistry and behavior of interfaces and phases in Al-Si-(Cu-Mg) nanoparticles using in-situ TEM James Howe (invited), Santhana Eswaremoorthy, Govindarajan Muralidharan University of Virginia, P.O. Box 400745 22904 Charlottesville, Virginia United States		

Wednesday afternoon	Room: Berlin	Room: Aachen	Room: Toledo
	I3.1 SEM Instrumentation and Methods	M3.1 Alloys and Intermetallics (Part I)	I2.3 Holography
Symp. Chair	L. Frank	H.P. Karthaler	D. van Dyck
Session Chairs	I. Müllerova	D. Edmonds, V. Radmilovic	M. Lehmann, M. McCartney
15.30	500 On the Spatial Resolution and Nanoscale Features Visibility in Scanning Electron Microscopy and Low-Energy Scanning Transmission Electron Microscopy (in memory of G. Merli)	510 TEM investigations on novel shape memory systems with Ni-depletions	520 Partial coherence in inelastic holography
15.45	Vittorio Morandi (invited), A. Migliori, F. Corticelli, M. Ferroni CNR-IMM, Via Gobetti 101 40129 Bologna Italy	Dominique Schryvers (invited), Rémi Delville, Barbora Bartova, He Tian University of Antwerp, Groenenborgerlaan 171 B-2020 Antwerp Belgium	Jo Verbeeck (invited), Giovanni Bertoni, Dirk Van Dyck, Hannes Lichte, Peter Schattschneider EMAT, University of Antwerp, EMAT, University of Antwerp Groenenborgerlaan 171 2020 Antwerpen Belgium
16.00	501 Development of the charging reduction system by electron beam irradiation for scanning electron microscopes Yuji Kono , Osamu Suzuki, Kazuhiro Honda JEOL Ltd., 1-2 Musashino 3-chome Akishima Tokyo 196-8558 Japan	511 Precipitation in an Al-Mg-Ge Alloy Ruben Bjorge , Calin D. Marioara, Sigmund J. Andersen, Randi Holmestad Norwegian University of Science and Technology, Høgskoleringen 5 7491 Trondheim Norway	521 Electron Holography: Performance and performance limits Hannes Lichte Technische Universität Dresden, Zellescher Weg 16 01062 Dresden Germany
16.15	502 Benefits of Low Vacuum SEM for EBSD Applications Karsten Kunze , Stefano Buzzi, Jörg Löffler, Jean-Pierre Burg ETH Zurich Wolfgang-Pauli-Strasse 16 8093 Zurich Switzerland	512 Voids associated with nano-particles of tin in aluminium Laure Bourgeois , Matthew Weyland, Barry Muddle Monash University, Building 81 3800 Clayton Australia	522 High-Resolution Electron Holography on Ferroelectrics Martin Linck (invited), Hannes Lichte, Axel Rother, Falk Röder, Koichiro Honda
16.30	503 In-situ combination of SEMPA, STM, and FIB for magnetic imaging and nanoscale structuring Julius Mennig , Jobinson Kollamana, Sebastian Gliga, Saliha Sherifi, Frank Matthes, Daniel E. Bürgler, Claus M. Schneider FZ Jülich, Institut für Festkörperforschung Forschungszentrum Jülich GmbH 52425 Jülich Germany	513 TEM investigations of aluminum precipitate in eutectic Si of A356 based alloys Zhihong Jia , Lars Arnberg, Petter Åsholt, Bruno Barlas, Terje Iveland Norwegian University of Science and Technology, Alfred Getz vei 2b N-7491 Trondheim Norway	Triebenberg Laboratory, Zum Triebenberg 50 01328 Dresden Germany
16.45	504 Role of the high-angle BSE in SEM imaging Iлона Müllerova , Luděk Frank Institute of Scientific Instruments ASCR, v.v.i., Královopolská 147 612 64 Brno Czech Republic	514 Chemical and structural analysis of NiAl-Al2O3 interface by FETEM and STEM Weiping Hu , Thomas Weirich, Günter Gottstein Institute of Physical Metallurgy and Metal Physics, Kopernikus Strasse 14 52074 Aachen Germany	523 Electron Holography on the charge modulated structure In2O3(ZnO)m in comparison with DFT-calculations Falk Röder , Axel Rother, Werner Mader, Thomas Bredow, Hannes Lichte Technische Universität Dresden, Zum Triebenberg 50 01328 Dresden-Zaschendorf Germany
17.00	505 Method to determine image sharpness and resolution in Scanning Electron Microscopy images Bernd Rieger , Gerard van Veen FEI Company, Achsteweg Noord 5 5651 GG Eindhoven Netherlands	515 Microstructure of Co-Ni based superalloy Toyohiko Konno , Tomofumi Tadano, Hiroaki Matsumoto, Akihiko Chiba Tohoku University, 2-1-1 Katahira, Aoba-Ku 980-8577 Sendai Japan	524 Reconstruction of 3D (Ge,Si) islands by 2D phase mapping Changlin Zheng , Holm Kirmse, Ines Häusler, Kurt Scheerschmidt, Wolfgang Neumann Humboldt-Universität zu Berlin, Newtonstr.15 12499 Berlin Germany
17.15	506 Non-destructive 3D imaging of the objects internal microstructure by microCT attachment for SEM. Alexander Sasov SkyScan, Kartuizersweg 3 2550 Kontich Belgium	516 Electron microscopy study of Mg78.5Pd21.5: a phase with nanoscale 120° rotational twin domains Wilder Carrillo-Cabrera , Julian Makongo, Yuri Prots, Guido Kreiner Max-Planck Institut CPFS, Nöthnitzer Str. 40 01187 Dresden Germany	525 Strain determination by dark-field electron holography Florent Houdellier , Martin J Hÿtch, Florian Hüe, Etienne Snoeck CEMES-CNRS, 29 rue jeanne marvig 31005 TOULOUSE France
17.30	507 A novel use of rf-GD sputtering for sample surface preparation for SEM: its impact on surface analysis K. Shimizu , T.Mitani, P.Chapon Keio University, 4-1-1 Hiyoshi X Yokohama Japan	517 HRTEM study of precipitates in Al-Mg-Si-(Ag, Cu) alloys Kenji Matsuda , Junya Nakamura, Tokimasa Kawabata, Tatsuo Sato, Susumu Ikeno University of Toyama, 3190 Gofuku 9308555 Toyama Japan	526 Electron holography of biological and organic objects Paul Simon Max Planck Institute for Chemical Physics of Solid, Nöthnitzer Str. 40 01187 Dresden Germany
17.45		518 TEM and EELS study of carbide precipitation in low alloyed steels Thierry Epicier, Claire Leguen , Michel Perez, Daniel Acevedo, Thomas Sourmail INSA de Lyon, Bât. Blaise Pascal 69621 Villeurbanne Cedex France	527 Nonlinear Electron Inline Holography Christoph T. Koch , Behnaz Rahmati, Peter A. van Aken Max Planck Institute for Metals Research, Heisenbergstr. 3 70569 Stuttgart Germany
18.00			528 Reconstruction Methods for In-line Electron Holography of Nanoparticles Lucian Livadaru , Marek Malac, Robert Wolkow University of Alberta, Rm. #238 CEB 11322 - 89 Avenue University of Alberta, AB, CANADA T6G 2G7 Edmonton Canada
18.15			

Room: Lüttich	Room: Maastricht	Room: Hasselt
M1.2 Compound Semiconductors	L1.1 Cryo-Electron Microscopy of Macromolecular Complexes / Fitting Atomic Structures	L3.1 High-Resolution Fluorescence and Confocal Microscopy / Nonlinear Microscopy
D. Gerthsen A. Craven, P. Ruterana	W. Baumeister H. Stark, Ohad Medalia, R. Beckmann, P. Schultz	A. Engel J.-P. Timmermans, H.C. Gerritsen
530 The atomic structure of GaN-based quantum wells and interfaces C. Humphreys (invited) University of Cambridge, Pembroke Street CB2 3QZ Cambridge United Kingdom	540 Nicolas Boisset: In memoriam Jose Carrascosa (invited) CSIC, Darwin 3 Campus Cantoblanco 28049 Madrid Spain	550 Necrotic cell death, a controlled way of cellular explosion Peter Vandenabeele (invited) Flanders Institute for Biotechnology (VIB), Technologiepark 927 9052 Zwijnaarde, Gent Belgium
531 Lattice polarity and capping of GaN dots Jean-Luc Rouviere , Catherine Bougerol, J Coraux, Benoit Amstatt, Edith Bellet-Almalric, Bruno Daudin CEA-Grenoble, 17 rue des Martyrs 38054 Grenoble France	541 High resolution structure of a 6 MDa protease by xray-crystallography and cryo-EM Beate Rockel , Crystal Chuang, Gönül Seyit, Peter Walian, Jürgen Peters, Wolfgang Baumeister, Bing Jap Max-Planck-Institut of Biochemistry, Am Klopferspitz 18 82152 Martinsried Germany	551 Dissecting mitochondrial protein distributions using sub-diffraction resolution fluorescence microscopy Stefan Jakobs (invited) Max Planck Institute for Biophysical Chemistry, Am Fassberg 11 37077 Goettingen Germany
532 Epitaxial Orientations of GaN Grown on R-plane Sapphire J. Smalc-Koziorowska, G. P. Dimitrakopoulos , Ph. Komninou, Th. Kehagias, S.-L. Sahonta, G. Tsiakatouras, A. Georgakilas ARISTOTLE UNIVERSITY OF THESSALONIKI, UNIVERSITY CAMPUS GR541 24 THESSALONIKI Greece	542 Modular organization of RNase P Bettina Böttcher (invited) EMBL, Meyerhofstrasse 1 69117 Heidelberg Germany	552 High resolution confocal Ca2+ imaging of the pulmonary neuroepithelial body microenvironment in lung slices Ian De Proost, Isabel Pintelon, Inge Brouns , Robrecht Lembrechts, Jean-Pierre Timmermans, Dirk Adriaensens University of Antwerp, Groenenborgerlaan 171 2020 Antwerp Belgium
533 The microstructure of (0001)GaN films grown by molecular beam epitaxy from a nanocolumn precursor layer David Cherns , Louisa Meshi, Ian Griffiths, Somboon Khongphetsak, Sergey Novikov, Nicola Farley, Richard Champion, Tom Foxon University of Bristol, Tyndall Avenue BS8 1TL Bristol United Kingdom	543 Structural basis for the concerted integration of HIV-1 DNA in the human genome, role of the human cofactor LEDGF/p75. Patrick Schultz IGBMC, 1, rue Laurent Fries 67404 Illkirch France	553 Novel 515 nm DPSS-laser brings excitement in life cell imaging Lars Kaestner Saarland University, Building 61 66421 Homburg/Saar Germany
534 Nanoanalytical investigation of the dielectric gate stack for the realisation of III-V MOSFET devices Paolo Longo , Alan J Craven, Martin C Holland, Iain G Thayne University of Glasgow, Department of Physics and Astronomy, Kelvin Building G12 8QQ Glasgow United Kingdom	544 Unveiling conformational changes of biological molecules using multiscale modeling and multiresolution experiments Florence Tama (invited) University of Arizona, Biological Sciences West 448 1041 East Lowell Street 210088 85721-00 Tucson, AZ United States	554 High Throughput, High Content Tissue Cytometry Peter So (invited) Massachusetts Institute of Technology, NE47-279 77 Mass Ave MA 02139 Cambridge United States
535 About the determination of optical properties using fast electrons Michael Stöger-Pollach Vienna University of Technology, Wiedner Hauptstr. 8-10 1040 Vienna Austria	545 Titan Krios: Automated 3D imaging at ambient and cryogenic conditions Marc Storms , Raymond Wagner, Uwe Luecken, Werner Hax, Matt Harris FEI Company, Achtseweg Noord 5 5651 GG Eindhoven The Netherlands	555 Focus on the vascular wall: Imaging of large arteries using two-photon microscopy. Marc van Zandvoort (invited), Remco Megens, Dick Slaaf, Mirjam oudeEgbrink
536 Characterization and modelling of semiconductor quantum nanostructures grown by droplet epitaxy David L. Sales , J. C. Hernandez, P. A. Midgley, A. M. Beltran, A. M. Sanchez, T. Ben, P. Alonso-Gonzalez, Y. Gonzalez, L. Gonzalez, S. I. Molina Universidad de Cadiz, Facultad de Ciencias Campus Universitario Rio San Pedro 40 11510 Puerto Real (Cadiz) Spain	546 Molecular anatomy of the human pathogen Leptospira interrogans Martin Beck (invited) ETH Zurich, Wolfgang Pauli-Str. 16 8093 Zürich Switzerland	556 Non-invasive Skin Tissue Characterization Using Non-linear Spectral Imaging Microscopy Jonathan Palero , Henriette de Bruijn, Angelique van der Ploeg van den Heuvel, Henricus Sterenberg, Hans Gerritsen Utrecht University, Princetonplein 1 3584 CC Utrecht Netherlands
537 Electron beam induced damage: An atom-by-atom investigation with TEAM0.5 Christian Kisielowski (invited), Rolf Erni, Jannik Meyer National Center for Electron Microscopy, One Cyclotron Rd. 94720 Berkeley United States	547 Three-dimensional architecture of outer- and inner-dynein arms in flagella revealed by cryo-electron tomography and single particle analysis Takashi Ishikawa ETH Zurich, HPK F7, ETH Hoenggerberg 8049 Zurich Switzerland	

Thursday morning	Room: Berlin
8:30	Plenary Lecture K. Suenaga Direct Observation of Atomic Defects in Carbon Nanotubes and Fullerenes

Thursday morning	Room: Berlin	Room: Aachen	Room: Toledo
Symp. Chair Session Chairs	11.1 Aberration Correctors	M3.1 Alloys and Intermetallics (Part II)	I4.2 Scanning Probe Microscopy
9:30	M. Haider P. Nellist, C. Hetherington 600 STEM Aberration Correction: an Integrated Approach Ondrej Krivanek (invited) Nion Co., 1102 8th St. WA 98075 Kirkland United States	H.P. Karnthaler D. Edmonds, V. Radmilovic 610 Crystalline-to-amorphous transformation in intermetallic compounds by severe plastic deformation Koichi Tsuchiya (invited), Thomas Waiz, Toru Hara, Hans P. Karnthaler, Yoshimazu Todaka, Minoru Umemoto National Institute for Materials Science, Sengen 1-2-1 305-0047 Tsukuba Japan	A. Howie O. Marti, M. Castell 620 Determination of the lateral Resolution of a Cantilever based Solid Immersion Lens Near Field Microscope Tobias Merz , Karsten Rebner, Rudolf Kessler Institut of Applied Research, Reutlingen University, Alteburgstrasse 150 72762 Reutlingen Germany
9:45			621 High resolution Kelvin force microscopy Matthias Fenner , John Alexander, Sergei Magonov Agilent Technologies, Campus Kronberg 7 61476 Krinberg Germany
10:00	601 Structure determination of H-encapsulating clathrate compounds in aberration-corrected STEM Q.M. Ramasse , N.L. Okamoto, D. Morgan, D. Neiner, C.L. Condon, J. Wang, P. Yu, N.D. Browning, S.M. Kauzlarich Lawrence Berkeley National Laboratory, 1 Cyclotron Road CA94720 Berkeley United States	611 Analysing small precipitates in a ferritic steel matrix Alan Craven , Maureen MacKenzie University of Glasgow, Department of Physics & Astronomy, University of Glasgow, Glasgow, G12 8QQ, Scotland, UK	622 Spin mapping on the atomic scale Roland Wiesendanger (invited) University of Hamburg, Institut für Angewandte Physik Jungiusstrasse 11 D-20355 Hamburg Germany
10:15	602 Applications of Aberration-Corrected TEM-STEM and High-Resolution EELS for the Study of Functional Materials Gianluigi Botton , Christian Maunders, Lina Gunawan, Kai Cui, Lan-Yun Chang, Sorin Lazar McMaster University, 1280 Main Street W. L8S 4M1 Hamilton Canada	612 Multi-scale observations of deformation twins in Ti6Al4V Wim Tirry , Frederik Coghe, Luc Rabet, Dominique Schryvers Royal Military Academy, Renaissancelaan 30, Blok G, loc 20.09 1000 Brussels Belgium	
10:30	Coffee	Coffee	Coffee
11:00	603 Developments of aberration correction systems for current and future requirements Max Haider (invited), Heiko Müller, Stephan Uhlemann, Peter Hartel, Joachim Zach	613 Analysis of basic mechanisms of hardening in ODS EUROFER97 steel using in-situ TEM Amuthan Ramar , Robin Schäublin CRPP – EPFL, ODGA/105 CRPP – EPFL 5232 Villigen PSI Switzerland	623 LT-STM Manipulation and Spectroscopy of Single Copper and Cobalt Atoms Erik Zupanič , Rok Žitko, H.J.P. van Midden, Albert Prodan, Igor Muševič Jožef Stefan Institute, Jamova 39, SI-1000 Ljubljana Slovenia
11:15	CEOS GmbH, Englerstr. 28 D-69126 Heidelberg, Germany	614 Initial Stages of the Omega Phase Transformation Raghendra Tewari , K. V. Mani Krishna, G. K. Dey, S. Banerjee BARC, BARC TROMBAY 400 085 MUMBAI India	624 Height measurements on soft samples: applied force, molecules deformation and phase shift Cristiano Albonetti , Nicolás F. Martínez, Andreas Straub, Fabio Biscarini, Ruben Perez, Ricardo Garcia CNR, Via Gobetti 101 40129 Bologna Italy
11:30	604 Direct measurement of aberrations by convergent-beam electron holography (CHEF) Christophe Gatel , Florent Houdellier, Martin Hÿtch CEMES-CNRS, 29, rue Jeanne Marvig BP 94347 31055 Toulouse France	615 HRTEM of NiTi shape memory alloys made amorphous by high pressure torsion Thomas Waitz , Koichi Tsuchiya, Martin Peterlechner, H.-Peter Karnthaler University of Vienna, Boltzmanngasse 5 1090 Vienna Austria	625 Dynamics of nanostructures on surfaces revealed by high-resolution, fast-scanning STM Flemming Besenbacher (invited) University of Aarhus, Interdisciplinary Nanoscience Center, Ny Munkegade, bldg. 1521 8000 Aarhus Denmark
11:45	605 Sub-Angström Low-Voltage Electron Microscopy – future reality for deciphering the structure of beam sensitive nanoobjects? Ute Kaiser , Andrey Chuvilin, Rasmus Schröder, Harald Rose University Ulm, Albert Einstein Allee 11 89081 Ulm Germany	616 Core/Shell Precipitates in Al-Li-Sc-Zr Alloys Velimir Radmilovic , Marta D. Rossell, Alfredo Tolley, Emmanuelle A. Marquis, Rolf Erni, Ulrich Dahmen Lawrence Berkeley National Lab, One Cyclotron Rd. 94720 Berkeley, California United States	
12:00	606 Demonstration of CC/CS-correction in HRTEM Peter Hartel , Heiko Mueller, Stephan Uhlemann, Joachim Zach, Ulrich Loebau, Rainer Hoeschen, Max. Haider CEOS GmbH, Englerstr. 28 D-69126 Heidelberg, Germany		626 CO and O2 chemisorption on Pd70Au30(110): evolution of the surface studied by in situ STM and complementary surface analysis techniques at elevated pressures Marie-Angélique Languille, Francisco Cadete Santos Aires , Bongjin Simon Mun, Yvette Jugnet, Marie-Claire Saint-Lager, Hendrik Bluhm, Odile Robach, David E. Starr, Cyrille Rioche, Pierre Dolle, Stéphanie Garaudée, Philip N. Ross, Jean-Claude Bertolini IRCELYON, 2 Avenue Albert Einstein 69626 Villeurbanne France

Room: Aachen

Plenary Lecture

E. Umbach

High-resolution Spectro-microscopy with Low-voltage Electrons and Double Aberration Correction

Room: Lüttich	Room: Maastricht	Room: Hasselt
M2.3 Nanostructured Materials and Nanolab	I5.1 New Image Processing Developments in Materials Science and Beyond	L4.1 Ultrastructural Localization of Molecules and Elements
E. Olsson	J.M. Carazo	J. Dubochet
E. Olsson	S. Hovmöller	H. Schwarz
630 Electron Beam Nanofabrication and Characterization of Iron Compounds Kazuo Furuya , Masayuki Shimojo, Masaki Takeguchi, Minghui Song, Kazutaka Mitsuishi, Miyoko Tanaka National Institute for Materials Science, 3-13, Sakura 301-0003 Tsukuba Japan	640 Structure determination of zeolites by electron crystallography Junliang Sun (invited), Daliang Zhang, Zhanbing He, Sven Hovmöller, Xiaodong Zou, Fabian Gramm, Christian Baerlocher, Lynne B. McCusker	650 Molecular Organisation of Cadherins in Intercellular Adhesion Junctions by Cryo-Electron Tomography of Vitreous Sections Ashraf Al-Amoudi (invited), Achilleas Frangakis EMBL/Heidelberg, Meyerhofstr. 1 69117 Heidelberg Germany
631 Structure and stability of core-shell AgAu nanoparticles Ziyou Li University of Birmingham, Edgbaston Park Road B15 2TT Birmingham United Kingdom	Stockholm University, Department of Physical, Inorganic and Structural Chemistry Arrhenius Laboratory, Stockholm University S-106 91 Stockholm Sweden	
632 In situ TEM nanocompression testing Andrew Minor (invited) Lawrence Berkeley National Laboratory } address {One Cyclotron Road MS 72 94720 Berkeley United States	641 3D electron diffraction of protein crystals: data collection, cell determination and indexing J Abrahams (invited), D.G Georgieva, L Jiang, H.W. Zandbergen, S. Nicolopoulos Leiden University, X 9502 2300 RA Leiden Netherlands	651 Immunolabeling for Electronmicroscopy George Posthuma (invited) University Medical Hospital utrecht, AZU G.02.525 Heidelberg-laan 100 3584CX Utrecht Netherlands
Coffee	Coffee	Coffee
633 Physical measurements on an individual nanostructure in a TEM nanolaboratory Christian Colliex (invited) Université Paris-Sud 11, UMR CNRS 8502 Bât. 510 91405 Orsay France	642 elmiX – An Electron Microscopy Software Collection for Data Analysis and Education Thomas Weirich, Alexander Reinholdt RWTH Aachen University, Ahornstr. 55 D-52074 Aachen Germany	652 Cryofixation and Freeze-Substitution combined with Tokuyasu Cryo-section Labelling York-Dieter Stierhof , Heinz Schwarz Universität Tübingen, Auf der Morgenstelle 5 72076 Tübingen Germany
634 In-situ studies on electrical and mass transport in multi-wall carbon and vanadium oxide nanotubes Markus Löffler , Thomas Gemming, Rüdiger Klingeler, Bernd Büchner IFW-Dresden, Helmholtzstraße 20 P.O. Box 270116, 01171 Dresden 01069 Dresden Germany	643 Optimal noise filters for high-resolution electron microscopy of non-ideal crystals Kazuo Ishizuka , Paul Eilers, Toshihiro Kogure HREM Research Inc., 14-48 Matsukazedai 355-0055 Higashimatsuyama Japan	653 Correlative Cryo-Fluorescence and Cryo-Electron Microscopy Alexander Rigort , Andrew Leis, Manuela Gruska, Anna Sartori, Wolfgang Baumeister, Jürgen M.Plitzko Max Planck Institute of Biochemistry, Am Klopferspitz 18 D-82152 Martinsried/Munich Germany
635 Hexahedral nano-cementites catalysing the growth of carbon nanohelices Junhai Xia , Xin Jiang, Chunlin Jia, Chuang Dong Forschungszentrum Jülich, Gästehaus 6.3.1, Münchener Str. 4 D-52428 Jülich Germany	644 High quality electron diffraction data by precession Sven Hovmöller , Daliang Zhang, Junliang Sun, Xiaodong Zou, Peter Oleynikov Stockholm university, Svante Arrhenius väg 14 SE-106 9 Stockholm Sweden	654 An active mechanism flanks and modulates the export of the small ribosomal subunits Barbara Cisterna, Manuela Malatesta , Jurgen Dieker, Ennio Prosperi, Sylviane Muller, Marco Biggiogera, Università di pavia, Piazza Botta, 10 27100 Pavia Italy
		655 Application of electron energy loss spectroscopy for heavy metal localization in unicellular algae Ursula Lütz-Meindl , Manuela Milla, Barbara Stöger University of Salzburg, Hellbrunnerstrasse 34 5020 Salzburg Austria

Thursday afternoon	Room: Berlin	Room: Aachen	Room: Toledo
Symp. Chair Session Chairs	I2.1 Quantitative HRTEM and STEM	M1.4 Nanotubes, Nanowires and Molecular Devices	I4.3. Field Ion Microscopy and Atom Probe I4.4 Surface Analytical Techniques
15.30	D. van Dyck A. Rosenauer, M. Hytch 700 Quantitative TEM and STEM Simulations Christoph Koch (invited) Max Planck Institute for Metals Research, Heisenbergstr. 3 70569 Stuttgart Germany	D. Gerthsen J. Sloan, M. Terrones 710 3-Dimensional morphology of GaP-GaAs nanowires Marcel Verheijen , Rienk Algra, Magnus Borgstrom, George Immink, Erwan Soury, LouFe Feiner, Willem van Enckevort, Elias Vlieg, Erik Bakkers Philips, High Tech Campus 11 5656AE Eindhoven Netherlands	Archie Howie, K. Stiller Archie Howie, C. van Haesendonck, John Watts 720 3D atomic-scale chemical analysis of engineering alloys Alfred Cerezo (invited), Emmanuelle Marquis, David Saxey, Ceri Williams, Mathijs Zandbergen, George Smith
15.45		711 EDX and linescan modelling for core/shell GaN/AlGaIn nanowire analysis Leonardo Lari , Robert Murray, Timothy Bullough, Paul Chalker, Caroline Chèze, Lutz Geelhart, Henning Reichert University of Liverpool, George Holt Building L69 3GH Liverpool United Kingdom	University of Oxford, Parks Road OX1 3PH Oxford United Kingdom
16.00	701 Quantitative determination of the chemical composition of an alloy by High Angle Annular Dark Field imaging Vincenzo Grillo (invited), Elvio Carlino, Frank Glas CNR, Area Science Park Basovizza S.S. 14 Km 163.5 34012 Trieste Italy	712 In-situ electron irradiation studies of metal-carbon nanostructures Florian Banhart , Litao Sun, Yanjie Gan, Mauricio Terrones, Arkady Krasheninnikov, Julio Rodriguez-Manzo Université de Strasbourg, IPCMS-GSI 23 rue du Loess 67034 Strasbourg France	721 New Applications for Atom-Probe Tomography in Metals, Semiconductors and Ceramics Thomas Kelly (invited), David Larson, Roger Alvis, Peter Clifton, Stephan Gerstl, Rob Ulfing, Daniel Lawrence, David Olson, David Reinhard, Krystyna Stiller
16.15		713 Surface chemistry along single silicon nanowires : Quantitative x-ray photoelectron emission microscopy (XPEEM) of the metal catalyst diffusion Olivier Renault , Aude Bailly, Pascal Gentile, Nicolas Pauc, Thierry Baron, Luiz Zagonel, Nick Barrett CEA-LETI, 17 rue des Martyrs 38054 Grenoble cedex 9 France	Imago Scientific Instruments Corporation, 5500 Nobel Drive Suite 100 53711 Madison, WI United States
16.30	702 New Approach to Quantitative ADF STEM James LeBeau , Scott Findlay, Les Allen, Susanne Stemmer University of California, Santa Barbara, University of California Materials Research	714 Understanding the Chemistry of Molecules in Nanotubes by Transmission Electron Microscopy Andrei Khlobystov (invited), Mike Fay, Paul Brown University of Nottingham, University Park Nottingham NG7 2RD United Kingdom	722 Low Energy Electron Microscopy: A 10 Year Outlook Rudolf Tromp (invited) IBM, 1101 Kitchawan Road 218 NY 10598 Yorktown Heights United States
16.45	703 Atomic-resolution studies of In ₂ O ₃ -ZnO compounds on aberration-corrected electron microscopes Wentao Yu , Lothar Houben, Karsten Tillmann, Werner Mader University of Bonn, Roemerstr.164 53117 Bonn Germany		
17.00	704 The benefits of statistical parameter estimation theory for quantitative interpretation of electron microscopy data Sandra Van Aert (invited), Sara Bals, Lan-Yun Chang, Arjan den Dekker, Angus Kirkland, Dirk Van Dyck, Gustaaf Van Tendeloo University of Antwerp, Groenenborgerlaan 171 2020 Antwerp Belgium	715 Electrical and mechanical property studies on individual low-dimensional inorganic nanostructures in HRTEM Dmitri Golberg (invited) National Institute for Materials Science, Namiki 1-1, Tsukuba 305-0044 Ibaraki Japan	723 Surface orientation dependent termination and work-function of in situ annealed strontium titanate Luiz Zagonel , Nick Barrett, Aude Bailly, Olivier Renault, J. C. Cezar, N. Brookes, S.-J. Shih, D. Cockayne, J. Leroy CEA-Saclay, CEA-Saclay Bâtiment 462 p.8 91191 Gif-sur-Yvette France
17.15			724 High resolution in interferometric microscopy Marc Jobin , Raphael Foschia Ecole d'Ingenieurs de Geneve, 4 Prairie 1202 Geneve Switzerland
17.30	705 First-time quantification of the HRTEM information-limit reveals insufficiency of the Young's-fringe test Juri Barthel , Andreas Thust Research Centre Jülich, Forschungszentrum Jülich IFF-8 52425 Jülich Germany	716 Application of 80kV Cs-corrected TEM for nanocarbon materials. Andrey Chuvilin , Ute Kaiser, Dirk Oberfell, Andrei Khlobystov, Siegmund Roth University of Ulm, Albert Einstein Allee 11 D-89069 Ulm Germany	725 High resolution surface analysis of metallic and biological specimens by NanoSIMS Chris Grovenor (invited) University of Oxford, Parks Road OX1 PH Oxford United Kingdom
17.45	706 Quantitative Investigations of the Depth of Field in a Corrected High Resolution Transmission Electron Microscope Johannes Biskupek , Andrey Chuvilin, Jörg Ralf Jinschek, Ute Kaiser Ulm University, Albert-Einstein-Allee 11 89081 Ulm Germany		
18.00	707 Spatial Coherence and the Quantitative Interpretation of Atomic Resolution Images Christian Dwyer , Joanne Etheridge Monash University, Building 81, Clayton Campus 3800 Clayton Australia		726 Imaging of Surface Plasmon Waves in Nonlinear Photoemission Microscopy Frank Meyer zu Heringdorf (invited), N.M. Buckanie, L.I. Chelaru, N. Raß
18.15	708 Strain measurements in electronic devices by aberration-corrected HRTEM and dark-field holography Florian Hüe , Florent Houdellier, Etienne Snoeck, Vincent Destefanis, Jean-Michel Hartmann, Hugo Bender, Alain Claverie, Martin Hytch CEMES-CNRS, 29, rue Jeanne Marvig 31055 Toulouse France		Universität Duisburg-Essen, Lotharstrasse 1 47057 Duisburg Germany

Room: Lüttich	Room: Maastricht	Room: Hasselt
M3.3 Magnetic Materials	L3.3 Microscopy in Human Health and Disease (part 1)	L5.2 Cellular Imaging and Nano-analytics L3.2 Biological Nanomachines and Nanomanipulation
H.P. Karthaler	A. Engel	A. Verkleij, D. Ploton
E. Snoeck, J. Chapman	A. Warley, B. Hauröder, H. Gelderblom	A. Engel, J.L. Carrascosa
730 Off-axis electron holography and micromagnetic simulations of magnetization reversal in cobalt nanoparticle rings R. Dunin-Borkowski (invited) Center for Electron Nanoscopy Technical University of Denmark	740 Light and electron microscopy of phagosomes Gareth Griffiths (invited), David Liebl, Christopher Bleck, Andreas Merz, Paul Walther, Jacques Dubochet and Benoit Zuber EMBL, Meyerhofstrasse 1 69117 Heidelberg Germany	750 Cell imaging by dynamic secondary ion mass spectrometry (SIMS) : basic principles and biological applications Alain Croisy (invited) Centre de Recherche de l'Institut Curie, Laboratoire Raymond Latarjet Bat 112, Centre Universitaire 91405 ORSAY cedex France
731 Characterization of Ni-Mn-Ga Magnetic Shape Memory Alloys Using Electron Holography and Lorentz Microscopy Karin Vogel , Martin Linck, Christopher Matzeck, Axel Rother, Daniel Wolf, Hannes Lichte Technische Universität Dresden, Technische Universität Dresden 01062 Dresden Germany	741 Ultrastructural analysis of lysosomal storage diseases: effects of therapy Marius Bergh Weerman , Josanne Cox-Brinkman, Anouk Vedder, Frits Wijburg, Carla Hollak, Sandrine Florquin Academic Medical Center, Amsterdam, Meibergdreef 9 1105AZ Amsterdam Netherlands	751 Water imaging in cell cryosections by electron energy loss spectroscopy Jean Michel (invited), Christine Terryn, Gérard Balossier INSERM UMR-S 926, 21 rue Clément Ader 51100 Reims France
732 Microstructure of epitaxially strained LaCoO3 thin films Levin Dieterle , Dagmar Gerthsen, Dirk Fuchs Laboratorium für Elektronenmikroskopie, Universität Karlsruhe 76128 Karlsruhe Germany	742 Ultrastructural gadolinium evidence in skin of a patient with Nephrogenic Fibrosing Dermopathy Josef Schroeder , Christian Weingart, Thomas Vogt, Ingrid Hausser, Ferdinand Hofstaedter, Bernard Krämer University Hospital Regensburg, F-J-Strauss-Allee 11 93053 Regensburg Germany	752 Visualisation of the attachment, possible uptake and distribution of technical nanoparticles in cells with electron microscopy methods Armin Springer , Wolfgang Pompe, Susanne Bastian, Maria Iwe, Hrissanthi Ikonomidou, Wibke Busch, Dana Kühnel, Annegret Pothoff, Volkmar Richter, Michael Gelinsky Tu-Dresden, Budapesterstraße 27 01069 Dresden Germany
733 High resolution imaging of magnetic structures in a TEM - what is possible ? Josef Zweck (invited) Physics Faculty, University of Regensburg Universitätsstrasse 31 93040 Regensburg FRG	743 Overview of the impact of biological microanalysis in health and disease Ann LeFurgey (invited) and Peter Ingram Duke University & Veterans Affairs Medical Centers, VAMC, P&LMS (113) 508 Fulton Street 27705 Durham, NC United States	753 Study of the cellular uptake of Pt nanoparticles in human colon carcinoma cells Holger Blank , Reinhard Schneider, Patrice Brenner, Dagmar Gerthsen, Melanie Esselen, Doris Marko, Marlene Crone, Michael Türk, Thierry Muller, Stefan Bräse Universität Karlsruhe (TH), Laboratorium für Elektronenmikroskopie 76128 Karlsruhe Germany
734 TEM characterization of nanometer-sized Fe/MgO granular multilayer thin films grown by pulsed laser deposition C. Magen , E. Snoeck, A. García-García, J. A.Pardo, P. A. Algarabel, P. Štrichovanec, A. Vovk, L. Morellón, J. M. De Teresa, M. R. Ibarra	744 Sedimentation of Suspensions for Diagnostic Thin Section Electron Microscopy Michael Laue , Norbert Bannert Robert Koch Institute, Nordufer 20 13353 Berlin Germany	754 Force Spectroscopy reveals mechanical structure of capsids Gijs Wuite (invited) VU University Amsterdam, De Boelelaan 1081 1081 HV Amsterdam Netherlands
735 L10-type ordered structure of FePd nanoparticles studied by high-resolution transmission electron microscopy Kazuhisa Sato , Toyohiko J Konno, Yoshihiko Hirotsu Tohoku University, 2-1-1 Katahira, Aoba 980-8577 Sendai Japan	745 Hyperspectral imaging - a novel concept for marker free chromosome characterization - Karsten Rebner , Tobias Merz Institute for Applied Research, Alteburgstrasse 150 72762 Reutlingen Germany	755 Manipulating and imaging molecular motors with optical traps, single-molecule fluorescence and atomic force microscopy Christoph Schmidt (invited) Georg-August-Universität, Friedrich-Hund-Platz 1 37077 Göttingen Germany
		756 A single molecule mechanical assay to study DNA replication coupled to DNA unwinding Borja Ibarra , Jose A.Morin, Ricardo Arias, Silvia Hormeño, Margarita Salas, Jose M. Valpuesta, Jose L. Carrascosa Centro Nacional Biotecnología (C.S.I.C.), Darwin, 3. Campus Canto Blanco 28049 Madrid Spain
		757 Manipulation of the mechanical properties of a virus by protein engineering Carolina Carrasco, Milagros Castellanos, Pedro de Pablo , Mauricio Mateu Universidad Autónoma de Madrid, Facultad de Ciencias Campus de Cantoblanco 28049 Madrid Spain

Friday morning	Room: Berlin	Room: Aachen	Room: Toledo
Symp. Chair Session chairs 8:30	I3.2 FIB and Dual Beam - Instrumentation and Methods L. Frank, C. Volkert L. Frank, L. Giannuzzi, Ed Boyes	I6 Sample Preparation for Materials Science and Biology J. Ayache, J. Schroeder	I1.3 Phase Plates and Detectors M. Haider R. Schröder, J. Plitzko
8:45	800 3D EBSD-based orientation microscopy and 3D materials simulation tools: an ideal combination to study microstructure formation processes Stefan Zaefferer (invited) Max Planck Institute for Iron Research, Max-Planck-Str. 1 40237 Düsseldorf Germany	810 Modern Methods of TEM Specimen Preparation in Material Science H. Penkalla (invited) Forschungszentrum Jülich, X 52425 Jülich Germany	820 In-focus phase contrast: Present state and future developments Rasmus Schröder (invited), Bastian Barton, Katrin Schultheiß, Björn Gamm, Dagmar Gerthsen University of Heidelberg, CellNetworks, Bioquant Im Neuenheimer Feld 267 69120 Heidelberg Germany
9:00	801 Deformation mechanisms in 1D nanostructures revealed by in situ tensile testing in an SEM/FIB Dan Gianola (invited), R. Mönig, O. Kraft, C.A. Volkert Forschungszentrum Karlsruhe, Hermann-von-Helmholtz-Platz-1 76344 Karlsruhe Germany	811 Ultramicrotomy in biology and materials science: an overview Helmut Gnaegi (invited), Daniel Studer, Erik Bos, Peter Peters, Jason Pierson Diatome Ltd, P.O. Box 1164 CH-2501 Biel Switzerland	821 The image intensity in Zernike mode with electrons Marco Beleggia University of Leeds, Institute for Materials Research Houldsworth Building SPEME- University of Leeds LS2 9JT Leeds United Kingdom
9:15			822 The Detective Quantum Efficiency of Electron Area Detectors Richard Henderson (invited) MRC Laboratory of Molecular Biology, Hills Road CB2 0QH Cambridge United Kingdom
9:30	802 Advanced FIB preparation for semiconductor specimens for examination by off-axis electron holography David Cooper , Robert Truche, Alison Twitchett, Paul Midgley, Rafal Dunin-Borkowski CEA leti Minatec, 17 rue des Martyrs 38054 Grenoble France	812 Preparation of biological samples for electron microscopy Heinz Schwarz (invited), B. M. Humbel Max Planck Institute for Developmental Biology, Paul-Ehrlich-Str. 20 D-72076 Tuebingen Germany	
9:45	803 Fabrication and characterization of highly reproducible, high resistance nanogaps made by focused ion beam milling Tobias Blom , Ken Welch, Maria Strömme, Ernesto Coronel, Klaus Leifer Uppsala University, Lägerhyddsvägen 1 Box 534 751 21 UPPSALA Sweden		823 High speed simultaneous X-ray and electron imaging and spectroscopy at synchrotrons and TEMs Lothar Strueder (invited) MPI für extraterrestrische Physik, Otto-Hahn-Ring 6 SIEMENS Gelände 81739 München Germany
10:00	804 Capturing Sub-Nanosecond Quenching in DualBeam FIB/SEM Serial Sectioning. Warren J. MoberlyChan (invited), Alex E. Gash	813 Microwave-assisted sample preparation for life science Josef Schroeder University Hospital Regensburg, F-J-Strauss-Allee 11 93053 REGENSBURG Germany	
10:15	Lawrence Livermore National Laboratory, 7000 East Ave. L-367 94550 Livermore, CA United States	814 An appraisal of FIBSEM and ultramicrotomy for the TEM analysis of the cell-biomaterial interface Hannah Edwards, Michael Fay , Susan Anderson, Colin Scotchford, David Grant, Paul Brown University of Nottingham, Wolfson Building, School M3, University of Nottingham University Park, Nottingham NG7 2RD. United Kingdom	824 Direct electron detectors for TEM Grigore Moldovan , Xiaobing Li, Peter Wilshaw, Angus Kirkland University of Oxford, Parks Road OX1 3PH Oxford United Kingdom
10:30	Coffee	Coffee	Coffee
11:00	805 Focused Ion Beam Tomography of Insulating Biological and Geological Materials Bruno M. Humbel (invited), D.A.M. de Winter, C.T.W.M. Schneijdenberg, B.H. Lich, M.R. Drury, A.J. Verkleij	815 A novel method for precipitates preparation using extraction replicas combined with focused ion beam techniques Martina Dienstleder , Harald Plank, Gerald Kothleitner, Ferdinand Hofer Technical University Graz, Steyrergasse 17 8010 Graz Austria	
11:15	Utrecht University, Padualaan 8 3584 CH Utrecht Netherlands	816 Lipid nanotube encapsulating method in low voltage scanning transmission electron microscopy Hirotohi Furusho , Yumiko Mishima, Naohiro Kameta, Midori Yamane, Mitsutoshi Masuda, Masumi Asakawa, Ichiro Yamashita, Akio Takaoka, Toshimi Shimizu Osaka University, 7-1 Mihogaoka 567-0047 Ibaraki, Osaka Japan	
11:30	806 Comparison of ion- and electron-beam-induced Pt nanodeposits: composition, volume per dose, microstructure, and in-situ resistance Rosa Córdoba , José M ^a De Teresa, Amalio Fernandez-Pacheco, Óscar Montero, Pavel Strichovanec, Alfonso Ibarra, M Ricardo Ibarra Universidad de Zaragoza, Edificio Interfacultades II, Calle Pedro Cerbuna 12 50009 Zaragoza Spain	817 Comparison TEM specimen preparation of perovskite thin films by conventional Ar ion milling and tripod polishing Espen Eberg, Antonius T. J. van Helvoort , Bjørn G. Soleim, Åsmund F. Monsen, Lena C. Wennberg, Thomas Tybell, Randi Holmestad Norwegian University of Science & Technology (NTNU), Hogskoleringen 5 7491 Trondheim Norway	
11:45	807 High volume TEM-sample preparation using a wafer saving in-line preparation tool Uwe Muehle , Soeren Jansen, Ralf Schuetten, Robby Prang, Ruud Schampers, Ralf Lehmann Qimonda Dresden GmbH & Co OHG, Koenigsbruecker Strasse 180 01099 Dresden Germany	818 Microscopy observation of food biopolymers and related sample preparation methods Cedric Gaillard INRA, Rue de la Géraudière BP 71627 44316 Nantes France	
12:00	808 Manipulation and Contacting of Individual Carbon Nanotubes Inside a FIB Workstation Siegfried Menzel , Hartmut Vinzelberg, Thomas Gemming IFW Dresden, PF 270116 01171 Dresden Germany		
12:15	809 Advances in 3-dimensional material characterisation using simultaneous EDS and EBSD analysis in a combined FIB-SEM microscope Rene De Kloe , Hubert Schulz, Felix Reinauer EDAX BV, Ringbaan Noord 103 5046 AA Tilburg Netherlands		

Room: Lüttich	Room: Maastricht	Room: Hasselt
M2.1 Carbon-based Nanomaterials	M2.2 Nanoparticles and Catalysts	L3.3 Microscopy in Human and Disease (part 2)
E. Olsson	E. Olsson	A. Engel
M. Monthieux	S. Giorgio	A. Warley, B. Hauröder, H. Gelderblom
830 HRTEM contribution to the study of extraterrestrial nanocarbons and some earth materials analogues Jean-Noël Rouzaud (invited), Corentin Le Guillou CNRS-ENS, Laboratoire de Géologie de l'Ens UMR 8538 24, rue Lhomond 75231 PARIS France	840 Structure and Composition of Dilute Co-doped BaTiO ₃ Nanoparticles. Oleg Lebedev , Rolf Erni, Gustaaf Van Tendeloo University of Antwerp, Groenenborgerlaan, 171 B2020 Antwerpen Belgium 841 Catalytic soot oxidation studied by Environmental Transmission Electron Microscopy Stig Helveg , Søren B Simonsen, Søren Dahl, Erik Johnson Haldor Topsoe A/S, Nymollevvej 55 DK-2800 Kgs. Lyngby Denmark	
831 Time resolved in-situ TEM observations of Carbon Nanotube growth John Robertson (invited) Cambridge University, Trumpington St CB2 1PZ Cambridge University United Kingdom	842 CoFe ₃ -xO ₄ catalytic materials for gaz sensors Lilia Ajroudi, Abdel Essoumi, Sylvie Villain, Véronique Madigou, Najeh Mliki, Christine Leroux IM2NP, bat. R, South University Toulon-Var BP 20132 83957 La Garde France 843 Low-loss-energy EFTEM Imaging of Triangular Silver Nanoparticles Jaysen Nelayah , Lin Gu, Wilfried Stigle, Christoph Koch, Isabel Pastoriza-Santos, Luis M. Liz-Marzan, Peter van Aken Max-Planck-Institut für Metallforschung, Heisenbergstr. 3 70569 Stuttgart Germany	860 The use of microscopy in the diagnosis of Human microsporidial infection - the Manchester, UK experience Alan Curry (invited) Health Protection Agency, Clinical Sciences Building, Manchester Royal Infir M13 9WL Manchester United Kingdom
832 Structural peculiarities of carbon onions, formed by different methods Boris Kulnitskiy , Igor Perezhogin, Vladimir Blank TISNMC, 7a Centralnaya str. Technological Institute for Su 7a Centralnaya str. 142190 Troitsk, Moscow region Russian Federation	844 Looking at the surface of catalysts nanopowders José Calvino (invited), Juan C. Hernández, Ana B. Hungria, Miguel López-Haro, José A. Pérez-Omil, Susana Trasobares, Serafin Bernal, Paul Midgley, Odile Stephan Universidad de Cádiz, Facultad de Ciencias Campus Rio San Pedro 11510 Puerto Real (Cádiz) Spain	861 Assembly and maturation of pestiviruses Stefanie Deike , Matthias König, Heinz-Jürgen Thiel Justus-Liebig-Universität Giessen, Frankfurter Str. 107 35392 Giessen Germany
833 Insulator-Metal transition: formation of Diamond Nanowires in n-type Conductive UNCD films Raul Arenal , Odile Stephan, Paola Bruno, Dieter M. Gruen CNRS-ONERA, 29, Av. de la Division Leclerc 92320 Chatillon France		862 Reconstitution and morphological characterisation of an original Human Endogenous Retrovirus Norbert Bannert Robert Koch Institute, Nordufer 20 13353 Berlin Germany
	845 Gathering structural and analytical information on catalysts at sub-nanometer level with TEM Francisco Cadete Santos Aires (invited), Mimoun Aouine IRCELYON, 2 Avenue Albert Einstein 69626 Villeurbanne France	863 Rapid Diagnosis of Marburg Hemorrhagic Fever C. Schmetz , I. Bonow, P. Emmerich, S. Guenther, J. Schmidt-Chanasit Bernhard Nocht Institute for Tropical Medicine, Bernhard-Nocht-Str. 74, 20359 Hamburg, Germany
Coffee	Coffee	Coffee
	846 Direct observation of surface oxidation of Rh nanoparticles on (001) MgO N. Yun Jin-Phillipp Max Planck Institute for Metal Research, Heisenbergstr. 3 70569 Stuttgart Germany	
	847 Size effect and influence of nanoparticles thickness on order/disorder phenomena in CoPt nanoparticles Damien Alloyeau , Christian Ricolleau, Tetsuo Oikawa, Cyril Langlois, Yann Le Bouar, Annick Loiseau University Paris 7 Denis Diderot, 10 rue Alice Domont et Leonie Duquet Case 7021 75205 PARIS France	
	848 Quantitative strain determination in nanoparticles using aberration-corrected HREM Martin Hytch CNRS/CEMES, 29 rue Jeanne Marvig 31055 Toulouse France	
	849 Complementary EM study on highly active nanodendritic Raney-type Ni catalysts with hierarchical build-up Ute Hörmann , Ute Kaier, Nicholas Adkins, Rainer Wunderlich, Alexander Minkow, Hans Fecht, Hans Schils, Torsten Scherer, Horst Blumtritt Ulm University, Albert-Einstein-Allee 11 89081 Ulm Germany	
	850 Atomic-resolution Electron Microscopy at Ambient Pressure Fredrik Creemer , Stig Helveg, Alfons Molenbroek, Lina Sarro, Henny Zandbergen Delft University of Technology, PO Box 5053 2600 GB Delft Netherlands	
	851 Near-surface structure of FePt nanoparticles Bernd Rellinghaus , Darius Pohl, Elias Mohn, Ludwig Schultz IFW Dresden, Helmholtzstr. 20 D-01069 Dresden Germany	