

## Programme MC2009 Graz

### Weekly overview

MC 2009	SUN, AUGUST 30	MON, AUGUST 31	TUE, SEPTEMBER 1	WED, SEPTEMBER 2	THU, SEPTEMBER 3	FRI, SEPTEMBER 4	
08:30–09:00		Opening Ceremony	Plenary Lecture	Ernst Ruska Lecture	Plenary Lecture	I6 L5 M2	
09:00–09:30		Plenary Lecture	Plenary Lecture	Ernst Ruska Lecture	Plenary Lecture	I6 L5 M2	
09:30–10:00		Plenary Lecture	Plenary Lecture	Ernst Ruska Lecture	Plenary Lecture	I6 L5 M2	
10:00–10:30		Coffee Break					
10:30–11:00		I1 L6 M1	I2 L6 M6	I3 L4 M3	M4 L3 M2	I7 L5 M7	
11:00–11:30		I1 L6 M1	I2 L6 M6	I3 L1 M3	M4 L3 M2	I7 L5 M7	
11:30–12:00		I1 L6 M1	I5 L6 M6	I3 L1 M3	M4 L7 M2	I7 L5 M7	
12:00–12:30		I1 L6 M6	I5 L4 M6	I3 L1 M5	M4 L7 M2	I7 L5 M7	
12:30–13:00		Lunch Break					
13:00–13:30							Closing Ceremony & Farewell
13:30–14:00							
14:00–14:30	Registration	Poster Session I1, I3, I4, I6 / L4, L6, L7, W1 / M1, M3, M5, M6			Poster Session I2, I5, I7 / L1, L2, L3, L5, W2, W3 / M2, M4, M7		
14:30–15:00		Coffee Break					
15:00–15:30		Visit of the Exhibition	I5 L4 M6	I4 L2 M5	Assemblies National Societies		
15:30–16:00			I5 L4 M3	I4 L2 M5			
16:00–16:30			I5 L4 M3	I4 L3 M2	Break		
16:30–17:00	Welcome Party	Workshop W1			Workshop W2		
17:00–17:30		Workshop W1			Workshop W3		
17:30–18:00		Workshop W1			Conference Dinner		
18:00–18:30		Workshop W1			Conference Dinner		
18:30–19:00		Break					
19:00–19:30							
19:30–20:00							
20:00–20:30							

### Remarks

Poster numbering scheme:

Monday afternoon/Tuesday afternoon

Wednesday afternoon/Thursday afternoon

“session”. “Pnnn”

numbers starting from P101

numbers starting from P501

Each poster will be displayed during two days. After two days the posters will be exchanged.

Authors are asked to be present at the poster on one of these two days.

The poster presentations have consecutive numbers, where presenters with odd numbers are asked to present at the poster on the first day, and presenters with even numbers on the second day.

2009-08-31

**Scherzer Lecture**

08:50 - 09:15, Stefaniensaal

1

8:50 - 9:15 In memoriam of Otto Scherzer on the occasion of his hundredth birthday

**Harald Rose****Plenary Lecture**

09:15 - 10:00, Stefaniensaal

1

9:15 - 10:00 Microscopy for biomedical research

**Jürgen Roth****I1: Atomic resolution microscopy**

10:30 - 12:30, Saal Steiermark

I1.111

10:30 - 11:00 Abberation-corrected atomic-resolution transmission electron microscopy (invited)

**Markus Lentzen**

I1.112

11:00 - 11:30 Imaging single atoms and atomic clusters in complex media by aberration corrected STEM (invited)

**Andrew Bleloch**

I1.113

11:30 - 11:45 Structural and elemental analysis under the sub-Angstrom resolution with Cs-corrected STEM

**Tetsuo Oikawa**, E. Okunishi, N. Endo, C. Ricolleau

I1.114

11:45 - 12:00 Atomic and electronic structural studies of VN/MgO (001) interface by an image-side CS-corrected electron microscope

**Zaoli Zhang**, Boriana Rashkova, Gerhard Dehm, Petr Lazar, Josef Redinger, Raimund Podloucky

I1.115

12:00 - 12:15 Applied wave optics on the atomic scale: Electron holography materials characterization in a Titan TEM

**Martin Linck**, Michael Lehmann, Bert Freitag, Stephan Kujawa, Tore Niermann

I1.116

12:15 - 12:30 Noise Analysis of Amplitude and Phase reconstructed from High Signal Resolution Electron Holograms

**Falk Röder**, Axel Lubk, Dorin Geiger, Hannes Lichte

**L6: Structures of cells and tissues, localization of molecular targets***10:30 - 12:30, Kammermusiksaal*

L6.121

10:30 - 11:00 High-throughput 3D Cellular Imaging (invited)

**Ben Lich**, David Wall, Graham Knott

L6.122

11:00 - 11:15 FIB-SEM: an in-depth study of atherosclerotic tissue

**Liesbeth Hekking**, Misjael Lebbink, Matthijs de Winter, Chris Schneijdenberg, Marco Brand, Bruno M. Humbel, Arie Verkleij, Jan Andries Post

L6.123

11:15 - 11:30 Structures of YidC and Oxa1 bound to translating ribosomes: Dimeric pores for membrane protein insertion

**Daniel Boehringer**, Rebecca Kohler, Basil Greber, Rouven Bingel-Erlenmeyer, Ian Collinson, Christiane Schaffitzel, Nenad Ban

L6.124

11:30 - 11:45 Subcellular quantification of glutathione and its precursors during pathogen attack in plants

**Maria Müller**, Bernd Zechmann

L6.125

11:45 - 12:00 S-Layer - a special way to get in contact with "Heavy Metal"

**Andreas Klingl**, Wulf Depmeier, Gottfried Schmalz, Michael Thomm, Harald Huber, Reinhard Rachel**M1: Materials for information technology***10:30 - 12:00, Stefaniensaal*

M1.131

10:30 - 11:00 TEM and CL of semiconducting 1D nanostructures (invited)

**Laura Lazzarini**

M1.132

11:00 - 11:30 Structural characteristics of dilute nitride III/V semiconductors (invited)

**Kerstin Volz**

M1.133

11:30 - 11:45 Influence of AlN/(Al,Ga)N superlattices on the defect densities in UV-LEDs formed on high-temperature AlN layers on sapphire

**Anna Mogilatenko**, Arne Knauer, Frank Brunner, Viola Kueller, Markus Weyers, Wolfgang Neumann

M1.134

11:45 - 12:00 Stress Modulated Composition Fluctuation and Diffusion in near lattice match AlInN/GaN

**Anas Mouti**, Jean-Luc Rouviere, Nicolas Grandjean, Pierre Stadelmann

**M6: Thin films and interfaces**

*12:00 - 12:30, Stefaniensaal*

M6.135

12:00 - 12:30 Metallic Thin Films for MEMS/NEMS Applications (invited)

**Velimir Radmilovic**, Z. Lee, C. Ophus, E. Luber, U. Dahmen, D. Mitlin

**Workshop W1: Bridging gaps in microscopy**

*19:00 - 20:15, Kammermusiksaal*

W1.1

19:00 - 19:15 Correlative Light and Electron Microscopy (invited)

Bruno M. Humbel, **Heinz Schwarz**

2009-09-01

## Plenary Lectures

08:30 - 10:00, Stefaniensaal

1

8:30 - 9:15 Biomolecular Electron Microscopy: From Molecules to Systems  
B. Rockel, S. Nickell, J. Ortiz, **Wolfgang Baumeister**

2

9:15 - 10:00 Analytical transmission electron microscopy  
**Wilfried Sigle**

## I2: Scherzer symposium on advanced electron optics

10:30 - 11:30, Saal Steiermark

I2.211

10:30 - 11:00 Aberration Correctors in Electron Microscopy: From the first ideas of O. Scherzer to sophisticated correction systems (invited)  
**Max Haider**, Peter Hartel, Rainer Höschel, Uli Loebau, Heiko Mueller, Stephan Uhlemann, Joachim Zach

I2.212

11:00 - 11:15 New developments in the field of electrostatic phase plates in transmission electron microscopy  
**Katrin Schultheiss**, Joachim Zach, Bjoern Gamm, Manuel Dries, Rasmus Schröder, Dagmar Gerthsen

I2.213

11:15 - 11:30 Recent Advances in EELS Instrumentation and Analysis: Quantitative Analysis at the Nanometer Scale  
**R.D. Twesten**, M.M.G. Barfels, C.G. Trevor, P.J. Thomas, N.K. Menon, A. Aitouchen, A.J. Gubbens

## L6: Structures of cells and tissues, localization of molecular targets

10:30 - 12:00, Kammermusiksaal

L6.221

10:30 - 10:45 The structure and the chemical composition of the spherites in the cave cricket *Troglophilus neglectus* (Rhaphidophoridae, Saltatoria)  
**Sasa Lipovsek**, Ilse Letofsky-Papst, Tone Novak, Ferdinand Hofer, Maria Anna Pabst

L6.222

10:45 - 11:00 Detection of calcium ions in the mantle epithelium of the abalone *Haliotis tuberculata*  
**Katharina Gries**, Monika Fritz, Andreas Rosenauer

L6.223

11:00 - 11:15 Structural and mechanical characterization of chitin using correlative AFM-TEM microscopy and spectroscopy  
**Nadejda Matsko**, Nada Žnidaršic, Jasna Strus, Werner Grogger, Ferdinand Hofer

L6.224

11:15 - 11:30 Spherules and nanotubules involved in elaboration of crustacean cuticle during the molt cycle: A correlative TEM-AFM study  
**Jasna Strus**, Nada Žnidaršic, Magda Tusek Znidaric, Werner Grogger, Ferdinand Hofer, Nadejda Matsko

L6.225

11:30 - 11:45 Structure and composition of the pleoventral calcium phosphate deposits of the beach isopod *Tylos europaeus* (Crustacea)  
**Andreas Ziegler**, Sascha Jenas, Sabine Hild

L6.226

11:45 - 12:00 Ultrastructure and mineral phase distribution in the exoskeleton of the beach isopod *Tylos europaeus* (Crustacea)  
**Bastian Seidl**, Sabine Hild, Andreas Ziegler

**M6: Thin films and interfaces***10:30 - 12:30, Stefaniensaal*

M6.231

10:30 - 10:45 Atomic scale compositions across DyScO<sub>3</sub>/SrTiO<sub>3</sub> interfaces  
**Martina Luysberg**, Markus Heidelmann, Lothar Houben, M. Boese, T. Heeg, M. Röckerath, J. Schubert

M6.232

10:45 - 11:00 Study of near-edge structures of SrO(SrTiO<sub>3</sub>)<sub>n</sub> Ruddlesden-Popper films using EELS in the TEM and simulations  
**Thomas Riedl**, Torsten Weißbach, Emanuel Gutmann, Dirk Meyer, Sibylle Gemming, Thomas Gemming

M6.233

11:00 - 11:30 Structure and Chemistry of Nanometer-Thick Intergranular Films at Au-Al<sub>2</sub>O<sub>3</sub> Interfaces (invited)  
**Wayne D. Kaplan**, Mor Baram

M6.234

11:30 - 11:45 First phase selection during interfacial reactions in oxide systems  
**Andriy Lotnyk**, Stephan Senz, Dietrich Hesse

M6.235

11:45 - 12:00 Thin films in solar cells: electron microscopy study of cross-section combined with depth profiling by Raman spectroscopy  
**Andreja Gajovic**, Davor Gracin, Miran Ceh

M6.236

12:00 - 12:30 Advanced high-resolution TEM of layered crystals and incommensurate misfit layer compounds and their interfaces (invited)

**Erdmann Spiecker**, Magnus Garbrecht, Wolfgang Jäger**I5: SEM**11:30 - 12:30, *Saal Steiermark*

15.214

11:30 - 12:00 Focused ion beam (FIB) / scanning electron microscopy (SEM) of epithelial tissue (invited)

**Damjana Drobne**, Vladka Lešer, Marziale Milani, Francesco Tatti

15.215

12:00 - 12:15 Quantitative scanning electron microscopy in the transmission mode: a development for nanoanalytics

**Vladislav Krzyzaneck**, Rudolf Reichelt

15.216

12:15 - 12:30 Quantification of the In concentration of InGaAs quantum wells by transmission measurements in a scanning electron microscope

**Tobias Volkenandt**, Erich Müller, Dagmar Gerthsen, Dong Zhi Hu, Daniel M. Schaadt**L4: Microscopy in plant sciences and microbiology**12:00 - 12:30, *Kammermusiksaal*

L4.227

12:00 - 12:30 Live Cell Imaging of Endoplasmic Reticulum and Golgi Dynamics in Higher Plants (invited)

**Chris Hawes**, John Runions, Anne Osterrieder, Imogen Sparkes**I5: SEM**16:30 - 18:30, *Saal Steiermark*

15.311

16:30 - 17:00 High resolution field emission scanning electron microscopy (invited)

**Taryl Kirk**, Olivier Scholder, Lorenzo De Pietro, Urs Maier, Urs Ramsperger, Danilo Pesca

15.312

17:00 - 17:15 Transmission through thin films by low energy scanning electron microscopy

**Ilona Mullerová**, Miloš Hovorka, Jaroslav Sobota, Renáta Hanzlíková, Tomáš Fort, Ludek Frank

15.313

17:15 - 17:30 SEM contrast of semiconducting and semi-insulating samples

**Hans-Joachim Fitting**, Joseph Kovacs

15.314

17:30 - 17:45 Nonlinear material contrast in low voltage backscatter electron images.

**Johannes Rattenberger**, Julian Wagner, Hartmuth Schroettner

15.315

17:45 - 18:15 Progress and applications of scanning electron microscopy in the presence of a gas (invited)

**Debbie Stokes**

15.316

18:15 - 18:30 Combination of various scanning electron microscopy techniques: applications for thin-film solar cells

**Daniel Abou-Ras**, Jürgen Bundesmann, Jaison Kavalakkatt, Joachim Klaer, Björn Marsen, Melanie Nichterwitz, Thomas Unold, Uwe Jahn, Wolfgang Jägermann, Hubert Schulz, Felix Reinauer, Hans-Werner Schock**L4: Microscopy in plant sciences and microbiology**16:30 - 18:30, *Kammerrmusiksaal*

L4.321

16:30 - 17:00 The Plant TGN, a Challenge for Light- and Electron Microscopy (invited)

**York-Dieter Stierhof**, Elizabeth F. Crowell, Karin Schumacher

L4.322

17:00 - 17:15 Studying Golgi protein dynamics after disruption of Golgi membranes in tobacco

**Jennifer Schoberer**, John Runions, Eric Hummel, Chris Hawes, Herta Steinkellner, Richard Strasser, Anne Osterrieder

L4.323

17:15 - 17:30 Ultrastructural 3D investigations of cells and cell organelles

**Günther Zellnig**, Andreas Perktold, Günther Daum, Bernd Zechmann

L4.324

17:30 - 18:00 Investigating cell and "organelle" division in anammox bacteria using electron tomography (invited)

**Laura van Niftrik**, Willie Geerts, Elly Van Donselaar, Bruno M. Humbel, Richard Webb, Harry Harhangi, Huub Op den Camp, John Fuerst, Arie Verkleij, Mike Jetten, Marc Strous

L4.325

18:00 - 18:15 Localization of effectors from *Xanthomonas campestris* triggering plant reactions dependent on an N-myristoylation signal**Gerd Hause**, Simone Jahn, Frank Thieme, Robert Szczesny, Ulla Bonas

L4.326

18:15 - 18:30 3D Structure of the Archaea *Ignicoccus* and *Nanoarchaeum*, as determined by serial section electron microscopy**Thomas Heimerl**, Nadine Wasserburger, Benjamin Junglas, Carolin Meyer, Reinhard Wirth, Harald Huber, Reinhard Rachel

**M6: Thin films and interfaces***16:30 - 17:00, Stefaniensaal*

M6.331

16:30 - 16:45 TEM study of interfaces in transition metal nitride thin films and their influence on their properties

**Magdalena Parlinska-Wojtan**, Aude Pelisson, Karolina Rzepiejewska-Malyska, Silviu Cosmin Sandu, Rosendo Sanjines, Francis Levy, Joerg Patscheider, Hans-Josef Hug

M6.332

16:45 - 17:00 High-resolution electron holography of ferroelectric nanolayers

**Martin Linck**, Hannes Lichte, Axel Lubk, Falk Röder, Koichiro Honda**M3: Alloys and intermetallics***17:00 - 18:30, Stefaniensaal*

M3.333

17:00 - 17:30 Electron Microscopy of Metal and Alloy Nanoparticles for Possible Medical Applications (invited)

**Robert Sinclair**, Paul J. Kempen, He Li, Ai Leen Koh

M3.334

17:30 - 17:45 Distinguishing screw dislocation core configuration in bcc W using TEM

**Robin Schaeublin**, Jan Fikar

M3.335

17:45 - 18:00 Systematic dislocation analysis assessment by HAADF STEM imaging

**Leonardo Agudo Jacome**, Christoph Somsen, Gunther Eggeler

M3.336

18:00 - 18:15 Hardening phases evolution in the QE22 magnesium alloy

**Gianni Barucca**, Adriano Di Cristoforo, Luigi Gobbi, Danilo Lussana, Paolo Mengucci, Giuseppe Riontino

M3.337

18:15 - 18:30 Analytical TEM of an Al-Mn-Be-Cu alloy

**Niko Rozman**, Franc Zupanic, Tonica Boncina, Werner Grogger, Christian Gspan, Ferdinand Hofer**Workshop W2: Electron microscopy in human and veterinarian infectiology***19:00 - 20:15, Kammermusiksaal*

W2.1

19:00 - 19:15 Diagnostic electron microscopy : the last resort ?

**Jan Mast**

W2.2

19:15 - 19:30 Detection limit in diagnostic electron microscopy of model suspensions

**Michael Laue**, Janett Piesker, Norbert Bannert

W2.3

19:30 - 19:45 The use of convalescent sera in nsIEM for the detection of not suspected and/or new viral agents of veterinary relevance (invited)

**Antonio Lavazza**, Monica P. Cerioli, Cristiana Tittarelli, Paolo Cordioli

W2.4

19:45 - 20:00 Electron microscopic analysis of Fatal Cowpox Virus Infection in Captive Banded Mongooses (*Mungos mungo*)**Larissa Kolesnikova**, G. J. Schmiedeknecht, M. Eickmann, S. Becker

W2.5

20:00 - 20:15 Imaging the assembly process of the Human Endogenous Retrovirus K(HML-2)

**Anja Zimmermann**, Kazimierz Madela, Norbert Bannert

2009-09-02

**Ernst Ruska Lectures: Ernst Ruska Lectures**

08:30 - 10:00, Stefaniensaal

1

8:30 - 9:15 High-resolution cryo-electron microscopy of biological macromolecular structures by helical reconstruction  
**Koji Yonekura**, Saori Maki-Yonekura

2

9:15 - 10:00 Quantitative electron holography of magnetic fields in nanoscale materials and devices  
Molly R. McCartney, Takeshi Kasama, **Rafal Dunin-Borkowski**

**I3: 3D-Imaging, nanotomography**

10:30 - 12:30, Saal Steiermark

I3.411

10:30 - 11:00 EFTEM Tomography on Nanomaterials (invited)  
**N. Yun Jin-Phillipp**, Christoph Koch, Peter A. van Aken

I3.412

11:00 - 11:15 FIB-Tomography and 3D Image Analysis for Quantitative Characterization of Microstructures  
Michael Engstler, **Frank Mücklich**

I3.413

11:15 - 11:30 Towards a Quantitative Understanding in Electron Tomography - Quantitative Analysis of 3D Nanoparticle Distributions -  
**Christian Kuebel**, Michael Godehardt, Robert Cieslinksi, Steve Rozeveld

I3.414

11:30 - 11:45 Quantitative 3D characterization of semiconductor nanostructures using electron-holographic tomography  
**Daniel Wolf**, Axel Lubk, Andreas Lenk, Hannes Lichte, Giulio Pozzi, Paola Prete, Nico Lovergine

I3.415

11:45 - 12:00 Fast automated 3D EDXS Mapping  
**Julian Wagner**, Stefan Mitsche, Ilse Letofsky-Papst, Hartmuth Schroettner, Christof Sommitsch

I3.416

12:00 - 12:15 Application of a Novel Automated Serial Sectioning Technique in the 3D Analysis of Paper Structures  
**Johannes Kritzinger**, Mario Wiltsche, Michael Donoser, Wolfgang Bauer

I3.417

12:15 - 12:30 HAADF-STEM tomography of carbonitrides in steel  
**Wladyslaw Osuch**, Adam Kruk, Grzegorz Cempura, Juan Carlos Hernandez, Aleksandra Czyrska-Filemonowicz

**L4: Microscopy in plant sciences and microbiology***10:30 - 11:00, Kammermusiksaal*

L4.421

10:30 - 10:45 ESEM imaging of dynamic biological processes – a proof of principle study

**Juliette McGregor**, Athene Donald

L4.422

10:45 - 11:00 Application of environmental scanning electron microscopy to study plant surfaces

**Edith Stabentheiner****M3: Alloys and intermetallics***10:30 - 12:00, Stefaniensaal*

M3.431

10:30 - 11:00 Evolution of microstructure during creep of tempered martensite ferritic steels (invited)

A. Aghajani, Christoph Somsen, **Gunther Eggeler**

M3.432

11:00 - 11:30 Determination of 3D statistical structural parameters of Ni<sub>4</sub>Ti<sub>3</sub> precipitates in stress-free and compressed Ni-Ti (invited)Shanshan Cao, Michael Croitoru, Wouter Van den Broek, **Dominique Schryvers**

M3.433

11:30 - 11:45 Precipitation behaviors in Co-Ni based alloys observed by transmission electron microscopy

**Toyohiko Konno**, T. Tadano, Hiroaki Matsumoto, Akihiko Chiba

M3.434

11:45 - 12:00 Nanostructuring of polycrystalline FeSi alloy by means of ion beam

**Barbara Setina Batic**, Monika Jenko**L1: 3D and cryo-TEM***11:00 - 12:30, Kammermusiksaal*

L1.423

11:00 - 11:30 From the nuclear periphery to cell adhesion by cryo-electron tomography (invited)

**Ohad Medalia**

L1.424

11:30 - 11:45 Analysis of molecular dynamics by 3D cryo-EM: the examples of HSP90 and Ribosomal complexes (invited)

**Daniel Thomas**, Félix Weis, Laura Moulintraffort, Emmanuel Giudice, Patrick Bron, Jean-Paul Rolland, Cyrille Garnier, Reynald Gillet

L1.425

11:45 - 12:00 Electron cryo-tomography of type I secretion complexes caught in the act of substrate transport

**Dennis Thomas**, Thorsten Jumpertz, Lutz Schmitt, Wolfgang Baumeister, Juergen Plitzko

L1.426

12:00 - 12:15 Integration of the cryo ultramicrotome and specially designed cryo AFM to study of soft polymer and biological systems

**Anton Efimov**, Victor Sevastyanov, Werner Grogger, Ferdinand Hofer, Nadejda Matsko

L1.427

12:15 - 12:30 The eye lens chaperone alphaB-crystallin forms defined 24meric globular assemblies

**Nathalie Braun**, Andreas Kastenmüller, Jirka Peschek, Johannes Buchner, Sevil Weinkauff**M5: Carbon based materials, soft materials, polymers**

12:00 - 12:30, Stefaniensaal

M5.435

12:00 - 12:30 3D reconstruction at the nanoscale of graphene undulations (invited)

**Luca Ortolani**, Florent Houdellier, Marc Monthieux, Vittorio Morandi, Andrea Migliori**I4: Analytical TEM**

16:30 - 18:30, Saal Steiermark

I4.511

16:30 - 17:00 EELS at high spatial resolution (invited)

**Alan Craven**

I4.512

17:00 - 17:12 Surface plasmon resonance effects in a perforated Ag film studied by energy-filtering TEM

**Wilfried Sigle**, Jaysen Nelayah, Christoph Koch, Burcu Ögüt, Peter A. van Aken

I4.513

17:12 - 17:24 A new approach in valence EELS: using slow electrons for optical characterization

**Michael Stöger-Pollach**

I4.514

17:24 - 17:36 Model based determination of the dielectric properties of nanomaterials from STEM valence loss EELS

**Liang Zhang**, Johan Verbeeck, Gustaaf Van Tendeloo

I4.515

17:36 - 18:06 EELS investigation of carbon nanotubes and other carbon modifications (invited)

**Cécile Hébert**, Feng Tian

I4.516

18:06 - 18:18 Chirality in EELS: Progress and Applications

**Inga Ennen**, Michael Stöger-Pollach, Peter Schattschneider, Johan Verbeeck, Peter Nellist

I4.517

18:18 - 18:30 Quantitative determination of the dopant distribution in Si Ultra Shallow Junctions by TSADF-STEM

**Vittorio Morandi**, Andrea Parisini**L2: High-resolution light microscopy, correlative light and electron microscopy**16:30 - 18:00, *Kammermusiksaal*

L2.521

16:30 - 16:45 Introduction and future challenges: HR-LM state of the art / From LM to EM and state of the art

**Roger Wepf**, **Alberto Diaspro**

L2.522

16:45 - 17:00 Identifying single quantum dots using statistical analysis of electron spectroscopic imaging (ESI) series

**Martin Pfanmöller**, Stephan Irsen, Gerd Benner, Rasmus Schröder

L2.523

17:00 - 17:15 High-pressure freezing of cell cultures cultivated on PEN-film  $\mu$ -slides**Michael Laue**, Anja Zimmermann, Norbert Bannert

L2.524

17:15 - 17:30 Integrated Laser and Electron Microscopy: Applications and Sample Preparation

**Matthia Karreman**, Alexandra Agronskaia, Elly Van Donselaar, Bruno M. Humbel, Cornelis Brand, Arie Verkleij, Hans Gerritsen

L2.525

17:30 - 17:45 3D CLEM: from Morphology to Membranes

**Miriam S. Lucas**, Maja Guentert, Stephan Handschin, Philippe Gasser, Sandra Sulser, Hans-Martin Fischer, Roger Wepf

L2.526

17:45 - 18:00 XRD, TEM, HRTEM AND SAED investigation of the morphology and structure of the sea hare species *Aplysia punctata***Andjelka M. Tonejc**, Davorin Medakovic, Stanko Popovic, Mirjana Bijelic, Zeljko Skoko, Hrvoje Posilovic, Andrej Jaklin, Antun Tonejc**M5: Carbon based materials, soft materials, polymers**16:30 - 18:00, *Stefaniensaal*

M5.531

16:30 - 17:00 In-situ electron microscopy of carbon nanomaterials with an aberration-corrected STEM (invited)

Julio Rodríguez-Manzo, **Florian Banhart**

M5.532

17:00 - 17:15 Imaging of Bioengineering Surfaces with the Helium Ion Microscope

**Larry Scipioni**, Choung Huynh, Ian Smith

M5.533

17:15 - 17:30 Graphene - Two-dimensional carbon at atomic resolution

**Jannik Meyer**, Andrey Chuvilin, Ute Kaiser

M5.534

17:30 - 17:45 In situ measurements of the electrical and mechanical behaviour of carbon nanoscrolls

**Andreas Schaper**, Haoqing Hou, Mingsheng Wang, Zhi Xu, Dmitri Golberg, Yoshio Bando

M5.535

17:45 - 18:00 Changes of morphology during plastic deformation of cavitating semicrystalline polymers

**Andrzej Pawlak**, Andrzej Galeski**L3: Tracking molecules in vivo, intracellular trafficking and cellular dynamics**18:00 - 18:30, *Kammermusiksaal*

L3.527

18:00 - 18:30 Novel lab on chip technology for fast 3D particle tracking in living yeasts based on micromirrors (invited)

**Houssam Hajojoul**, Monique Dilhan, Imen Lassadi, Silvia Kocanova, Kerstin Bystricky, Aurélien Bancaud**M2: Nanoparticles and nanostructured materials**18:00 - 18:30, *Stefaniensaal*

M2.536

18:00 - 18:30 Orientation dependent ordering of liquid Al atoms and oxygen transport mechanism at liquid Al/sapphire interfaces (invited)

**Sang Ho Oh**, Christina Scheu, Manfred Rühle**Workshop W3: Advanced microscopy in teaching**19:00 - 20:15, *Kammermusiksaal*

W3.1

19:00 - 19:15 Morphological aspects of autophagy: Identification and possible mechanism of autophagosome formation in neuronal cells (invited)

**Yasuo Uchiyama**

W3.2

19:15 - 19:30 Recent advances in scanning electron microscopy of vascular corrosion casting and their importance in microvascular research

**Alois Lametschwandtner**, Heidi Bartel, Bernd Minnich

W3.3

19:30 - 19:45 New 3D Quantification Software (M3) Enables to Examine Blood Vessels Inspected in the SEM / ESEM and also Allows to Render Threedimensional Models of (Micro-)Vascular Trees

**Bernd Minnich**, Alois Lametschwandtner, Edward Bernroider, Helmut Mayer

W3.4

19:45 - 20:00 Collaboratory: A Solution for Shared Use of Instruments over Secure Internet Connections

**Peter Schlossmacher**, Li Li, Auke van Balen, Dominique Hubert

W3.5

20:00 - 20:15 Integration of Transmission Electron Microscopy in Computing Grid Structure

**Marco Vittori Antisari**, Silvio Migliori

2009-09-03

**Plenary Lectures**

08:30 - 10:00, Stefaniensaal

1

8:30 - 9:15 Microscopy at the bottom

**Ute Kaiser**, Andrey Chuvilin, Jannik Meyer, Johannes Biskupek

2

9:15 - 10:00 The TEAM Project

**Peter Denes****M4: Ceramics, coatings, geomaterials, ...**

10:30 - 12:30, Saal Steiermark

M4.611

10:30 - 11:00 HRTEM study of heat induced La<sub>2</sub>NiO<sub>4</sub> surface degradations (invited)**Juri Barthel**, Joachim Mayer, Nicolas Gauquelin, Micheal Schroeder, Monica Ceretti, Werner Paulus

M4.612

11:00 - 11:15 Y segregation behavior controlled by the transient precipitation in saturated Y-doped alumina

**Saso Sturm**, Mehmet Ali Gulgun

M4.613

11:15 - 11:30 Estimation of the local electric polarization in layered heterostructures using HRTEM and Electron Holography

**Dorin Geiger**, Axel Lubk, Stefan Thiel, Martin Linck, Hannes Lichte, Jochen Mannhart

M4.614

11:30 - 12:00 Calcium and (alpha)- Alumina (invited)

**Mehmet Ali Gulgun**, Arzu Altay, Ilke Aslan, C. Barry Carter

M4.615

12:00 - 12:15 EELS Measurements and Ab-initio Calculations of the N-K Edge in TiN/VN Films Deposited on MgO Substrates

**Boriana Rashkova**, Saso Sturm, Zaoli Zhang, Gerald Kothleitner, Kerstin Kutschej, Christian Mitterer, Petr Lazar, Josef Redinger, Raimund Podloucky, Christina Scheu, Gerhard Dehm

M4.616

12:15 - 12:30 ELNES studies of abalone shell and geological CaCO<sub>3</sub> polymorphs**Vesna Srot**, Ulrike G.K. Wegst, Peter A. van Aken, Christoph Koch, Ute Salzberger

**L3: Tracking molecules in vivo, intracellular trafficking and cellular dynamics***10:30 - 11:30, Kammermusiksaal*

L3.621

10:30 - 10:45 Fluorescent probes illuminate role of Rac1A in regulation of the actin cytoskeleton in *D. discoideum***Vedrana Filic**, Jan Faix, Maja Marinovic, Igor Weber

L3.622

10:45 - 11:00 Membrane dynamics during formation of the endocytic TGN, visualized by 3D-electron tomography

**Margit Pavelka**, Monika Vetterlein, Claudia Meißlitzer-Ruppitsch, Adolf Ellinger, Josef Neumüller

L3.623

11:00 - 11:30 Golgi reorganization and decreased endocytosis provide basis for a functional differentiation of urothelial cells (invited)

**Mateja Erdani Kreft****M2: Nanoparticles and nanostructured materials***10:30 - 12:30, Stefaniensaal*

M2.631

10:30 - 11:00 Thermal stability of FeCr Multilayer – Interface width and triple line diffusion (invited)

**Patrick Stender**, Guido Schmitz

M2.632

11:00 - 11:15 Electron microscopy study of Bi doped ZnO and Zn-In-O nanowires and nanobelts grown by a thermal method

Belén Alemán, Pedro Hidalgo, Paloma Fernandez, **Javier Piqueras**

M2.633

11:15 - 11:30 Direct imaging and analysis of the internal interfaces between carbon nanotubes and their catalyst particles

**Darius Pohl**, Franziska Schäffel, Christine Täschner, Mark Hermann Rummeli, Christian Kisielowski, Ludwig Schultz, Bernd Rellinghaus

M2.634

11:30 - 11:45 TEM investigations on (Ga,Mn)As core/shell Nanowires

**Marcello Soda**, Andreas Rudolph, Matthias Kiessling, Elisabeth Reiger, Tomasz Wojtowicz, Werner Wegscheider, Josef Zweck

M2.635

11:45 - 12:00 Synthesis and characterization of SrTiO<sub>3</sub> nanotubes**Kristina Žagar**, Miran Ceh

M2.636

12:00 - 12:15 Formation of PbTe quantum dots and their coherent (001) interfaces with the CdTe host crystal

**Heiko Groiss**, Erich Kaufmann, Stefan Kriechbaumer, Gunther Springholz, Thomas Schwarzl, Günter Hesser, Friedrich Schäffler, Wolfgang Heiss, Roman Leitsmann, Friedhelm Bechstedt, Kazuto Koike, Mitsuaki Yano, Tomasz Wojtowicz, Peter Werner

M2.637

12:15 - 12:30 A structural characterization of a Cu/MgO (001) interface using Cs Corrected HRTEM

**Sophie Cazottes**, Zaoli Zhang, Gerhard Dehm**L7: Image processing for life sciences**11:30 - 12:30, *Kammermusiksaal*

L7.624

11:30 - 12:00 The proportionator: a new sampling tool in stereology (invited)

**Jens R. Nyengaard**, J.E. Gardi, H.J.G. Gundersen

L7.625

12:00 - 12:10 Measurement of capillary length from 3D microscopic image data by methods of image analysis and stereology

**Lucie Kubinova**, Jiri Janacek, Ivan Saxl, Ida Erzen, Xiao Wen Mao

L7.626

12:10 - 12:20 Mathematical image-processing methods for the automated segmentation of yeast cells in transmission images

**Kristian Bredies**, Heimo Wolinski

L7.627

12:20 - 12:30 Two image preprocessing methods for Confocal Laser Scanning Microscopy

**Jan Michalek**, Martin Capek, Lucie Kubinova

2009-09-04

**I6: Advanced sample preparation methods for life sciences and materials science**

08:30 - 10:00, Saal Steiermark

I6.711

8:30 - 9:00 Study of acetylcholine receptor organisation in the postsynaptic membrane of Torpedo electrocyte by cryoelectron tomography (invited)

**Benoit Zuber**, Nigel Unwin

I6.712

9:00 - 9:15 Optimization of immunogold labeling on thin resin sections after cryofixation

**Pavel Hozák**, Anatoly A. Philimonenko, Vlada Philimonenko, Margaryta Sobol, Jiri Janacek, Ales Vyhnal, Lucie Kubinova, Pavel Janda

I6.713

9:15 - 9:30 Microwave assisted rapid plant TEM sample preparation

**Bernd Zechmann**, Günther Zellnig

I6.714

9:30 - 9:45 Standard Free Thickness Determination of Thin TEM Samples via Backscatter Electron Image Correlation

**Roland Salzer**, Andreas Graff, Michél Simon, Frank Altmann

I6.715

9:45 - 10:00 Influence of Sample Preparation on 3D Microanalysis with EDX in a Dual-Beam FIB

**Pierre Burdet**, Cécile Hébert, M. Cantoni**L5: Microscopy in developmental biology and medicine**

08:30 - 10:00, Kammermusiksaal

L5.721

8:30 - 9:00 Ectopic calcifications under the microscope (invited)

**Daniela Quaglino**, Federica Boraldi, Giulia Annovi, Deanna Guerra, Leon J. Schurgers, Cees Vermeer, Ivonne Pasquali-Ronchetti

L5.722

9:00 - 9:15 3D visualisation and analysis of capillaries in human muscles using confocal microscopy

**Ida Erzen**, Jiri Janacek, Lucie Kubinova

L5.723

9:15 - 9:30 3D visualisation of gene expression patterns in early embryos

**Stefan Geyer**, Ariel D. Chipman, Diego Rasskin-Gutman, Wolfgang Weninger

L5.724  
9:30 - 9:45 Skeletal muscle fiber apoptosis: from ultrastructure to biochemistry  
**Elisabetta Falcieri**, Alessandra D'Emilio, Michela Battistelli, Camilla Evangelisti, Alberto Martelli, Sabrina Burattini

L5.725  
9:45 - 10:00 Measuring the diameter of embryonic arteries: the method and first biometric data  
**Barbara Maurer**, Stefan Geyer, Karl Dorfmeister, Birgit Zendron, Wolfgang Weninger

## **M2: Nanoparticles and nanostructured materials**

08:30 - 10:00, *Stefaniensaal*

M2.731  
8:30 - 9:00 Nanostructures in metals and intermetallics studied by TEM (invited)  
**Christian Rentenberger**, Clemens Mangler, Christoph Gammer, Jagannathan Rajagopalan, Hans Peter Karnthaler

M2.732  
9:00 - 9:15 Novel hedgehog-like magnetic nanostructures studied by liquid nitrogen free EDS and aberration corrected STEM/EELS  
**Meiken Falke**, Anna Mogilatenko, Wolfgang Neumann, Christoph Brombacher, H. Rohrmann, M. Kratzer, Manfred Albrecht, Andrew Bleloch, Ralf Terborg, Robert Krömer, Martin Rohde

M2.733  
9:15 - 9:30 Nanostructure and functionalities of the bi-layered ruthenate Sr<sub>3</sub>Ru<sub>2</sub>O<sub>7</sub>  
**Regina Ciancio**, Johan Borjesson, Henrik Pettersson, Rosalba Fittipaldi, Danilo Zola, Antonio Vecchione, Massimiliano Polichetti, Shunichiro Kittaka, Yoshiteru Maeno, Sandro Pace, Eva Olsson

M2.734  
9:30 - 9:45 Structural and Magnetic Investigations on FePt Nanoparticles  
**Johannes Biskupek**, Zaoli Zhang, Ute Kaiser, Ulf Wiedwald, Luyang Han, B. Kuerbanjiang, Paul Ziemann

M2.735  
9:45 - 10:00 Studying the uptake of nanoparticles by cells to evaluate their potential toxicity  
**Frank Krumeich**, Andreas Studer, Ludwig Limbach, Van-Duc Luu, Doris Guntersweiler, Holger Moch, Wendelin Stark

## **I7: Other current topics of microscopy**

10:30 - 12:30, *Saal Steiermark*

I7.811  
10:30 - 11:00 Nanoscale investigations by atom probe tomography and electron microscopy (invited)  
**Krystyna Stiller**, Marcus Andersson, Marie Sonestedt, Mattias Thuvander

17.812

11:00 - 11:15 Field Desorption Micro-Spectroscopy: direct access to binding energies of adatoms in coadsorption systems

**Yuri Suchorski**, Miron Hupalo, Günther Rupprechter

17.813

11:15 - 11:30 Comparison of three-dimensional atom probe measurements of an Fe-Co-Mo-Cr alloy using laser and voltage pulsing

**Erich Stergar**, Elisabeth Eidenberger, Harald Leitner

17.814

11:30 - 11:45 Measuring the correct thickness of graphene layers by intermittent contact atomic force microscopy

**Peter Nemes - Incze**, Zsolt E. Horváth, Katalin Kamarás, László P. Biró

17.815

11:45 - 12:00 Characterization of the metastable phase BaGe<sub>5</sub>**Wilder Carrillo-Cabrera**

17.816

12:00 - 12:30 Precession Electron Diffraction - Towards Structure Determination (invited)

**Paul Midgley**, Tom A. White, Alex S. Eggeman, Erica G. Bithell**L5: Microscopy in developmental biology and medicine**10:30 - 12:30, *Kammermusiksaal*

L5.821

10:30 - 11:00 Reinke's crystals in testes of infertile men with cryptorchidism (invited)

**Davor Ježek**, Viviana Kozina, Ljerka Banek, Igor Weber, Hans Peter Karnthaler

L5.822

11:00 - 11:15 Human oocyte ultrastructural changes after vitrification.

**Maria Grazia Palmerini**, Marta Maione, Monica Antinori, Caterina Versaci, Severino Antinori, Stefania Annarita Nottola, Guido Macchiarelli

L5.823

11:15 - 11:30 Microscopy in the analysis of mouse *Stam2* and *Klf8* genes modified by gene trap procedure**Srecko Gajovic**, Dinko Mitrecic, Katarina Kapuralin, Natasa Pavlic, Ljiljana Kostovic Knezevic

L5.824

11:30 - 11:45 Entry mechanisms of the human cytomegalovirus (HCMV) into GM- and M-monocyte derived macrophages

**Li Wang**, Paul Walther, Thomas Mertens, Giada Frascaroli

L5.825

11:45 - 12:00 Human platelets isolated by apheresis are able to sequester bacteria by aggregation and to engulf them into the open canalicular system

**Josef Neumüller**, Claudia Meißlitzer-Ruppitsch, Margit Pavelka, Sylvia Emanuela Neumüller-Guber, Christof Jungbauer

L5.826

12:00 - 12:15 Modulation of alpha-synuclein aggregation by dopamine analogs

**Giuseppe Legname**, Diane Latawiec, Fernando Herrera, Alpan Bek, Michela Candotti, Federico Benetti, Vincenzo Grillo, Elvio Carlino, Marco Lazzarino, Stefano Gustincich, Paolo Carloni

L5.827

12:15 - 12:30 Visualization and Analysis of Superparamagnetic Ferrogels as Carriers for Therapeutical Molecules to the Inner Ear

Marlene Thaler, Soumen Roy, Jian Qin, Rudolf Glueckert, Mario Bitsche, Andrea Fornara, Mamoun Muhammed, **Anneliese Schrott Fischer**

## **M7: Other current topics of materials science**

10:30 - 12:30, Stefaniensaal

M7.831

10:30 - 11:00 Reversal mechanism of exchange-biased magnetic bi-layers observed by Lorentz electron microscopy (invited)

**Andras Kovacs**, J. Dean, Amit Kohn, T. Schrefl

M7.832

11:00 - 11:30 Microscopic analysis of electrodeposited copper in the hydrogen co-deposition range (invited)

**Nebojsa Nikolic**

M7.833

11:30 - 11:45 In Situ catalytic growth of Gallium Nitride Nanowires

**Rosa Díaz Rivas**, Renu Sharma, Karalee Jarvis, Subhash Mahajan

M7.834

11:45 - 12:00 Determination of micro-mechanical properties: in-situ compression, tension and fracture testing within the SEM

**Christian Motz**, Daniel Kiener, Christoph Kirchlechner, Kurt Matoy, Stefan Wurster, Gerhard Dehm, Reinhard Pippan

M7.835

12:00 - 12:15 Interpretation of electron holographic phase images and defocused bright-field images of nanocarbon field emitters

**Filippo Ubaldi**, Takeshi Kasama, Giulio Pozzi, Rafal Dunin-Borkowski

M7.836

12:15 - 12:30 Detection of pn-junctions in very thin specimens by combining electron holography and electrical fields in an in-situ experiment

**Andreas Lenk**, Bernd Einkenkel, Hannes Lichte, John William Sandino del Busto

2009-08-31 & 2009-09-01

**I1: Atomic resolution microscopy**

14:00 - 16:00, First Floor

I1.P101

Prominent structure modulation in the  $\text{Ca}_x\text{CuO}_2$  composite crystal ( $x \approx 5/6$ ); an artifact of imaging conditions

**Ognjen Milat**, Kresimir Salamon, Nazif Demoli

I1.P102

High-resolution Electron Holography Study of Basal-plane Stacking Faults in (11-20) GaN

Lewis Z.-Y. Liu, D.V.Sridhara Rao, Menno J. Kappers, Colin J. Humphreys, **Dorin Geiger**, Hannes Lichte

I1.P103

Characterization and Quantification of Point Defects from Multivariate Analysis of HAADF-STEM Images

**Michael Sarahan**, Quentin Ramasse, Nigel Browning

I1.P104

Improved object wave reconstruction in off-axis holography

**Martin Linck**, Daniel Wolf, Axel Lubk, Falk Röder

I1.P105

Measurement of TEM-Parameters for Electron Holography

**Dorin Geiger**, Jan Sickmann, Hannes Lichte

I1.P106

Improved imaging mode for electron holography at medium resolution

**Jan Sickmann**, Petr Formanek, Martin Linck, Dorin Geiger, Hannes Lichte

I1.P107

Quantitative analysis of wedge crystal structure based on the channelling theory

**Amy Wang**, Sandra Van Aert, Fu-Rong Chen, Dirk Van Dyck

I1.P108

High resolution STEM and analytical electron microscopic characterization of  $\text{SrRuO}_3$  based multiferroic heterostructures

**Eckhard Pippel**, Ionela Vrejoiu, Angelika Hähnel, Dietrich Hesse, Michael Ziese

I1.P109

Electron Microscope Object Reconstruction: Retrieval of Local Variations in Mixed Type Potentials

**Kurt Scheerschmidt**

I1.P110

Atomic Resolution Electron Holography Performance of a Titan TEM with High-Brightness Electron Gun

**Michael Lehmann**, Martin Linck, Bert Feitag, Stephan Kujawa, Tore Niermann

I1.P111

Reconstruction of the projected crystal potential in high-resolution transmission electron microscopy

**Markus Lentzen**

I1.P112

Electron holography with low-energy electrons

**Tatiana Latychevskaia**, Hans-Werner Fink

I1.P113

Quantitative HRTEM analysis of rare earth hexaaluminate films on sapphire substrates

**Matthias Svete**, Farinaz Saegh, Werner Mader

I1.P114

Strain field measurement at inversion domain boundaries of indium-doped zinc oxide

**Wentao Yu**, Werner Mader**I3: 3D-Imaging, nanotomography**

14:00 - 16:00, First Floor

I3.P115

Enhancing the performance of the simultaneous iterative reconstruction technique by adaptive relaxation factors

**Markus Wollgarten**

I3.P116

Three-Dimensional Quantification of Nanoparticles by Electron Tomography - Improvement of Binarization Parameters

**Jens Leschner**, Andrey Chuvilin, Johannes Biskupek, Ute Kaiser

I3.P117

Compact laboratory micro-CT/micro-XRF scanner for non-destructive 3D imaging of internal chemical composition

**Alexander Sasov**, Xuan Liu, Peter Bruyndonckx

I3.P118

X-ray microscopy with 100nm resolution and 3D imaging of the objects internal microstructure by microCT attachment for SEM.

**Alexander Sasov**, Bart Pauwels, Peter Bruyndonckx, Xuan Liu

I3.P119

Model based tomography in high resolution HAADF STEM

**Wouter Van den Broek**, Sandra Van Aert, Dirk Van Dyck

I3.P120

Measurement of Object Height in Emission Electron Microscopy

**Sergej Nepijko**, Gerd Schönhense

I3.P121

4-Quadrant-large-angles-BSE-Analysis: Problems and Approaches for quantitative 3D-Surface Reconstruction

**Dirk Berger**, Matthias Hemmleb

I3.P122

3D characterization and metrology of oxide nanoparticles in ODS alloy by electron tomography

**Adam Kruk**, Beata Dubiel, Wladyslaw Osuch, Grzegorz Cempura, Juan Carlos Hernandez, Aleksandra Czyrska-Filemonowicz

I3.P123

Re-Viewing of Stereoscopic imaging: a real alternative to EM tomography techniques?

**Fabian Gramm**, Elisabeth Müller, Murray Height, Roger Wepf

I3.P124

Application of the digital holographic interference microscope for transparent thin solid films investigation

**Dmytro Tishko**, Tatyana Tishko, Vladimyr Titar

I3.P125

Nanotomography of materials degradation - new insights by high resolution 3D analysis of electrical contacts

Frank Mücklich, Christian Selzner

**I4: Analytical TEM**

14:00 - 16:00, First Floor

I4.P126

Calculation of the angular-dependent loss function of Ag and Pd using ab-initio methods

**Audrius Alkauskas**, Simon Schneider, Stephan Sagmeister, Kathrin Glantschnig, Claudia Ambrosch-Draxl, Cécile Hébert

I4.P127

An ELNES study of LiAlO<sub>2</sub>**Walid Hetaba**, Anna Mogilatenko, Wolfgang Neumann, Peter Schattschneider

I4.P128

Measuring valence information from chemical shifts in EELS on transition metal (Mn, Fe) oxides

**Haiyan Tan**, Johan Verbeeck, Artem Abakumov, Gustaaf Van Tendeloo

I4.P129

EFTEM, EELS, and Cathodoluminescence of Si Nanoclusters in Silica Layers

**Hans-Joachim Fitting**, Lena Fitting Kourkoutis, Roushdey Salh, Maria Zamoryanskaya

I4.P130

Study of Surface Plasmon Resonances on Assemblies of Slits in Thin Ag Films by Low-Loss EFTEM Imaging

**Burcu Ögüt**, Wilfried Sigle, Jaysen Nelayah, Christoph Koch, Peter A. van Aken

I4.P131

On the precision of ELNES calculations for EMCD applications

**Jan Rusz**, Hans Lidbaum, Stefano Rubino, Peter M. Oppeneer, Klaus Leifer, Olle Eriksson

I4.P132

Monolayer resolved EEL spectroscopy with StripeSTEM for high-resolution interface analysis

**Lothar Houben**, Markus Heidelmann, Juri Barthel

I4.P133

First-Principles Approach for Spatially-Resolved Electron Energy-Loss Spectroscopy

**Ralf Hambach**, Giulia Pegolotti, Christine Giorgetti, Francesco Sottile, Lucia Reining

I4.P134

An integrated Silicon Drift Detector System for FEI Field Emission Transmission Electron Microscopes

**Sebastian von Harrach**, P. Dona, Bert Freitag, H. Soltau, A. Niculae, Martin Rohde

I4.P135

Improving the signal/noise ratio in elemental maps using spatial drift corrected EFTEM imaging

**Tobias Heil**, Helmut Kohl

I4.P136

Density Functional Theory study of the core-hole effect in simulations of core-loss spectra

**Vincent Mauchamp**, Michel Jaouen, Peter Schattschneider

I4.P137

Determination of the optimum sample thickness to calculate the dielectric function of SiC

**Dieter Hinderks**, Helmut Kohl

I4.P138

Liquid nitrogen free energy dispersive x-ray spectroscopy in TEM/STEM using silicon drift detectors

**Meiken Falke**, Anna Mogilatenko, Holm Kirmse, Wolfgang Neumann, Christoph Brombacher, H. Rohrman, M. Kratzer, Manfred Albrecht, Andrew Bleloch, G. Tränkle, Ralf Terborg, Robert Krömer, Martin Rohde

I4.P139

Simulation of amorphous structures for comparison with images of aged FeCr samples

**Carsten Kreyenschulte**, Helmut Kohl

I4.P140

Cross-section characterization by SAED/HRTEM of ground layers of "The equestrian portrait of the Duke of Lerma" by P.P. Rubens

**M. Isabel Báez**, Juan L. Baldonado, Julio Ramirez-Castellanos, M. Dolores Gayo, Livia Vidal, M. Jose Garcia-Molina

I4.P141

SMART approaches to analytical, Cs-corrected STEM

**Bernhard Schaffer**, Kasim Sader, Gareth Vaughan, Andrew Bleloch

**I6: Advanced sample preparation methods for life sciences and materials science***14:00 - 16:00, First Floor*

I6.P143

FIB preparation and TEM characterization of Si<sub>3</sub>N<sub>4</sub> precipitates grown in multicrystalline Si for solar cell application**Andriy Lotnyk**, Horst Blumtritt, Jan Bauer, Otwin Breitenstein

I6.P144

HRTEM- Sample Preparation for Compressed Rolled- up- Nanomembranes

**Christine Mickel**, Christoph Deneke, Tim Zander, Oliver G. Schmidt, Bernd Rellinghaus

I6.P145

Preparation of nanotubes for cross-sectional TEM/STEM observations

**Medeja Gec**, Kristina Žagar, Birgit Bußmann, Peter A. van Aken, Miran Ceh

I6.P146

The examination of the effects of Beta Amyloid on cultured primary cortical neurons

**Selma Yilmazer**, Erdinc Dursun, Duygu Gezen-Ak

I6.P147

A Novel Preparation Route to Obtain Micro-Bending Beams for In-situ TEM Studies

Gabriele Moser, Herwig Felber, Wolfgang Grosinger, Zaoli Zhang, **Boriana Rashkova**, Christian Motz, Gerhard Dehm

I6.P148

Subcellular localization of the tetrachloroethene reductive dehalogenase in *Desulfitobacterium hafniense* strains**Martin Westermann**, Renate Kaiser, Anika Reinhold, Torsten Schubert, Gabriele Diekert

I6.P149

The Effect of FIB Process Parameters on the Surface Morphology of Thin Lamellas

**Martina Dienstleder**, Harald Plank, Christian Gspan, Gerald Kothleitner, Ferdinand Hofer

I6.P150

Apoptosis without fragmentation of the nucleus in murine microglia after UV irradiation

**Barbara Klein**, Ursula Lütz-Meindl, Hubert H. Kerschbaum

I6.P151

Access to large area cross sections with FIB for the characterization of the SiC/diamond interface

**Kerstin Sempf**, Mathias Herrmann, Fabian Perez-Willard

I6.P152

Micro- and Nanoscale Tensile Testing Using FIB and Micromanipulator

**Torsten Scherer**, Sheng Zhong

I6.P153

TEM lamella preparation with in situ low energy Ar-milling

**Stephan Irsen**, Heiko Stegmann, Simone Pokrant

I6.P154

A new advanced technique to freeze cell culture monolayers on Sapphire discs with the Empact high-pressure freezer

**Andres Kaech**, Anne Greet Bittermann, Urs Ziegler

I6.P155

An application to Ultra High Resolution SEM of Broad Argon Ion Beam Cross-sectional technique

**Shunsuke Asahina**, Franck Charles, Sam M. Stevens, Osamu Terasaki**L4: Microscopy in plant sciences and microbiology**

14:00 - 16:00, Gallery

L4.P201

The Three Dimensional Structure of Chloroplast Membranes. 3D Imaging of CLSM Data

**Radoslaw Mazur**, Katarzyna Gieczewska, Izabela Rumak, Agnieszka Mostowska, Maciej Garstka

L4.P202

The heavy metal distribution in two copper tolerant bryophytes *Pohlia drummondii* and *Mielichhoferia elongata***Stefan Wernitznig**, Ingeborg Lang, Marieluise Weidinger, Stefan Sassmann, Irene Lichtscheidl

L4.P203

IFM surface profiler,  $\mu$ CT 3D SCAN, and electron microscopical investigation of 'Sanggul Fatimah' (*Anastatica Hierochuntica* L).**Farid Che Ghazali**

L4.P204

Chromoplast morphogenesis during development of pansy petals

**Tatjana Prebeg**, Lucija Horvat, Mercedes Wrischer, Nikola Ljubecic

L4.P205

Ultrastructural changes of cells in leaf abscission zone of tomato plant

**Magda Tusek Znidaric**, Aleš Kladnik, Maruša Pompe Novak, Marina Dermastia

L4.P206

The application of various anatomical techniques for estimating hydraulic conductivity in tomato fruit pedicels

**Dragana Rancic**, Sofija Pekic Quarrie, Radenko Radosevic, Radmila Stikic, Steven Jansen

L4.P207

Ultrastructural changes in leaf and root cells of *Lespedeza chinensis* and *Lespedeza davidii* after lead exposure**Lingjuan Zheng**, Thomas Peer, Ursula Lütz-Meindl

L4.P208

Zinc tolerance of *Physcomitrella patens* evaluated by X-ray microanalysis**Stefan Sassmann**, Ingeborg Lang, Marieluise Weidinger, Stefan Wernitznig, Irene Lichtscheidl

L4.P209

Deficiency of TROL protein causes changes in chloroplast morphogenesis

**Hrvoje Fulgosi**, Snjezana Juric, Ana Tomasic, Hrvoje Lepedus

L4.P210

Microscopic analysis of glandular and nonglandular trichomes of *Satureja subspicata* Bartl. ex Vis**Marija Marin**, Sonja Duletc-Lauševic, Petar D. Marin

L4.P211

Ultrastructural analysis of cell wall formation in the filamentous alga *Desmidium swartzii***Margit Hoefftberger**, Ursula Lütz-Meindl

L4.P212

Transmission electron microscopy of extra ultrathin sections of *Nicotiana occidentalis***Jana Nebesarova**, Marie Vancova, Silvie Svidenska

L4.P213

Cyanobacteria as “Filler” for loading Nitrocellulose Capillaries: An innovative method for High Pressure freezing of Pollen

**Diaa Eldin Daghma**, Monika Wiesner, Twan Rutten, Michael Melzer

L4.P214

Immunogold localization of a hsp72 in bean leaf cells

Lajos László, **Aron Keresztes**

L4.P215

Spectroscopic studies and microscopic imaging of semi-lamellar systems as compared with the native ones

**Katarzyna Gieczewska**, Wieslaw I. Gruszecki, Wojtek Grudzinski, Radoslaw Mazur, Agnieszka Mostowska, Maciej Garstka

L4.P216

insights into the role of LEC1 in *Arabidopsis* embryogenesisAstrid Junker, **Twan Rutten**, Gudrun Mönke, Michael Melzer, Helmut Bäumlein

L4.P217

Fast and sensitive screening of biogenic composite materials using polarized light imaging

**Magdalena Eder**, E. Weber, Ingrid Weiss

L4.P218

Comparative ultrastructure of snow- and ice-algae from polar and alpine habitats

**Cornelius Lütz**, Daniel Remias, Andreas Holzinger

L4.P219

Reciprocal interactions between plants and fluorescent pseudomonads in relation with iron in the rhizosphere

**Laure Avoscan**, Gérard Vansuyt, Jeannine Lherminier, Christine Arnould, Geneviève Conejero, Eric Bernaud, Philippe Lemanceau

L4.P220

Pollen morphology of *Primula vulgaris* Huds. (Primulaceae)**Marina Macukanovic-Jocic**, Dragana Rancic, Vladimir Pavlovic

L4.P221

Preparation conditions for optimal ultrastructural preservation and for immuno-labeling in TEM analysis of Archaea

**Carolin Meyer**, Nadine Wasserburger, Sonja Guerster, Benjamin Junglas, Andreas Klingl, Thomas Heimerl, Tillmann Burghardt, Reinhard Rachel

L4.P222

*A. thaliana* and *A. halleri* root and root hair characteristics under control and high zinc concentrations**Andrea Stanova**, Eva Valasekova, Miroslav Ovecka, Milada Ciamporova

L4.P223

Monitoring freezing cytorrhysis and PS II efficiency in leaves using a temperature controlled microscope stage

**Othmar Buchner**, Gilbert Neuner

L4.P224

Uptake of silver nanoparticles in *Chlamydomonas reinhardtii*Renata Behra, Bettina Wagner, Ilona Szivak, Flavio piccapietra, Laura Sigg, Stephan Handschin, **Elisabeth Müller**

L4.P225

Histolocalization of the pigments in the pumpkin seed which are the source of dichromatic colour in edible oil

**Marko Kreft**, Robert Zorec, Samo Kreft

L4.P226

Coupling identity and metabolic function of single cells in environmental microbiology with NanoSIMS

Hans Ulrich Ehrke, **Francois Horreard**, Francois Hillion**L6: Structures of cells and tissues, localization of molecular targets**

14:00 - 16:00, Gallery

L6.P227

The effect of waterborne iron on the carp (*Cyprinus carpio* L.) liver: a comparison of two iron salts**Gordana Gregorovic**, Gordana Lackovic, Mirjana Kalafatic

L6.P228

The Role of the Actin Cytoskeleton in the Nuclear Envelope Breakdown

**Merja Joensuu**, Giuseppa Piras, Maija Puhka, Eija Jokitalo

L6.P229

The Role of Reticulon 4b in the Structure of Mammalian Endoplasmic Reticulum

**Olli Rämö**, Helena Vihinen, Eija Jokitalo

L6.P230

Labelling of porcine circovirus and ultrastructural changes in histiocytes from naturally infected pigs: a tool for diagnosis?

**Carolina Rodríguez-Cariño**, Alejandro Sánchez-Chardi, Joaquim Segalés

L6.P231

Visualising the native capsule of *Neisseria meningitidis* by CEMOVIS and localisation of polyphosphatase.**Kirsty MacLellan**, Qian Zhang, R. Bigwood, Christoph M Tang, Ian Feavers, Roland A Flack

L6.P232

A new horizon in the treatment of biofilm-associated tonsillitis

Zeki Ciftci, Omer Develioglu, **Serap Arbak**, Tunis Ozdoganoglu, Erdogan Gultekin

L6.P233

Ultrastructural Changes of Human Promyelocytic Leukemia Cell Line with Aescin and Detection by Transmission Electron Microscope

**Mehtap Kutlu**, Ali Demir, Arzu Iscan, Ibrahim H. Cigerci

L6.P234

Characterization of amnion-derived mesenchymal cells from human placenta

**Julia König**, Berthold Huppertz, Gottfried Dohr, Angela Schweizer, Maria Anna Pabst, Ornella Parolini, Ingrid Lang

L6.P235

Ultrastructural Changes of Aescin on H-RAS TRANSFORMED Cell Line by Using a Transmission Electron Microscope

**Mehtap Kutlu**, Ali Demir, Arzu Iscan, Ibrahim H. Cigerci

L6.P236

High Doses of MPA as the Cause of Disappearance of Adherence of the Zona Pellucida to an Oocyte

**Barbara Jodlowska - Jedrych**, Wlodzimierz Matysiak

L6.P237

Comparative ultrastructural analysis of gastroenteric tract mucous membrane in experiment as well as in patients with gastroduodenitis and colitis

**Astghik Pepoyan**, Karlen Hovnanyan, M.K. Hovnanyan, Ch.A. Sargsyan

L6.P238

Multiple Infectious Agents in Joint Fluid of Patients with Rheumatoid and Reactive Arthritides

**Vida Graziene**, Danute Povilenaite, Irena Butrimiene, Algirdas Venalis, Mindaugas Minderis

L6.P239

In search of the components of nuclear skeleton and their binding partners in a nucleolus

**Margaryta Sobol**, Pavel Hozák

L6.P240

Elemental maps of low phosphorus content in *Corynebacterium glutamicum*  $\Delta$ mcbR

**Michael Epping**, Rudolf Reichelt, Helmut Kohl

L6.P241

Further characterization of three novel cell lines established from human metastatic midgut carcinoid

**Ingeborg Stelzer**, Gerd Leitinger, Astrid Hammer, Helga Susanne Haas, Robert Fuchs, Roswitha Pfragner

L6.P242

Beneficial effect of halofuginone on gentamicin - induced acute nephrotoxicity  
Berna Karakoyun, Meral Yuksel, Pinar Turan, **Serap Arbak**, Inci Alican

L6.P243

Comet assay of green and brown hydra treated with aluminium

Davor Zeljezic, **Goran Kovacevic**

L6.P244

Tegument of monozoic tapeworms (Cestoda: Caryophyllidea): TEM and SEM studies

**Céline Levron**

L6.P245

Atlas of the Vasculature of Larval and Adult *Xenopus laevis*. Part: Respiratory Tract

**Wasan Tangphokhanon**, Heidi Bartel, Ursula Lametschwandtner, Christine Radner, Synnöve Tholo, Bernd Minnich, Alois Lametschwandtner

L6.P246

Preferential intracellular localization of nanoparticles, evaluated by stereology

**Christina Brandenberger**, Barbara Rothen-Rutishauser, Anke-Gabriele Lenz, Otmar Schmid, Peter Gehr, Christian Mühlfeld

L6.P247

Antiapoptotic effect of angiotensin-II type-1 receptor blockade in renal tubular cells of hyperoxalouric rats

**Melek Öztürk**, Tahir Turan, Matem Tunçdemir, Oktay Demirkesen, Fatma Dagistanli, O. Levent Tuncay

L6.P248

Ultrastructural investigation of lysosomal rupture, necroapoptotic interactions in neurons shortly after focal ischemia

**Esra Erdemli**, Munire Kiliç, Yasemin Gürsoy-Ozdemir, Günfer Gürer, Alp Can, Turgay Dalkara

L6.P249

Is enzyme metallography suitable for pre- and post-embedding immunogold electron microscopy?

J. Pourani, Marlene Almeder, Klara Weipoltshammer, **Christian Schöfer**

L6.P250

RNA/MBNL1-containing foci in myoblast nuclei from patients affected by DM2: immunocytochemical characterization

Federica Perdoni, Manuela Malatesta, Rosanna Cardani, Enzo Mancinelli, **Carlo E. Pellicciari**, Giovanni Meola

L6.P251

Probing filamentarity of nuclear skeletal structures by methods of spatial statistics, mathematical morphology and image analysis

**Ales Vyhnal**, Vlada Philimonenko, Pavel Hozak, Lucie Kubinova

L6.P252

Heat shock protein 70 immunoexpression in the brown adipose tissue of heat - exposed rats

**Stefan Prekovic**, Ksenija Velickovic, Milica Markelic, Vesna Petrovic, Ana Vasiljevic, Aleksandra Jankovic, Biljana Buzadzic, Bato Korac, Aleksandra Korac

L6.P253

Nanoarchitecture of the crustacean cuticle - visualization and analysis by combined use of TEM, AFM and light microscopy

**Nada Žnidaršic**, Nadejda Matsko, Magda Tusek Znidaric, Werner Grogger, Ferdinand Hofer, Jasna Strus

L6.P254

Ageing affects morpho-functional features of skeletal muscle cell nuclei

**Manuela Malatesta**, Federica Perdoni, Carlo E. Pellicciari, Carlo Zancanaro

L6.P255

Oogenesis in neotenic cave salamander: Ultrastructure of previtellogene oocytes in *Proteus anguinus* (Amphibia, Urodela, Proteidae)**Lilijana Bizjak Mali**, Boris Bulog

L6.P256

Does Administration of Non-Steroidal Anti-Inflammatory Drug Determine Morphological Changes in Adrenal Cortex

**Włodzimierz Matysiak**, Barbara Jodłowska - Jedrych, Jadwiga Romanowska-Sarlej, Ewa Kifer-Wysocka

L6.P257

Hypo-osmosensitive TRP channels in the airway epithelium: a multilabel immunohistochemical and high resolution confocal calcium imaging study

**Robrecht Lembrechts**, Inge Brouns, Kathy Schnorbusch, Jean-Pierre Timmermans, Dirk Adriaensen, Isabel Pintelon

L6.P258

Control of differentiation and cell death of human erythroleukemia cells by alpha1-adrenergic mechanisms

**Robert Fuchs**, Ingeborg Stelzer, Gerd Leitinger, Helga Susanne Haas, Anton Sadjak

L6.P259

Immunocytochemical localization of the epilepsy-related *Lgi1* in rat cortical neurons**Manuela Malatesta**, Sandra Furlan, Raffaella Mariotti, Carlo Zancanaro, Carlo Nobile

L6.P260

High Intensity Exercise Induces Immune Suppression Through Endocannabinoid Increase

**Petek Korkusuz**, R.H.Ozdurak Singin, Dilara Zeybek, M. Yagci, F. Korkusuz

L6.P261

Subcellular localization of glutathione and cysteine in cyanobacteria

**Bernd Zechmann**, Hrvoje Fulgosi

L6.P262

The Significance of the Golgi complex in Herpes Virus Morphogenesis

**Elisabeth M. Schraner**, Anna Paula de Oliveira, Andres Kaech, Cornel Fraefel, Mathias Ackermann, Peter Wild

L6.P263

The specificity of seven monoclonal antibodies specific to myosin heavy chain isoforms in rat, dog and human skeletal muscles

**Vika Smerdu**, Tomas Soukup, Gregor Fazarinc

L6.P264

Tubulohelical membrane arrays: Novel nonlamellar, nanoperiodic cell compartments of unknown function

**Siegfried Reipert**, Bhuma Wysoudil, Harald Kotisch, Josef Neumüller

L6.P265

Histological Changes in the Uterus of the Hens After Embryonic Exposure to Bisphenol A and Diethylstilbestrol

F. Yigit, **Suzan Daglioglu**

L6.P266

Detection of cellular damage after exposure at not-cytotoxic doses of chlorpyrifos solution by Raman microspectroscopy and AFM

Emilio Mezzenga, **Giuseppe Perna**, Maria Lasalvia, Palma D'Antonio, Angela Castro, Nicola L'Abbate, Giuseppe Quartucci, Vito Capozzi

L6.P267

Ultrastructural changes in gill lamellar epithelium of Wels catfish *Silurus glanis* adapted to brackish water**Ivona Mladineo**, Ivana Bocina, Isabelle Metaxa

L6.P268

Progenitor and differentiation potential of human fetal and adult endothelial cells

**Angela Schweizer**, Michaela Schwarz, Gernot Desoye, Maria Anna Pabst, Gottfried Dohr, Julia König, Karlheinz Tscheliessnigg, Ingrid Lang

L6.P269

Neospora caninum myositis in Epagneul Breton: ultrastructural findings

**Marcello Tosti**

L6.P270

Atlas of the Vasculature of Larval and Adult *Xenopus laevis*. Part: Interhyoideus Muscle**Johannes Rattey**, Heidi Bartel, Bernd Minnich, Alois Lametschwandner

L6.P271

Effect of Cisplatin treatment on death and survival of C6 glioma cells in culture: an ultrastructural and cytochemical study

Giada Santin, Dimitrolos Krajci, Maria Grazia Bottone, Vera Lisa, Vladislav Mares, Carlo E. Pellicciari

L6.P272

Optimizing Ar<sup>+</sup>-ion etching for TEM cross-section sample preparation**Levin Dieterle**, Benjamin Butz, Dirk Fuchs

L6.P273

UCP1 and leptin expression in human fetal brown adipose tissue

**Ksenija Velickovic**, Biljana Srdic, Milica Markelic, Vesna Petrovic, Ana Vasilijevic, Aleksandra Jankovic, Biljana Buzadzic, Edita Stokic, Bato Korac, Aleksandra Korac

L6.P274

A Transmission Electron Microscope Investigation Effects of Limonium leaves extracts on Human Promyelocytic Leukemia Cell Line.

**Mehtap Kutlu**, Ali Demir, Arzu Iscan, Ibrahim H. Cigerci, Gamze Güney

L6.P275

Morphology of the eyes and sensilla in the antlion larvae (Neuroptera: Myrmeleontidae)

**Sasa Lipovsek**, Maria Anna Pabst, Dusan Devetak**L7: Image processing for life sciences**

14:00 - 16:00, Gallery

L7.P276

An adaptive neural network for the restoration of SEM pictures

Elisabetta Binaghi, Ignazio Gallo, Rossana Pisani, **Mario Raspanti**

L7.P277

A System for Automated Acquisition of 3D Biomedical Images Using Confocal Microscopy

**Martin Capek**, Zoltan Tomori, Jan Michalek, Jiri Janacek, Lucie Kubinova, Jiri Hozman

L7.P278

Novel imaging-based tools to investigate neutral lipid metabolism in budding yeast

**Heimo Wolinski**, Kristian Bredies, Karl Kunisch, Sepp D. Kohlwein

L7.P279

Images registration by discontinuous correspondence calculated iteratively using graph cuts

**Jiri Janacek**

L7.P280

Parameterization of atomic force microscopy images of supramolecular assemblies

**Serge Timashev**, Anna Solovieva, Pavel Misurkin, Nadezda Aksenova, Victoria Timofeeva, Piotr Timashev

L7.P281

A System for Automated Acquisition of 3D Biomedical Images Using Confocal Microscopy

**Martin Capek**, Zoltan Tomori, Jan Michalek, Jiri Janacek, Lucie Kubinova, Jiri Hozman

L7.P282

Reconstruction of mitochondria 3D images using image processing techniques

**Peter Topor**, Anton Mateasik, Ljuba Bacharova**Workshop W1: Bridging gaps in microscopy**

14:00 - 16:00, Gallery

W1.P284

Infection route of a highly endotheliotropic human cytomegalovirus (HCMV) strain in early matured endothelial progenitor cells

**Sylvia Emanuela Neumüller-Guber**, Michael Winkler, Claudia Meißlitzer-Ruppitsch, Margit Pavelka, Josef Neumüller

W1.P285

Photooxidation for ultrastructural localization of fluorescent probes

**Claudia Meißlitzer-Ruppitsch**, Clemens Röhrl, Josef Neumüller, Margit Pavelka, Adolf Ellinger

W1.P286

High pressure freezing of in vivo-DAB stained organelles

**Adolf Ellinger**, Josef Neumüller, Monika Vetterlein, Claudia Meißlitzer-Ruppitsch, Margit Pavelka**M1: Materials for information technology**

14:00 - 16:00, Casineum

M1.P301

LM STEM Study of Dislocation in Thick Si

Dong Tang, Andreas Rucki, Hans Cerva, **Peter Schlossmacher**

M1.P302

Contacts to heavily doped n-type GaN

**László Dobos**, Béla Pécz, Lajos Tóth, Zsolt E. Horváth, Attila Tóth, Bernard Beaumont, Zahia Bougrioua

M1.P303

HRTEM characterization of erbium silicide formed in ultra-high vacuum

**Adam Laszcz**, Jacek Ratajczak, Andrzej Czerwinski, Jerzy Katcki, Fritz Phillipp, Peter A. van Aken, Dmitri Yarekha, Nicolas Reckinger, Guilhem Larrieu, Emmanuel Dubois

M1.P304

Electrostatic potential distribution on pn junction GaN-semiconductor

**Jae Bum Park**, Tore Niermann, Arne Knauer, Markus Weyers, Michael Kneissl, Michael Lehmann

M1.P305

Formation of ternary nickel disilicide films with modified lattice parameters: influence of Al and Ga

**Anna Mogilatenko**, Frank Allenstein, Andreas Schubert, Meiken Falke, Gunter Beddies, Wolfgang Neumann

M1.P306

TEM investigations of gyrotropic vortex motion on structured magnetic specimens

**Martin Müller**, Christian Dietrich, Christian Back, Josef Zweck

M1.P307

Real structure and in-situ transformation of Phase Change Materials

**Lorenz Kienle**, Jan Tomforde, Jan König, M. Winkler, Harald Böttner, Viola Duppel, Ulrich Schürmann, Wolfgang Bensch

M1.P308

Characterization and comparison of InAs quantum dashes uncapped and capped by InGaAsP layer

**Dennis Plüschke**, Tore Niermann, Dieter Franke, Michael Lehmann

M1.P309

Formation of a Ti<sub>2</sub>AlN layer on GaN for contact applications**Michal A. Borysiewicz**, Béla Pécz, Lajos Tóth, Eliana Kaminska, Anna Piotrowska, Iwona Pasternak, Rafal Jakiela, Elzbieta Dynowska

M1.P310

Simultaneous measurement of In and N concentration maps and profiles in InGaNaNs from a single TEM lattice fringe image

**Knut Mueller**, Marco Schowalter, Andreas Rosenauer, Wolfgang Stolz, Kerstin Volz

M1.P311

Local estimation of lattice parameters

**Tore Niermann**, Dennis Plüschke, Jae Bum Park, Michael Lehmann

M1.P312

Structural and magnetic properties of (MnGa)As clusters in GaAs

**Kerstin Volz**, Michael Lampalzer, Wolfgang Stolz, Ines Häusler, Changling Zheng, Wolfgang Neumann

M1.P313

Structural changes in IR/C vs. VPS SAC305 lead free solder joints

**Mihai Branzei**, M. Miculescu, Paul Svasta, Florin Miculescu

M1.P314

Atomic-resolution STEM and EELS Studies of Thermoelectric Ca<sub>3</sub>Co<sub>4</sub>O<sub>9</sub>**Guang Yang**, Quentin Ramasse, Robert Klie, Erdmann Spiecker**M3: Alloys and intermetallics**

14:00 - 16:00, Casineum

M3.P315

Comprehensive TEM studies on Cr-rich martensitic steels

**Mihaela Albu**, Francisca Mendez Martin, Peter Mayr, Gerald Kothleitner

M3.P316

Phase identification of gold-aluminum intermetallic compounds (IMCs) by electron diffraction

**Benjamin März**, Andreas Graff, Matthias Petzold

M3.P317

Synthesis and Crystal Structures of  $\text{InGaO}_3(\text{ZnO})_m$  ( $m = 2$  and  $3$ )

**Isabelle Keller**, Wilfried Assenmacher, Gregor Schnakenburg, Werner Mader

M3.P318

Structure of Al-TM-Ce alloy

**Alena Michalcova**, Dalibor Vojtech, Pavel Novak

M3.P319

Helium ion microscopy and electron microscopy on high performance gas-atomised Raney-type nickel catalysts

**Ute Hörmann**, Ute Kaiser, Fabian Pérez-Willard, Alexander Minkow, Hans Fecht, Nicholas Adkins

M3.P320

TEM study of secondary precipitates influencing creep strength of martensitic VM12 steel

**Anna Zielinska-Lipiec**, Tomasz Koziel, Aleksandra Czyrska-Filemonowicz

M3.P321

Determination of fracture toughness  $K_{Ic}$  of small hard particles embedded in a soft matrix using microindentation and microscopy

**Tonica Boncina**, Bostjan Markoli, Franc Zupanic

M3.P322

Characterization of Electrodeposited Ni-Co alloy Powders

**Vesna Maksimovic**, Borka Jovic, Uros Lacnjevac, Miodir Pavlovic, Vladimir Jovic

M3.P323

Microstructure of a massively transformed high Nb containing gamma-TiAl based alloy

Limei Cha, Christina Scheu, Gerhard Dehm, **Martin Rester**, Helmut Clemens

M3.P324

Microstructure evaluation of 12 % Cr steel using TEM technique

**Francisca Mendez Martin**, Mihaela Albu, Bernhard Sonderegger, Christof Sommitsch

M3.P325

Microstructure and phase decomposition of  $\alpha'$  (alpha prime) martensite in Ti-V-Al alloys studied by TEM and STEM

**Kazuhisa Sato**, Toyohiko Konno, Hiroaki Matsumoto, Kazuki Kodaira, Akihiko Chiba

M3.P326

Microstructural analysis of austenitic heat resistant steel modified with silicon

**Aleš Nagode**, Matjaž Godec, Monika Jenko

M3.P327

TEM investigations of severely deformed and annealed NiTiHf high temperature shape memory alloys

**Gerd Steiner**, Thomas Waitz, Hans Peter Karnthaler

M3.P328

TEM Characterization of Oxides on Duplex Stainless Steel

**Irena Paulin**, Crtomir Donik, Darja Jenko, Monika Jenko

M3.P329

Magnetic domain structure of a Ni-Mn-Ga magnetic shape memory alloy studied by electron holography

**Karin Vogel**, Martin Linck, Axel Lubk, Daniel Wolf, Hannes Lichte

M3.P330

(Ni,Fe)Si<sub>2</sub> Precipitates in Silicon**Sabine Langkau**, Gerald Wagner, Gert Klöß, Matthias Heuer

M3.P331

A TEM study of ultra-fine lamellar structures in titanium aluminides

**Limei Cha**, Christina Scheu, Gerhard Dehm, Helmut Clemens

M3.P332

TEM investigations of ODS tungsten materials

**Lyubomira Veleva**, Robin Schaeublin, N. Baluc

M3.P333

SEM and TEM cross-section study of inhomogeneities in Zr3Al deformed by high pressure torsion

**David Geist**, Alexander Thaller, Christian Rentenberger, Johannes Bernardi, Hans Peter Karnthaler

M3.P334

TEM investigations of the precipitation kinetics of Mn(Cu)S and AlN in microalloyed steel

**Sabine Schwarz**, Rene Radis, Ernst Kozeschnik, Gerhard Rumpfmair

M3.P335

Characterization of laser welds between Nitinol and stainless steel, for medical components

**Jonas Vannod**, Michel Rappaz, Aïcha Hessler-Wyser

M3.P336

Grain-subgrain structure analyses of hot deformed superalloy Allvac 718plus<sup>TM</sup> by EBSD**Stefan Mitsche**, Christof Sommitsch, Daniel Huber, Peter Pölt, Martin Stockinger

M3.P337

Identification of phases in novel Co-Re-based high temperature materials

**Timo Depka**, Christoph Somsen, Gunther Eggeler, Debashis Mukherji, Joachim Rösler

M3.P338

Various superstructures formed by tin-vacancy ordering in K<sub>8</sub>Sn<sub>44</sub> and Rb<sub>8</sub>Sn<sub>44</sub> clathrates**Wilder Carrillo-Cabrera**, Michael Baitinger, Burcu Uslu, Yuri Grin

M3.P339

TEM study of twinning mechanism in Fe-Mn-C TWIP steels

Hosni Idrissi, Laurence Ryelandt, **Dominique Schryvers**, Pascal J. Jacques

M3.P340

Relation between mechanical properties and microstructure morphology of medium carbon bainitic steels

Florian Gerdemann, **Alexander Schwedt**, Wolfgang Bleck

M3.P341

TEM and SEM investigation of nanostructure parameters of nuclear reactor pressure vessels

**Boris Gurovich**, **Evgenia Kuleshova**, Kirill Prikhodko, Svetlana Fedotova

M3.P342

Real structures of complex alkali- alkaline earth intermetallics

**Lorenz Kienle**, Volodymyr Smetana, Viola Duppel, Arndt Simon

M3.P343

A transmission electron microscopy study of phase compatibility in low hysteresis shape memory alloys

Rémi Delville, Hui Shi, Richard James, **Dominique Schryvers**

M3.P344

SEM imaging and EDX of plasma induced oxides on different phases in duplex stainless steel

**Crtomir Donik**, Irena Paulin, Aleksandra Kocijan, Monika Jenko

M3.P345

Dislocation analysis in the B2 phase of (111)-deformed NiTi single crystals

**Tobias Simon**, Andreas Kröger, Christoph Somsen, Antonin Dlouhy, Gunther Eggeler

## **M5: Carbon based materials, soft materials, polymers**

14:00 - 16:00, *Casineum*

M5.P346

Synthesis and microscopy studies of polymer nanostructures

**Lenka Polakova**, Zdenka Sedlakova, Petra Latalova, Helena Valentova

M5.P347

The ESEM and water - Prospects and limits

**Herbert Reingruber**, Peter Pölt

M5.P348

Higher throughput analysis of polymer morphologies by scanning electron microscopy

**Georg Bar**, Ewa Tocha, Eddy Garcia-Meitin, Clifford Todd

M5.P349

Three-Dimensional Characterization of the Inner Structure of Carbon Soot

**Jens Leschner**, Andrey Chuvilin, Johannes Biskupek, Juergen Behm, Ute Kaiser

M5.P350

Calculation of optimum contrast for HRTEM images of SiC and graphene at medium and lower voltages

**Zhongbo Lee**, Ute Kaiser

M5.P351

Determination of the phase structure evolution in immiscible polymer blends with electron microscopy

**Ivan Fortelny**, Monika Lapcikova, Bojan Dimzoski

M5.P352

Development of activated carbons from waste biomass for CO<sub>2</sub> capture**Elena David**

M5.P353

Structural and chemical characterization of ribbon-like particles in Co/Mn/Al/Mg multi-metal catalyst

**Lide Yao**, Jean-Philippe Tessonier, Dangsheng Su, Robert Schlögl, Michael Becker, Wei Xia, Martin Muhler

M5.P354

High resolution polymer imaging using scanning electron microscopy with back scattered electron detector

**Ewa Tocha**, Georg Bar

M5.P355

AFM investigations of fracture surfaces of filler-reinforced elastomers

Katrin Reincke, Marcus Tischer, Sybill Ilisch, Wolfgang Grellmann, Hans-Joachim Radusch, **Marcus Schoßig**

M5.P356

Preparation of titanate nanotubes and their surface modification by plasma polymerization

**Daniela Kralova**, Andrey Grinevich, Miroslav Slouf

M5.P357

TEM and EELS investigations of soot particles directly from the combustion chamber of low emission Diesel engines

**Mirza Mackovic**, Sebastian Pflaum, Gerhard Frank, Georg Wachtmeister, Erdmann Spiecker, Mathias Göken

M5.P358

Investigation of Particle Arrangements in Polymer Nanoparticle Composites

**Markus Ziehmer**, Jörg Schmauch, Ulrich Müller, Jörg Baller, Roland Sanctuary

M5.P359

Chemical bonding effects in HRTEM images

**Simon Kurasch**, Jannik Meyer, Andrey Chuvilin, Daniela Künzel, Axel Groß, Ute Kaiser

M5.P360

Investigation of 6T@SWNTs by Cs corrected TEM

**Cécile Hébert**, Barbora Bártová, Sorin Lazar, Gianluigi A. Botton, Matus Milko

M5.P361

Cathodoluminescence study of electron beam formed defects in polysilanes

**Petr Schauer**, Frantisek Schauer, Ivo Kuritka, Stanislav Nespurek

M5.P362

Graphene membranes for nanoscopic sieving of achiral SWNTs

**Luca Ortolani**, Marc Monthieux, Vittorio Morandi

M5.P363

Vibrational spectroscopy meets electron microscopy

**Peter Wilhelm**, Boril Chernev, Christian Brandl

M5.P364

Quantitative Analysis of Microstructures in GDLs Using Local Structural Characteristics from 3D Image Data

**Volker Schmidt**, Ralf Thiedmann, Christoph Hartnig, Ingo Manke, Werner Lehnert

M5.P365

Single Carbon Atom Chains

**Gerardo Algara-Siller**, Jannik Meyer, Andrey Chuvilin, Ute Kaiser

M5.P366

Orientation analysis for single electrospun PE nanofibers by transmission electron microscopy

**Taiyo Yoshioka**, Roland Dersch, Masaki Tsuji, Andreas Schaper

M5.P367

Combining HRTEM, Diffraction and EELS for determining structure and reactivity of Soot

**Manfred Erwin Schuster**, Dangsheng Su, Robert Schlögl

M5.P368

TEM study of nano-carbon materials intratracheally instilled in rat lung

**Kazuhiro Yamamoto**, Emiko Kobayashi, Akira Ogami, Yasuo Morimoto

M5.P369

Precise measurement of rubber membrane thickness in high-impact polystyrenes

**Miroslav Slouf**, Helena Vlkova

M5.P370

Graphene sheets analyses by the different microscopic methods

**Klara Safarova**, Roman Kubínek, Milan Vujtek, Radek Zboril, Dalibor Jancik, Athanasios.B. Bourlinos

M5.P371

The study of conductive shungitcontaining polyethylene-polypropylene blends by atomic force microscopy

**Anna Solovieva**, Victoria Timofeeva, Sergey Rozkov, Natalia Kedrina

M5.P372

Analytical Characterization for NIL production of Organic TFTs by Energy-Filtered Transmission Electron Microscopy

**Thomas Haber**, Christoph Auner, Ursula Palfinger, Meltem Sezen, Werner Grogger**M6: Thin films and interfaces**

14:00 - 16:00, Casineum

M6.P374

ISD-grown superconducting DyBCO coated conductors investigated by TEM

**Michael Dürrschnabel**, Jörg Handke, Werner Dreher, Werner Prusseit, Oliver Eibl

M6.P375

Nucleation and growth of anatase and rutile phase in TiO<sub>2</sub> layers deposited by reactive pulse magnetron sputtering

**Olaf Zywitzki**, Thomas Modes

M6.P376

TEM and CL Investigations of Doped ZnO Nanostructures

**Yanicet Ortega Villafuerte**, Ch. Dieker, P. Fernandez, Javier Piqueras, Wolfgang Jäger

M6.P377

Large-area through-thickness TEM analysis of thin film solar cells absorbers using double-wedge geometry

**Benito F. Vieweg**, Erdmann Spiecker, Stefan Jost, Jörg Palm

M6.P378

Interface structure and crystal growth mechanism in Nacre

**Nan Yao**, Wendy Liu, Jian Liang, Alex Epstein, Franz Sauer

M6.P379

Microscopic structure of polyethylene/polybutene-1 peel systems

**Michael Nase**, René Androsch, Armin Zankel, Beate Langer, Reinhard Händel, Goerg Hannes Michler, Wolfgang Grellmann

M6.P380

Phase Shifts at twin boundaries at medium resolution – A dynamic scattering simulation study

**Falk Röder**, Axel Lubk, Hannes Lichte

M6.P381

In situ peel test investigations of polyethylene/polybutene-1 peel systems using environmental scanning electron microscopy

**Michael Nase**, Armin Zankel, Beate Langer, Reinhard Händel, Wolfgang Grellmann

M6.P382

High Resolution TEM study of exchange coupled FePt/CoPt thin films

**Jehyun Lee**, Josef Fidler, Dieter Suess, Vasilis Alexandrakis, Dimitris Niarchos

M6.P383

Nano-Scaled Aperiodic Multilayer Systems for X-ray Optics: Quantitative Layer Thickness Determination by HAADF-STEM

**Ulrich Roß**, Dietrich Häußler, Erdmann Spiecker, Wolfgang Jäger, Christian Morawe, Uwe Heidorn, Frank Hertlein, Jörg Wiesmann

M6.P384

Detecting the Penetrationdepth of Organic Semiconductors into Mesoporous Titaniumdioxid Films in Solar Cells by EDX

**Markus Kaiser**, Heike Klesper, Klaus Meerholz

M6.P385

Strain measurements on Si/SiGe heterostructures using HRTEM

**Vasfi Burak Özdöl**, Christoph Koch, Fritz Phillipp, Peter A. van Aken

M6.P386

Combined SEM microscopic and spectroscopic study of selenization of thin metallic films

**Olga Volobujeva**, Enn Mellikov

M6.P387

Dislocations in charge-ordered  $\text{Pr}_{0.5}\text{Ca}_{0.5}\text{MnO}_3$  epitaxial thin films prepared by two-step growth technique**Yinlian Zhu**, Xue Wang, Mujin Zhuo, Xiuliang Ma

M6.P388

Simulation supported analysis of the effect of  $\text{SiN}_x$  interlayers in AlGaIn on the dislocation density reduction**Oliver Klein**, Johannes Biskupek, Ute Kaiser, Kamran Forghani, Ferdinand Scholz

M6.P389

TEM investigation of electron beam evaporated epitaxial  $\text{Fe}_3\text{Si}$  films on GaAs(100) substrates**Jürgen Thomas**, Joachim Schumann, Thomas Gemming, Jürgen Eckert

M6.P390

(S)TEM/EELS characterization of phase and structural state in  $\text{Fe}_{88}\text{Zr}_{10}\text{Ni}_{11}$  ferromagnetic films**Olga Zhigalina**, Dmitry Khmelenin, Elena Sheftel, Galina Usmanova, Anna Carlsson

M6.P391

Transmission Electron Microscopy of Indented and Scratched Titanium-Alumina Layers on Silicon

**Lawrence Whitmore**, Thomas Koch, Stephan Abermann, Karin Whitmore, Andreas Steiger-Thirsfeld

M6.P392

Growth structures of ZnO transparent electrical contacts for thin-film silicon solar cells

**Duncan Alexander**, Sylvain Nicolay, Christophe Ballif

M6.P393

Influence of process parameters on the properties of TEOS DF-PECVD grown  $\text{SiO}_x$  films by DOE**Eliška Mikmeková**, Jan Janca, Marie Dvoráková

M6.P394

Microstructure of rolled-up InGaAs/GaAs and AlN tubes

**Christoph Deneke**, Y.F. Mei, A. Dadgar, A. Krost, Oliver G. Schmidt

M6.P395

TEM study of ordering domains in  $\text{PbSc}_{0.5}\text{Ta}_{0.5}\text{O}_3$  and threading dislocations in  $\text{Ba}_{0.7}\text{Sr}_{0.3}\text{TiO}_3$  epitaxial films**Balaji Birajdar**, Anuj Chopra, Ionela Vrejoiu, Marin Alexe, Dietrich Hesse

M6.P396

TEM studies of PbS-ZnS quantum wells for solar cells

**Peter Schindler**, Neil Dasgupta, Christian Rentenberger, Thomas Waitz, Fritz Prinz, Hans Peter Karnthaler

M6.P397

TEM investigations of thin films of  $(\text{Mn}-1\text{AXn})$ -phases deposited onto Si, MgO and stainless steel substrates**Thomas Kups**, Christian Lange, Qingchuan Guo, Elvira Remdt, Michel Barsoum, Peter Schaaf

M6.P398

Morphologies, due to growth process induced segregation in two component thin films

**Fanni Misják**, Péter B. Barna, Marianna Szerencsi, György Radnóczy

M6.P399

Cation transport studies by dopant (Sm, Gd) diffusion in polycrystalline CeO<sub>2</sub> substrates**Christian Rockenhäuser**, Benjamin Butz, Nicole Schichtel, Carsten Korte, Jürgen Janek, Dagmar Gerthsen

M6.P400

TEM analysis of the microstructure of precipitates in binary zirconium alloys after in situ oxidation

**Christian Proff**, Sousan Abolhassani

M6.P401

Micro and Atomic structure of the interface in advanced materials fabricated by using high pressure with shock wave

**Seiichiro Ii**, Ryuichi Tomoshige, Kazuyuki Hokamoto, Masahiro Fujita

M6.P402

Structure-property correlation of CSD processed coated conductors at different length scales

**Leopoldo Molina**, Michael Dürschnabel, Martina Falter, Michael Bäcker, Oliver Eibl

M6.P403

Thickness-induced structural transitions in three PbZr<sub>1-x</sub>Ti<sub>x</sub>O<sub>3</sub>/PbZr<sub>1-z</sub>Ti<sub>z</sub>O<sub>3</sub> coherent superlattices ( $x/z = 0/0.2, 0.4/0.6, 0.6/0.8$ )**Dietrich Hesse**, Ludwig Feigl, S. J. Zheng, Yinlian Zhu, Ionela Vrejoiu, Ksenia Boldyreva, Balaji Birajdar, Nikolai Zakharov, Marin Alexe

M6.P404

Microstructure and phase evolution of BaHfO<sub>3</sub> pinning centers in YBCO thin films fabricated with the TFA-MOD process**Thomas Thersleff**, Sebastian Engel, Jens Hänisch, Manuela Erbe, Darius Pohl, Ruben Hühne, Bernd Rellinghaus, Ludwig Schultz, Bernhard Holzapfel

M6.P405

Aberration-Corrected HRTEM Analysis of Transition Layer Structure in ZrO<sub>2</sub> Ultra-Thin Film**Takanori Kiguchi**, Toyohiko Konno, N. Wakiya, K. Shinozaki

M6.P406

Study of the splat microstructure and the splat-substrate interface for a NiCr coating HVOF sprayed on to a steel substrate

**Sophie Brossard**, Paul Munroe, Anh Tran, Margaret Hyland

M6.P407

Effect of argon ions implantation on the reactively sputtered TiN layers

Maja Popovic, Mirjana Novakovic, **Natasa Bibic**

M6.P408

V<sub>2</sub>O<sub>5</sub> thin film electrodes in rechargeable Li-ion batteries - Sample characterization by EELS**Tobias Gallasch**, Dietmar Baither, Guido Schmitz

2009-09-02 & 2009-09-03

**I2: Scherzer symposium on advanced electron optics**

14:00 - 16:00, First Floor

I2.P501

LabVIEW controlled cathodoluminescence equipment

**Jan Bok**, Petr Schauer

I2.P502

The 4-Wienfilter-Monochromator integrated in a conventional SEM

**Waldemar Kaiser**, Fabian Engeser, Erich Plies

I2.P503

Performance of MANDOLINE filter and Omega-type monochromator

**Erik Essers**, Gerd Benner, Thilo Mandler, Dieter Mittmann, Rainer Höschen

I2.P504

Simulating Hilbert phase contrast produced by an anamorphic electrostatic phase plate

**Nicole Frindt**, Bjoern Gamm, Manuel Dries, Katrin Schultheiss, Dagmar Gerthsen, Rasmus Schröder

I2.P505

Miniaturized electrostatic column for electrons with a variable permanent magnetic snorkel lens

**Christoph Rochow**, Erich Plies

I2.P506

Object wave reconstruction by phase plate transmission electron microscopy

Bjoern Gamm, **Manuel Dries**, Katrin Schultheiss, Holger Blank, Andreas Rosenauer, Rasmus Schröder, Dagmar Gerthsen

I2.P507

Object wave reconstruction by carbon-film-based Zernike- and Hilbert-phase plates

**Manuel Dries**, Bjoern Gamm, Katrin Schultheiss, Andreas Rosenauer, Rasmus Schröder, Dagmar Gerthsen

I2.P508

A non-focussing retarding unit for Ar<sup>+</sup> ions

**Erich Plies**

I2.P509

Improved visualization of intracellular morphology by tomography of thick sections using a spherical and chromatic aberration corrected TEM

Bernd Kabius, Götz Hofhaus, Irene Wacker, Ina Röder, Rüdiger Rudolf, **Rasmus Schröder**

**I5: SEM**

14:00 - 16:00, First Floor

I5.P510

Cryo preparation of brittle particles for SEM-EDX analysis

**Johan Hazekamp**, Peter Nootenboom, Kirsty Sinclair

I5.P511

Improving EDS for Light Elements using an attachable X-ray Optics with an SDD in SEM

**Ulrich Gernert**, David O'Hara, Don Kloos, Marco Mostert

I5.P512

Microanalytical study of the pigments in the ground layers of "The equestrian portrait of the Duke of Lerma" (P.P. Rubens)

**M. Isabel Báez**, Juan L. Baldonado, M. Dolores Gayo, Julio Ramirez-Castellanos, Livia Vidal, David Rodríguez-Antón

I5.P513

Ultra low voltage SEM for high accuracy measurements of CD/LWR/LER

**Grazyna Mozdzen**, Friedrich Rüdener, Walter Costin, Peter Sattler, Peter Hudek

I5.P514

Profiling of N-type dopants in silicon structures

**Miloš Hovorka**, Filip Mika, Ludek Frank

I5.P515

Quantitative analysis of nanoparticles with EPMA

**Francois Galbert**, Dirk Berger

I5.P516

Scanning Electron Microscopy: Power Spectrum Analysis

**M.E. Rudnaya**, J.M.L. Maubach, R.M.M. Mattheij

I5.P517

Low-energy STEM and EDX investigation of polystyrene-ZnO core-shell structures

**Matteo Ferroni**, Ivano Alessandri, Laura Depero, Matteo Falasconi, Vittorio Morandi, Luca Ortolani, Giorgio Sberveglieri

I5.P518

SEM-EDX Analytical Data from Benvenuto Cellinis Salt Cellar "Saliera"

**Hans Ditrich**

I5.P519

Backscattered electron imaging versus specimen thickness in Scanning Electron Microscopy

**Vittorio Morandi**, Luca Ortolani, Andrea Migliori

I5.P520

Slope cutting with a broad Ar ion beam for SEM investigations - studies of artefacts on porous, inhomogeneous and temperature-sensitive materials

**Manfred Roemer**, Kathrin Zecho, Jürgen Meinhardt

I5.P521

Experimental vs. calculated values of the total scattering cross section and the BGPL of different image gases in an ESEM

**Hartmuth Schroettner**, Johannes Rattenberger, Julian Wagner

15.P522

Determination of grain size and grain size distributions from the nano to the micro scale by means of EBSD

**Jörg Schmauch**, Jürgen Markmann, Manuel Grewer, Rainer Birringer

15.P523

Secondary electron contrast in doped semiconductor with presence of a surface ad-layer

**Filip Mika**, Miloš Hovorka, Ludek Frank

15.P524

A study of the behavior of SE and BSE in Ultra low landing voltage condition

**Shuichi Takeuchi**, Atsushi Miyaki, Atsushi Muto, Yukari Dan, Kunji Shigeto, Mine Nakagawa, Toshiharu Teranishi, Yutaka Majima

15.P525

Comparison between X-ray tube based and synchrotron radiation based  $\mu$ CT**Dr. Stefan Becker**, Oliver Brunke

15.P526

Low-voltage scanning transmission electron microscopy of core-shell nanowires.

**Laura Felisari**, Vincenzo Grillo, Silvia Rubini, Fauzia Jabeen, Fausto Martelli

15.P527

Properties of modern scintillators compared by nuclear and electron microscopy methods

**Petr Horodysky**, Jaroslav Jiruse, Vilém Nedela, Jiri Spinka

15.P528

Quantitative EPMA of electrodeposited thin Co-Pt films - assessment of reliability and accuracy

**Zoran Samardžija**, Kristina Žužek Rožman, Spomenka Kobe

15.P529

Electron beam induced current measurement on a specimen biased in a cathode lens

**Miroslav Horacek**, Martin Zobac, Ivan Vlcek

15.P530

Direct observation of industrial high performance Ziegler-Natta catalysts by scanning electron microscope

**Wenqing Huang**, Zhao Xi, Zhang Ying, Yang Jing, Yang Wantai

15.P531

Low-energy electron transmission measurements of thin polymer films in a scanning electron microscope

**Marina Pfaff**, Erich Müller, Dagmar Gerthsen, Michael Klein, Alexander Colsmann, Uli Lemmer

15.P532

The SEM/FIB Workbench: Automatic Nanorobotics system inside of Scanning Electron or Focussed Ion Beam Microscopes

**Volker Klocke**, Burckhard Plitzko

15.P533

Advantages of a local gas injection system for charge compensation and contamination mitigation in FIB/SEM systems

**Joerg Stodolka**, Hubert Schulz, Ulrike Zeile, Daniel Kraft

15.P534

Towards a quantitative concentration analysis in InGaAs-heterostructures using HAADF-STEM

**Thorsten Mehrtens**, Knut Müller, Marco Schowalter, Nils Neugebohrn, Andreas Rosenauer, Dong Zhi Hu, Daniel M. Schaadt

15.P535

Scintillation secondary electron detector for variable pressure scanning electron microscope

**Pavel Cudek**, Josef Jiráček, Vilém Nedela

15.P536

Scintillator secondary electron detector for Variable Pressure and Environmental SEM

**Witold Slowko**, Michal Krysztof

15.P537

In-situ observation of salt crystallization using environmental scanning electron microscopy

Jirí Runštuk, **Vilém Nedela**, Pavel Cudek, Josef Jiráček

15.P538

Equipment for a classic SEM enabling environmental techniques

**Witold Slowko**, Michal Krysztof

15.P539

Microanalytical characterization of the inorganic materials in a mural painting from Ampurias Archaeological Site

**M. Isabel Báez**, Juan L. Baldonado, M. Eugenia de Leon, Livia Vidal, David Rodríguez-Antón, Noelia Rosales, Jorge Cuní**17: Other current topics of microscopy**

14:00 - 16:00, First Floor

17.P540

ProcessDiffraction: a SAED-based method to analyze phases and texture in nano-crystalline thin films in the TEM

**János Lábár**, Olga Geszti, György Sáfrán, Péter B. Barna, Lajos Székely, Fanni Misják, György Radnóczy

17.P541

Using a SFM/ESEM hybrid for the analysis of vibrating surfaces

**Heinz Sturm**

17.P542

Multiple beam interference and diffraction with FIB fabricated nano-slits

**Stefano Frabboni**, Cesare Frigeri, Gian Carlo Gazzadi, Giulio Pozzi

17.P543

MoniTEM: An approach to reduce electron microscope downtime by automated monitoring

Matthias Brunner, **Guenter Resch**

17.P544

Advances in 3D Atom Probe for nanoscale elemental analysis.

Hans Ulrich Ehrke, **Francois Horreard**, Ludovic Renaud

17.P545

Low Loss BSE Imaging

**Heiner Jaksch**

17.P546

Sub micrometer focus of a neutral helium spot

**Sabrina Eder**, Bodil Holst

17.P547

Measurement of structure factors by parallel and convergent beam electron nanodiffraction

**Knut Mueller**, Marco Schowalter, Andreas Rosenauer, Jacob Jansen, Kenji Tsuda, John Titantah, Dirk Lamoen

17.P548

Quantitative local scale analysis by electron diffraction applied to nanocrystalline FeAl

**Christoph Gammer**, Clemens Mangler, Christian Rentenberger, Hans Peter Karnthaler

17.P549

Quasi-static variations of the ambient magnetic field and their implications on TEM practice

**Reiner Ramlau**, Uta Köhler

17.P550

Comparative AFM and SEM investigations on kraft pulp fiber surfaces

**Franz J. Schmied**, Christian Teichert, Lisbeth Kappel, Ulrich Hirn, Robert Schennach, Hartmuth Schroettner

17.P551

The influence of dynamic scattering on potential and mean-free-path  $\lambda$  measurements in medium resolution electron holography**Axel Lubk**, Daniel Wolf, Hannes Lichte

17.P552

Application of Helium Ion Microscope in Material Characterization

**Xiong Liu**, M.A.E. Jepsone, B.J. Inkson, C. Rodenburg**L1: 3D and cryo-TEM**

14:00 - 16:00, Gallery

L1.P601

TVIPS Software Package for Electron Microscopy Solutions

**Reza Ghadimi**, Ingo Daberkow, Peter Sparlinek, M. Stumpf, Christine Kofler, Hans Tietz

L1.P602

Structure / function analysis of C.elegans synapses

**Jan Hegermann**, Stefan Eimer

L1.P603

Ptychographical Phase Retrieval

**Andrew Maiden**, John Rodenburg

L1.P604

Three-dimensional structure of the intermediate filament network using SEM-tomography

**Michaela Sailer**, Sebastian Lück, Volker Schmidt, Michael Beil, Guido Adler, Paul Walther

L1.P605

Contrast transfer function estimation for tilted weak-phase objects

Milos Vulovic, Pieter Brandt, Lennard Voortman, Arun Joseph, Raimond Ravelli, Abraham Koster, Lucas van Vliet, **Bernd Rieger**

L1.P606

Cryo TEM-based 3D reconstruction of the recombinant expressed human zinc peptidase Meprin  $\beta$ **Philipp Arnold**, Arne Moeller, Frank Depoix, Jürgen Markl, Walter Stöcker, Ulrich Meissner, Christoph Becker-Pauly

L1.P607

Methods for quantitative analysis electron tomographic reconstructions of structures in the wall of hazel pollen grains

**Lubomir Kovacik**, Monika Grote, Rudolf Reichelt

L1.P608

3D reconstruction of Golgi stacks in Brefeldin A treated cells. First results using STEM tomography

**Katharina Höhn**, Ganesh Varma Pusapati, Thomas Seufferlein, Guido Adler, Paul Walther

L1.P609

Small heat shock proteins from Caenorhaptidis elegans: structural insights obtained by electron-microscopy

**Andreas Kastenmüller**, Nathalie Braun, Daniel Weinfurtner, Johannes Buchner, Sevil Weinkauf

L1.P610

State of the Art 120 kV Cryo EFTEM applications in Life science and Soft matter

**Marlene Thaler**, Stephan A. Hiller, Christian Dietl, Volker Seybold, Gerd Benner

L1.P611

What is the true size of the mitochondrial intermembrane space? A study using high-pressure freezing and STEM tomography.

**Paul Walther**, Katharina Höhn, Holger Krisp

L1.P612

Three dimensional analysis of the Golgi apparatus: Reorganizations in response to ATP-depletion and replenishment

**Eva Wollmann**, Monika Vetterlein, Adolf Ellinger, Josef Neumüller, Margit Pavelka

L1.P613

Electron microscopy and 3D nano-organization of virus-like and surface structure of Entamoeba, Candida and Escherichia species

**Karlen Hovnanyan**, H.H. Davtyan, A.A. Trchounian, N.S. Pryatkin

L1.P614

Identification and 3D visualisation of filamentous structural components of synaptic active zones in locust visual systems

**Dagmar Kolb**, Maria Anna Pabst, Josef Neumüller, Margit Pavelka, F.C. Rind, P.J. Simmons, S. Masich, O. Shupliakov, Gerd Leitinger

L1.P615

Comparing an algebraic least squares 3D reconstruction algorithm with back projection and SIRT

**Sarah F. Wulf**, Kenneth. C. Holmes, Rasmus Schröder**L2: High-resolution light microscopy, correlative light and electron microscopy**

14:00 - 16:00, Gallery

L2.P617

A multivariate microscopical investigation of Collocalia fuciphaga oro-pharyngeal apparatus

**Farid Che Ghazali**

L2.P618

Studying of Nematode Morphology with Three Kinds of Methods: LM, CLSM and SEM

**Sarka Masova**, Iveta Hodova, Vlastimil Barus

L2.P619

The use of different microscopic techniques for the study of monogenean parasite Eudiplozoon nipponicum

**Iveta Hodova**, R. Sonnek

L2.P620

Comparative studies on leaf structure and ultrastructure of Peperomia species in vivo and in vitro

**Eugenia Maximova**, J.T. van Dongen, Juergen Hartmann

L2.P621

Further improvements on the integrated laser and electron microscope

**Alexandra Agronskaia**, Matthia Karreman, Cornelis Brand, Bruno M. Humbel, Abraham Koster, Arie Verkleij, Hans Gerritsen

L2.P622

The neuromuscular junction in the amphioxus myotomes revealed by an ultrastructural and immunohistochemical study

**Ivana Bocina**, Mirna Saraga-Babic

L2.P623

Autophagy and apoptosis in NRK-52E renal cells exposed to cisplatin

**A Zanola**, MF Aleo, I. Schena, Antonio Lavazza, P Grigolato, A. Stacchiotti

L2.P624

Confocal Laser Scanning Microscopy to study the bacterial communities associated with different species of lichens

**Massimiliano Cardinale**, Jana Steinova, Johannes Rabensteiner, Martin Grube, Gabriele Berg

L2.P625

Sildenafil attenuates renal ischemia reperfusion injury by decreasing leukocyte infiltration

Ozgur Oruc, Kubilay Inci, Fazil Tuncay Aki, Dilara Zeybek, **Sevda Muftuoglu**, Kamer Kilinc, Ali Ergen

### **L3: Tracking molecules in vivo, intracellular trafficking and cellular dynamics**

14:00 - 16:00, Gallery

L3.P626

Multi-mode electron tomography for the 3D morphological and structural characterization of nanomaterials.

**Zineb Saghi**, Xiaojing Xu, Guenter Möbus

L3.P627

Comparative study of the intracellular behaviour of four trace elements in the lactating mammary gland cells

Ahlem Ayadi, Samira Maghraoui, Aouatef Ben Ammar, Mohamed-Habib Jaafoura, **Leila Tekaya**

L3.P628

Ultrastructural localisation of Ca<sup>2+</sup> release channels in the nuclear envelope of human cardiac myocytes

**Silke Jäger**, Jens Kockskämper, Gerd Leitinger

L3.P629

Tissular alterations induced by indium in the testicular tissue. A study using Conventional Transmission Electron Microscope.

Samira Maghraoui, Ahlem Ayadi, Aouatef Ben Ammar, Mohamed-Habib Jaafoura, **Leila Tekaya**

L3.P630

Two alternative pathways of asymmetric unit membrane formation in urothelium

**Samo Hudoklin**, Kristijan Jezernik, Josef Neumüller, Margit Pavelka, Rok Romih

L3.P631

Versatility of tunneling nanotubes and cytoskeletal filaments they have

**Maruša Lokar**, Peter Veranic, Veronika Kralj-Iglic, Aleš Iglic

L3.P632

Ultrastructural visualization of cellular high density lipoprotein (HDL) internalization utilizing correlative microscopy

**Clemens Röhrl**, Claudia Meißlitzer-Ruppitsch, Josef Neumüller, Adolf Ellinger, Witta Strobl, Herbert Stangl, Margit Pavelka

L3.P633

Ultrastructural alterations of tracheal cilia in wild rodents exposed to urban pollution

**Alejandro Sánchez-Chardi**, Rosa Maria Gómez-Ugalde, José Ramirez-Pulido, Jacint Nadal

L3.P634

A molecular, ultrastructural and functional differentiated urothelium in vitro

**Mateja Erdani Kreft**, Rok Romih, Kristijan Jezernik

L3.P635

Lysosome of testicular cells a site of indium concentration. An ultrastructural study

Maghraoui Samira, Ayadi Ahlem, Ben Ammar Aouatef, Jaafoura Mohamed Habib, **Leila Tekaya**

L3.P636

Incidence of samarium on the lactating mammary gland tissue. Study using electron microscopy and second ion spectrometry

Ayadi Ahem, Maghraoui Samira, **Leila Tekaya**

L3.P637

High resolution analyses of lipid droplet – membrane interactions in yeast

**Dagmar Kolb**, Heimo Wolinski, R.I. Koning, Gerd Leitinger, Josef Neumüller, Günther Zellnig, Abraham Koster, Sepp D. Kohlwein**L5: Microscopy in developmental biology and medicine**

14:00 - 16:00, Gallery

L5.P638

The effect of pentadecapeptide BPC 157 on monocrotaline induced pulmonary hypertension in rats

**Lovro Kavur**, Iva Kosuta, M. Krnic, Mario Udovicic, Luka Brcic, Sven Seiwert

L5.P639

Exercise-induced ultrastructural changes of myotendinous junction in rat

Sabrina Burattini, Davide Curzi, Sara Salucci, Marina Marini, Fabio Esposito, Arsenio Veicsteinas, **Elisabetta Falcieri**

L5.P640

The Structure of Chitosan Based Photocatalytic Systems by AFM Study

**Victoria Timofeeva**, Nadezda Aksenova, Svetlana Rogovina, Anna Solovieva, Piotr Timashev, Nikolai Glagolev

L5.P641

Analysis of endometrial receptivity based on morphological aspects

**Marina Aunapuu**, A. Salumets, A. Arend

L5.P642

Signal transducing adaptor molecule 2 (Stam2) expression in the peripheral nervous system of the mouse

**Katarina Kapuralin**, Srecko Gajovic, Jean-Pierre Timmermans, Chris van Ginneken

L5.P643

Colour visualization of red blood cells in native smears by the new method reflected light microscopy

**Adkhamjon Paiziev**, Viktor Krakhmalev, Malika Abdullakhodjaeva

L5.P644

Ultrastructural characterization of bronchoalveolar lavage (BAL) fluid cells in usual interstitial pneumonia and sarcoidosis

**Henna Karvonen**, Raija Sormunen, Meeri Keinänen, Siri Lehtonen, Heta Merikallio, Terttu Harju, Riitta Kaarteenaho

L5.P645

Atlas of the Vasculature of Larval and Adult *Xenopus laevis*: Part: The Spleen

**Christine Radner**, Alois Lametschwandtner, Bernd Minnich

L5.P646

Quantitative stereological analysis of cryptorchid testes in men

**Viviana Kozina**, Ljerka Banek, Tomislav Banek, Davor Ježek

L5.P647

Ultrastructural Alterations in the Epidermis of Patients with Tinea Pedis

**Yurdagul Canberk**, Dilek Kocabalkan Selcuki, Bulent Ahishali, Funda Durmaz Onar, Ebru Karabulut

L5.P648

Atlas of the Vasculature of Larval and Adult *Xenopus laevis*. Part: Digestive Tract

**Alois Lametschwandtner**, Heidi Bartel, Ursula Lametschwandtner, Christine Radner, Synnöve Tholo, Bernd Minnich

L5.P649

Melatonin prevents H<sub>2</sub>O<sub>2</sub>-induced apoptosis in U937 cells

**Sara Salucci**, Sabrina Burattini, Michela Battistelli, Marco Paolillo, Piero Sestili, Pietro Gobbi, Elisabetta Falcieri

L5.P650

Synovial membrane: reaction to collagen scaffold implanted into the articular cartilage

**Deanna Guerra**, Jessika Roggiani, Davide Enea, Antonio Gigante, Maria Antonietta Croce, Roberta Tiozzo, Daniela Quaglino, Ivonne Pasquali-Ronchetti

L5.P651

Quantitative LSM microtomography of early mouse embryo subjected to hypoosmotic shock

**Maria Pogorelova**, Valentina Pogorelova, Vladimir Golichenkov

L5.P652

Effects of maternal dexamethasone treatment on pituitary FSH and LH cells in rat neonatal offspring

Natasa Ristic, **Milica Manojlovic-Stojanoski**, Natasa Nestorovic, Vladimir Ajdzanovic, Svetlana Trifunovic, Branko Filipovic, Verica Milosevic, Milka Sekulic

L5.P653

Evaluation of red blood cells stored under various temperature profiles

**Thomas Wagner**, Maria Anna Pabst, Alexandra Winkler, Gerhard Lanzer, Berthold Huppertz

L5.P654

The Role of Ultrastructural Analysis in the Diagnosis of Tumors: A Single Institution Experience.

**Stela Bulimbasic**, Arijana Racar-Pacic, Anamarija Bauer-Segvic, Danica Ljubanovic

L5.P655

The Acanthocyte-Echinocyte Differential The Example of Chorea-Acanthocytosis

**Alberto Foglia**

L5.P656

Neurodifferentiation potential of three human embryonic stem cell lines.

**Carolina Machado**, Roland A Flack

L5.P657

Temporary adaptation of the cuticle in *Semibalanus balanoides* (Linnaeus, 1767) (Crustacea, Cirripedia Thoracica)**Vanessa Zheden**, Daniela Gruber, Waltraud Klepal

L5.P658

Signal transducing adaptor molecule 2 (Stam2) is expressed in the mouse during embryo development and in the adult brain

**Srecko Gajovic**, Dinko Mitrecic, Ivan Bohacek, Marina Dobrivojevic, Dunja Gorup, Katarina Kapuralin, Sandra Mavric, Ljiljana Kostovic Knezevic

L5.P659

Scanning electron microscopy studies on in-vitro generated smooth muscle component for gastro-intestinal tissue engineering

Kristina Kofler, **Gerd Leitinger**, Herwig Ainödhofer, Amulya Saxena

L5.P660

Inspection of gastro-intestinal system of crustacean embryos

**Masa Milatovic**, Rok Kostanjsek, Magda Tusek Znidaric, Jasna Strus

L5.P661

SEM characteristics of dendritic and mesangial cells in culture

**Jelena Rajkovic**, Irena Dimov, M.J. Colic, Vojin Savic

L5.P662

Histological demonstration of early atherosclerosis by "oil-red-O" staining in neonatal cadavers

**Aymelek Yalin**, Ahmet Kocakusak

L5.P663

Usefulness of light and electron microscopy for assessment of pathological changes in human alveococcosis

**Lidia Chomicz**, Michal Walski, Daniel Mlocicki, Zdzislaw Swiderski, Piotr Fiedor

L5.P664

Scanning electron microscopy studies on in-vitro generated smooth muscle component for gastro-intestinal tissue engineering

Kristina Kofler, **Gerd Leitinger**, Herwig Ainödhofer, Amulya Saxena

L5.P665

Imaging of a three dimensional model system for invasive growth of trophoblasts

**Gerit Moser**, Nina Flieser, Martin Gauster, Kristina Orendi, Monika Siwetz, Berthold Huppertz

L5.P666

Cationic liposomes for photodynamic therapy of malignant gliomas: a light and electron microscopy study

**Giuseppina Bozzuto**, Cecilia Bombelli, Stefano Mannino, Annarita Stringaro, Laura Toccaceli, Annarica Calcabrini, Marisa Colone, Annunziato Mangiola, Giulio Maira, Paola Luciani, Giovanna Mancini, Giuseppe Arancia, Agnese Molinari

L5.P667

Ultrastructural analysis of HERV-K virus particles produced by human melanoma cells

**Klaus Boller**, Nina Fuchs, Regina Eberle, Johannes Löwer, Roswitha Löwer

L5.P668

The microvascularization of the human rectal continence organ:

**Karin Bleiner**, Felix Aigner, Thilo Wedel, Ulrich Böhler, Alois Lametschwandner

L5.P669

In vitro Anticancer Activity of Novel Bioactive Agents in Chemoresistant Tumors

**Victor Aguiriano Moser**, B. Svejda, E. Ingolic, ZX. Li, H. Höger, S. Sturm, H. Stuppner, Roswitha Pfragner

L5.P670

Expression of Growth Arrest and DNA-Damage Inducible Gene 45 Gamma (GADD45g) in First Trimester and Term Placental Tissue

**Astrid Hammer**, Nassim Ghaffari-Tabrizi, Gernot Desoye, Gottfried Dohr

L5.P671

Microscopic investigations on Reinke`s crystals in patients with cryptorchidism

**Viviana Kozina**, Ljerka Banek, Lucie Kubinova, Igor Weber, Davor Ježek

L5.P672

Structural alterations as biomarker in the shrew *Crocidura russula* exposed to chronic pollution**Alejandro Sánchez-Chardi**, Ciro Alberto Oliveira-Ribeiro, Jacint Nadal

L5.P673

Influence of different growth factors on rat embryo differentiation in vitro

Tatjana Belovari, Svjetlana Maric, **Maja Cosic**, Nikola Bijelic, Stjepan Krcmar

L5.P674

Immunohistochemical localization of necl-5 in melanocytic skin lesions. Preliminary observations

**Fabio D'Amico**, Alfredo Amoroso, Evangelia Skarmoutsou, Maria Consolo, Ylenia Bevelacqua, Franca Stivala, Maria Clorinda Mazzarino, Grazia Malaponte

**Workshop W2: Electron microscopy in human and veterinarian infectiology**

14:00 - 16:00, Gallery

W2.P677

ImmunoElectronMicroscopy (IEM) detection of viral agents in diarrheic pigs during the period 2002-2008 in Northern Italy

**Antonio Lavazza**, Cristiana Tittarelli, Monica P. Cerioli, Giovanni L. Alborali, Paolo Cordioli

W2.P678

Ultrastructure of natural West Nile viral infection of raptors (*Accipiter gentilis*) found in Austria

**Susanne Richter**

W2.P679

Redefining Electron Microscopy in tackling Emerging Plagues

**Atanu Basu**

W2.P680

Thin section electron microscopy – fast embedding methods versus classical embedding

Helene Vorisek, Susanne Richter, Josef Schröder, **Patricia Wernsdorf**

**Workshop W3: Advanced microscopy in teaching**

14:00 - 16:00, Gallery

W3.P681

Cholesterol depletion and replenishment of hepatitis B virions reversibly alter their ultrastructure and infectivity

Martin Raunest, Corinna Bremer, Nicole Kott, Christiane Bung, Wolfram Gerlich, Dieter Glebe, Franz Cemic, **Martin Hardt**

**M2: Nanoparticles and nanostructured materials**

14:00 - 16:00, Casineum

M2.P701

Coarsening of Pt clusters on amorphous carbon substrate

Eric Prestat, **Radian Popescu**, Reinhard Schneider, Holger Blank, Dagmar Gerthsen

M2.P702

TEM investigations of ZnO nanocrystals embedded in SiO<sub>2</sub>

**Reinhard Schneider**, Gillian Mayer, Mikhail Fonin, Ulrich Rüdiger, Nils Janßen, Rudolf Bratschitsch, Dagmar Gerthsen

M2.P703

TEM investigations of a friction film on a brake disc

**Claudia Prietzel**, Werner Österle

M2.P704

High resolution investigations of ripple structures formed by femtosecond laser irradiation of silicon

**Martin Schade**, Olga Varlamova, Jürgen Reif, Hartmut S. Leipner

M2.P705

Analyses of FeS-precipitates by TEM and SEM in a polymersome based prebiotic protocell model

**Frank Steiniger**, Sandor Nietzsche, Martin Westermann, Kirstin Rüdell, Theodor Alpermann, Ronny Rürger, Wolfgang Weigand, Alfred Fahr

M2.P706

Structural characterization of Si-nanowires using a 200 kV LaB6 TEM

**Soeren Selve**, D. Berger

M2.P707

Structural characterization of Si/SiO<sub>2</sub> quantum wells by HRTEM for the solar cell application

**Maryam Beigmohamadi**, Alla Sologubenko, Joachim Mayer

M2.P708

Investigation of Supported Catalyst Nanoparticles by Transmission Electron Microscopy

**Andreas Pfrang**, Aurélien Pitois, Georgios Tsotridis, Gaby Janssen, E. Sitters, Jean Pierre Pieterse

M2.P709

Characterization of SnO<sub>2</sub> Nanorods grown under oxidizing conditions

**Tobias Krekeler**, Werner Mader

M2.P710

Investigation of single-crystalline nano-whiskers by different TEM-methods

G. Richter, K. Hillerich, **M. Kelsch**, Kersten Hahn, D. Lang

M2.P711

Controlling Chemistry, Structure and Volume Growth Rate via Process Parameters of Electron Beam Induced Deposition

**Harald Plank**, Thomas Haber, Christian Gspan, Gerald Kothleitner, Ferdinand Hofer

M2.P712

Transmission electron microscopy and characterization of NiFe<sub>2</sub>O<sub>4</sub> nanoparticles dispersed in SiO<sub>2</sub> matrix

**Kashif Nadeem**, Ilse Letofsky-Papst, Thomas Traußnig, Heinz Krenn

M2.P713

Structural and Optical Characterization of Luminescent (Y<sub>0.7</sub>Gd<sub>0.3</sub>)<sub>2</sub>O<sub>3</sub>:Eu<sup>3+</sup> Nanopowder and Translucent Ceramics

**Radenka Krsmanovic**, Željka Antic, Barbora Bártová, Miroslav Dramicanin

M2.P714

Radial sections of severely deformed NiTi shape memory alloys studied by TEM and HRTEM

**Martin Peterlechner**, Thomas Waitz, Hans Peter Karnthaler

M2.P715

From crystalline to amorphous biomimetic (hydroxy)apatites in dependence on the preparation conditions. A HR-TEM study.

**Luca Bertinetti**, Salvatore Coluccia, Gianmario Martra, Norberto Roveri, Monica Sandri, Elena Landi

M2.P716

Formation of TiO<sub>2</sub> - Single Crystals in Ag-TiO<sub>2</sub> based Nanocomposites by Swift Heavy Ion Irradiation

**Venkata Sai Kiran Chakravadhanula**, Andriy Lotnyk, Yogendra Kumar Mishra, Tomislav Hrkac, Vladimir Zaporozhchenko, Devesh Kumar Avasthi, Dietmar Fink, Lorenz Kienle, Franz Faupel

M2.P717

Characterization of catalytically active Au and Pt particles supported on cerium oxide

**Frank Krumeich**, Linda Aschwanden, Fatos Hoxha, Björn Schimmöller, Alfons Baiker, Sotiris Pratsinis

M2.P718

Current-driven structural transitions in suspended Pt/C nanowires grown by EBID

**Stefano Frabboni**, Gian Carlo Gazzadi

M2.P719

TEM characterization of axial CdTe/ZnTe nanowires and simulation of strain induced diffusion by finite element method

**Holm Kirmse**, Ines Häusler, Wolfgang Neumann, Pawel Dluzewski, Slawomir Kret, Tomasz Wojtowicz, Detlef Klimm

M2.P720

Preparation and characterization of Ag, Pd and Pt nanoparticles for labeling of ultrathin sections in TEM microscopy

**Daniela Kralova**, Monika Lapcikova, Helena Vlkova, Jirina Hromadkova, Miroslav Slouf

M2.P721

Electron-microscopic characterization of pure oxide methanol steam reforming catalysts

**Simon Penner**, Harald Lorenz, Bernhard Klötzer, Michael Stöger-Pollach, Oleg Lebedev, Stuart Turner

M2.P722

Characterization of nanoparticulate coating solutions by means of High Resolution Electron Microscopy and X-Ray Diffraction

**Marianne Reibold**, Emanuel Gutmann, Boris Mahltig, Dirk Meyer, Horst Böttcher

M2.P723

Quantitative SEM study of NiCo alloy powders electrodeposited on Cu substrates

**Lidija Rafailovic**, Peter Franz Rogl, Dragica Minic, Hans Peter Karnthaler

M2.P724

The synthesis and characterization of rutile titanium oxide nanoparticles

**Dejan Verhovsek**, Kristina Žagar, Miran Ceh

M2.P725

Determining size distribution and shape factor for sub-micron chrome carbides in treated steel piping

**Samuel Scheller**, Heike Nitschke, Daniela Huenert, Axel Kranzmann

M2.P726

A TEM study of Ni-MoS<sub>2</sub>- and Co-MoS<sub>2</sub>-based HDS catalysts supported on SBA 15**Andriy Lotnyk**, Lorenz Kienle, Zhida Huang, Wolfgang Bensch, Sergio Fuentes, Jacqueline Bocarando, Gabriel Alonso, Carlos Ornelas

M2.P727

Characterization of 0-3 nanocomposites by means of HRTEM

**Lorenz Kienle**, Andriy Lotnyk, Viola Duppel, F. Beiroth, Britta Hesseler, K. Gerwien, Wolfgang Bensch

M2.P728

SEM study of a model system for Pb-free nanoparticle solders

**Jiri Bursik**, Jiri Sopousek, Jakub Zalesak

M2.P729

Nanoscale phase segregation driven magnetic properties of 3D hierarchical self-assembled microstructures formed from  $\alpha$ -MnO<sub>2</sub> nanotubes**Polona Umek**, Alexandre Gloter, Robert Dominko, Matej Pregelj, Marko Jagodic, Zvonko Jaglicic, Denis Arcon

M2.P730

Reinforcement of bio-based polymers – a study of the distribution and exfoliation of nanofillers by a set of complementary methods

**Manfred Pinnow**, Johannes Ganster, Andreas Bohn, Gunnar Engelmann

M2.P731

HRTEM imaging of electron beam irradiation defect dynamics in SWCNTs at 80 kV

**Sandeep Gorantla**, Felix Börrnert, Alicja Bachmatiuk, Ronny Schönfelder, Mark Hermann Rummeli, Bernd Büchner, Thomas Gemming, Jürgen Eckert

M2.P732

Ni electrodeposited within porous silicon – a self assembled nanomaterial

**Petra Granitzer**, Klemens Rumpf, Mihaela Albu, Peter Pölt

M2.P733

Morphology and structure evolution of ZnO nanocrystallites deposited on 4H-SiC and SiO<sub>2</sub>/Si substrates**Jiannis Tsiaoussis**, John Stoemenos, Volodymyr Khranovskyy, Rositza Yakimova

M2.P734

Synthesis and characterization of nanoscale iron oxid particles

**Christine Nielinger**, Gunnar Schaan, Werner Mader

M2.P735

Morphological properties of TiO<sub>2</sub> / Fe<sub>50</sub>Co<sub>50</sub> composite films**Venkata Sai Kiran Chakravadhanula**, Amit Kulkarni, Andriy Lotnyk, Viola Duppel, Vladimir Zaporotchenko, Lorenz Kienle, Franz Faupel

M2.P736

Characterization of highly versatile micrometer sized sensor particles using different microscopical techniques

**Klaus Koren**, Günter Mistlberger, Armin Zankel, Peter Pölt, Ingo Klimant

M2.P737

Electron microscopy investigation on Pt deposited on different carbon nanostructures for fuel cell applications

Daniele Mirabile Gattia, **Marco Vittori Antisari**, Leonardo Giorgi, Renzo Marazzi, Emanuela Piscopiello, Amelia Montone, Serafina Bellitto, Silvia Licocchia, Enrico Traversa

M2.P738

Perfluorinated Nanocomposite Membranes Modified by Polyaniline: Electrotransport Phenomena and Morphology

**Anna Sytcheva**, Svetlana Shkirskaya, Ninel Berezina

M2.P739

Phase-pure MoVTeNbO M1 catalysts for propane oxidation: particle dimension and catalytic properties

**Wei Zhang**, Dangsheng Su, Till Wolfram, Almudena Sanfiz, Annette Trunschke, Robert Schlögl

M2.P740

Characterization of the interface between Pt nanoparticles and ZrO<sub>2</sub> substrates by aberration-corrected HRTEM and EELS**Bernd Rellinghaus**, Mihai Branzei, Christoph Schünemann, Darius Pohl, Hirohito Hirata, Shin'ichi Matsumoto, Nori Sato

M2.P741

Production and application of polymeric nanoparticles for the optical determination of physiological parameters

**Günter Mistlberger**, Klaus Koren, Gunter Zenkl, Torsten Mayr, Armin Zankel, Peter Pölt, Sergey M. Borisov, Ingo Klimant

M2.P742

Transmission electron microscopy and characterization of NiFe<sub>2</sub>O<sub>4</sub> nanoparticles dispersed in SiO<sub>2</sub> matrix**Kashif Nadeem**, Ilse Letofsky-Papst, Thomas Traußnig, Roland Würschum, Heinz Krenn

M2.P743

Size Distribution of Gold and Palladium Nanoparticles measured in Cryo FESEM

**Jason Dean**, Marketa Svatakova, Marie Vancova, Stanislav Hucek, Jana Nebesarova

M2.P744

Size measurement of nanoparticles by means of transmission scanning electron microscopy (TSEM)

**Tobias Klein**, Carl Georg Frase, Egbert Buhr

M2.P745

Clusters in Cobalt implanted Boron pre-doped ZnO

**Arndt Mücklich**, K. Potzger

M2.P746

One-dimensional ZnS nanocrystals grown by VLS-mechanism

**Dominic Vogt**, Werner Mader

M2.P747

Synthesis and properties of FePt-nanocrystallites

**Thomas Traußnig**, Ilse Letofsky-Papst, Karin Wewerka, Gerald Kothleitner, Stephan Landgraf, Klemens Rumpf, Petra Granitzer, Heinz Krenn, Roland Würschum

M2.P748

Carbon nanotubes with Co-filling: HRTEM studies

**Boris Kulnitskiy**, Vladimir Blank, Igor Perezhugin, Evgeniy Polyakov, Dmitriy Batov

M2.P749

ELNES: A promising method for structural and chemical nanoparticle analysis?

**Simone Pokrant**, Marie Cheynet, Stephan Irsen

M2.P750

Nanostructure of Magnesium for Hydrogen storage

**Emanuela Piscopiello**, Ennio Bonetti, Elsa Callini, Luca Pasquini, Marco Vittori Antisari

M2.P751

Single Crystalline Germanium as Calibration Standard in NPM-Machines:  
Microscopic Investigations**Thomas Kups**, Uwe Schadewald, Elvira Remdt, Lothar Spieß

M2.P752

Analytical HRTEM Study of Self-Assembled Metal-Silicide Nanoislands

**Magnus Garbrecht**, Shirley Manor, Ilan Goldfarb, Wayne D. Kaplan

M2.P753

Nano-structuring of Conjugated Polymer Based Structures by Focused Ion  
Beam**Meltem Sezen**, Evelin Fisslthaler, Boril Chernev, E. Tchernychova, Harald Plank, A. Bluemel, Peter Pölt, E.J.W. List, Werner Grogger

M2.P754

SEM Studies of Fe<sub>2</sub>O<sub>3</sub> Thin-Films on Glass Substrate**Aleksandra Turkovic**, Mile Ivanda, Marko Bitenc, Zorica Crnjak Orel

M2.P755

A TEM investigation of twinning in ZnO nano-spikes

**Andriy Lotnyk**, Lorenz Kienle, Seid Jebriil, Yogendra Kumar Mishra, Rainer Adelung, Viola Duppel

M2.P756

SEM analysis of the Mg-MgH<sub>2</sub> phase transformationAmelia Montone, Marco Vittori Antisari, **Annalisa Aurora**, Daniele Mirabile Gattia

M2.P757

Electron microscopy as a tool for morphology control in nanocomposite solar  
cells**Wernfried Haas**, Armin Zankel, Thomas Rath, Eugen Maier, Alejandro Santis, Achim Fischereder, Gregor Trimmel, Ferdinand Hofer

M2.P758

Structural and compositional characterization of InAs/InAsP heterostructure  
nanowire**zi-an Li**, Marina Spasova, Michael Farle, Andrey Lysov, Werner Prost, Franz Josef Tegude

M2.P759

Embryonic States of Fluorapatite-Gelatine-Nanocomposites and Their Intrinsic Electric Field Driven Morphogenesis

**Paul Simon**, Elena Rosseeva, Jana Buder, Wilder Carrillo-Cabrera, Rüdiger Kniep**M4: Ceramics, coatings, geomaterials, ...**

14:00 - 16:00, Casineum

M4.P760

SEM/EDS characterization of fly ash based geopolymers

**Zvezdana Bascarevic**, Miroslav Komljenovic, Violeta Bradic, Ljiljana Petrasinovic-Stojkanovic, Natasa Jovanovic, Mihailo Rsumovic

M4.P761

Thermal stability of gamma-Al<sub>2</sub>O<sub>3</sub> coatings**Alexander Reinholdt**, Mara Ewering, Kirsten Bobzin, Joachim Mayer

M4.P762

In-situ TEM studies of a phase transition in Ca<sub>2</sub>Fe<sub>2</sub>O<sub>5</sub>Hannes Krüger, **Fritz Phillipp**

M4.P763

TEM investigations of mixed ionic/electronic conducting Ba<sub>0.5</sub>Sr<sub>0.5</sub>Co<sub>0.8</sub>Fe<sub>0.2</sub>O<sub>3-δ</sub> (BSCF) materials**Philipp Müller**, Heike Störmer, Dagmar Gerthsen, José Santiso, Jaume Roqueta, Monica Burriel, Christian Niedrig, Stefan Wagner, Ellen Ivers-Tiffée

M4.P764

Dislocation microstructure in strontium titanate plastically deformed at low temperature

Wilfried Sigle

M4.P765

Disordered alloyed alumina thin films as wear-resistant coatings – a TEM and FIB study.

**Wolfgang Engelhart**, Veit Schier, Werner Dreher, Oliver Eibl

M4.P766

Chemical instability as reason for degradation of ionic conductivity in the system Y<sub>2</sub>O<sub>3</sub>-ZrO<sub>2</sub>**Benjamin Butz**, Reinhard Schneider, Heike Störmer, Dagmar Gerthsen, Marco Schowalter, Andreas Rosenauer

M4.P767

Microstructure characterisation of double glass-ceramic coatings on TIMETAL 834

**Tomasz Moskalewicz**, Federico Smeacetto, Grzegorz Cempura, Aleksandra Czyrska-Filemonowicz

M4.P768

Analytical characterization of Y-Pd-B thin films deposited by magnetron sputtering

**Riza Iskandar**, Tetsuya Takahashi, Jochen .M Schneider, Joachim Mayer

M4.P769

The characterization of SiAlON-TiN composites using analytical transmission electron microscopy techniques

**Servet Turan**, Hilmi Yurdakul, Ferhat Kara, Hasan Mandal, Alpogut Kara

M4.P770

The change of oxygen vacancy ordering in a nonstoichiometric La-Sr-Co-perovskite during TEM investigation

**Christian Gspan**, Werner Grogger, Edith Bucher, Werner Sitte, Ferdinand Hofer

M4.P771

Microstructural origins defining the slip-rolling resistance of Zr(C,N) coating systems

**Ilona Dörfel**, Heidemarie Rooch, Werner Österle, Charles-Alix Manier, Mathias Woydt

M4.P772

Unusual effects during diffraction of electrons on BaTiO<sub>3</sub> single crystals

**Arthur Wall**

M4.P773

High Resolution Analytical Tools for Industrial Applications

**Michel Trudeau**, Alessandra Maria Serventi, Karim Zaghbi

M4.P774

Investigation of reactive transport processes in porous mineral systems by means of Focused Ion Beam

**Torsten Scherer**, Matthias Schwotzer

M4.P775

TEM investigation of defects in ceria

**Jonathan Winterstein**, C. Barry Carter

M4.P776

Sulfur as pollutant species on the cathode side of a SOFC system

**Andreas Schuler**, Zacharie Wuillemin, Aïcha Hessler, Jan Van herle

M4.P777

The Microstructural Characterization of SiAlON Ceramics after Creep

**Dilek Turan**, Alper Uludag, Hilmi Yurdakul, Servet Turan

M4.P778

Valence and spin state of iron in aluminum-doped perovskite ceramics

**Julia Martynczuk**, Fangyi Liang, Mirko Arnold, Vladimir Sepelak, Armin Feldhoff

M4.P779

Thorium-rich intergrowns and inclusions in monazite-(Ce) samples with low and high actinide content

**Nenad Tomasic**, Vladimir Bermanec

M4.P780

Mapping Grain Boundary Potentials in Ceramics by Nonlinear Inline Electron Holography and Impedance Spectroscopy

**Christoph Koch**, Behnaz Rahmati, Wilfried Sigle, Mona Shirpour, Rotraut Merkle, Joachim Maier, Peter A. van Aken

M4.P781

Decomposition process of a high-performance perovskite at intermediate temperatures studied by analytical TEM

**Armin Feldhoff**, Konstantin Efimov, Mirko Arnold

M4.P782

Effect of Y addition and thermal treatment on the phase stability of PVD deposited TiAlN coatings

**Daniel Kiener**, David Holec, Martin Moser, Paul Mayrhofer, Christina Scheu

M4.P783

Qualitative and Quantitative analysis of Ti<sub>2</sub>AlC MAX-phase films by Electron Spectroscopic Imaging Series**Riza Iskandar**, Darwin .P Sigumonrong, Jochen .M Schneider, Joachim Mayer

M4.P784

Investigating Charge Compensation in Li(1-x)FePO<sub>4</sub>**Michael Kiarie Kinyanjui**, Andrey Chuvilin, Ute Kaiser, Peter Axmann, Margret Wohlfahrt-Mehrens

M4.P785

HAADF-STEM and EELS study of SrTiO<sub>3-x</sub>Ny obtained by microwave plasma ammonolysis.**Myriam H Aguirre**, Andrey Shkabko, Laura Bocher, Anke Wiedenkauff, Peng Wang, Ursel Bangert**M7: Other current topics of materials science**

14:00 - 16:00, Casineum

M7.P787

Laser ablation on the edge of Cu target

**Visnja Henc-Bartolic**, Suzana Jakovljevic, Mario Matijevic

M7.P788

EBSD Investigations in the Micro System Technologies

**Ellen Auerswald**, Heike Kukuk-Schmid, Bernd Michel

M7.P789

TEM study of oxygen precipitates and other defects in Czochralski-grown silicon

**Jiri Bursik**, Josef Kubena, Mojmir Meduna, Ondrej Caha

M7.P790

Low -Temperature EBSP and EDAX analyses on ice and gas hydrate microstructures

**Kirsten Techmer**, Aneta Nedelcu, Sergio Faria, Susanne Hemes, Andres Schützendübel, Werner Kuhs

M7.P791

Microstructure of the ultra-fine grained Cu by UHV SLEEM

**Šárka Mikmeková**, Miloš Hovorka, Ilona Mullerová, Ludek Frank, Ondrej Man, Libor Pantelejev

M7.P792

In Situ TEM Study of Dislocation Nucleation and Escape in a FIB Structured 500nm Thick Al Single-Crystal Wire

Sang Ho Oh, Marc Legros, Daniel Kiener, **Gerhard Dehm**

M7.P793

Electrical potentials of mono-crystalline silicon solar cells by off-axis electron holography

**John William Sandino del Busto**, Hannes Lichte, Bernd Einkenkel, Wilder Carrillo-Cabrera

M7.P794

In situ reduction and oxidation of nickel from solid oxide fuel cells in a Titan ETEM

**Antonin Faes**, Quentin Jeangros, Jakob B. Wagner, Aïcha Hessler-Wyser, Jan Van herle, Rafal Dunin-Borkowski

M7.P795

AFeO<sub>3-δ</sub> Perovskites for SOFC Cathode Materials Applications. Effect of A-site Parameters.**Karmele Vidal**, Lide Rodríguez-Martínez, Luis Ortega-San-Martin, María Luisa Nó, Teófilo Rojo, Ander Laresgoiti, María Isabel Arriortua

M7.P796

Microstructural investigation of M-type BaFe<sub>12</sub>O<sub>19</sub> hexaferrites using electron backscatter diffraction (EBSD)**Anjela Koblischka-Veneva**, Jörg Schmauch, Michael Koblischka, Y. Chen, V. G. Harris, Frank Mücklich

M7.P797

Setting-up of a novel approach to in-situ TEM study of structure-transport correlations on single nanostructures

**Antonietta Taurino**, Massimo Catalano, Roman Krahne, Ezio Cociancich, Elvio Carlino

M7.P798

In situ reduction and oxidation of nickel from solid oxide fuel cells in a Titan ETEM

**Antonin Faes**, Quentin Jeangros, Jakob B. Wagner, Aïcha Hessler-Wyser, Jan Van herle, Rafal Dunin-Borkowski, Thomas W. Hansen

M7.P799

Quantitative Microstructure Examination of Cr-Ni-Mo Based Alloy Using EBSD Analytical Technique

**Matjaž Godec**, Borivoj Šuštaršič, Monika Jenko, Bernard Marini

M7.P800

Simultaneous EBSD and EDS analyses on thin film stacks as typically used in solar cells

Felix Reinauer, René de Kloe, Daniel Kraft, **Hubert Schulz**

M7.P801

Characterization of pressure-induced amorphous silicon

**Bianca Haberl**, Jodie E. Bradby, Simon Ruffell, Jim S. Williams, Amelia C. Y. Liu

M7.P802

In situ investigations in the ESEM Advances in materials science

**Armin Zankel**, Angelika Reichmann, Peter Pölt

M7.P803

Dynamical simulations for Electron Backscatter Diffraction in scanning electron microscopy

**Aimo Winkelmann**

M7.P804

In situ TEM measurements to study structural changes of VO<sub>2</sub> nanowires

**Ilse Letofsky-Papst**, Stefan Löffler, Alois Lugstein, Mihaela Albu, Werner Grogger

M7.P805

ESEM examinations for assessment of damage mechanisms in short glass fiber reinforced thermoplastics

**Marcus Schossig**, Christian Bieroegel, Armin Zankel, Peter Pölt, Wolfgang Grellmann, Thomas Mecklenburg

M7.P806

Evaluation of Ln<sub>0.5</sub>Ba<sub>0.5</sub>FeO<sub>3</sub> (Ln= La, Sm) perovskites as cathode materials for SOFC

**Ana Ecija**, Karmele Vidal, A. Larrañaga, Lide Rodríguez-Martínez, Maribel Arriortua

M7.P807

SEM/EDX-Analysis of a Portrait of Joachim II. Elector of Brandenburg (1505-1571) by Lukas Cranach the Younger

**Jörg Nissen**, Jens Bartoll

M7.P808

Influence of diatomite microstructure on its adsorption capacity for Pb(II)

**Sandra Kumric**, Snezana Nenadovic, Milos Nenadovic, Renata Kovacevic, Ljiljana Matovic, Branko Matovic, Jasmina Grbovic Novakovic

M7.P809

Samaria-Doped Ceria and Ytria Stabilized Zirconia, Interface Analysis at Different Sintering Atmospheres

**A. Martínez-Amesti**, A. Larrañaga, L.M. Rodriguez-Martinez, María Luisa Nó, J.L. Pizarro, Ander Laresgoiti, María Isabel Arriortua