

## **Preliminary Programme**

**EM'2008 - XIII International Conference on Electron Microscopy**

**Zakopane, 8 - 11 June 2008**

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**08.06 - Sunday**

*"Piłsudski Hall"*

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- 15:30** Refreshment
- 16:00** Opening Ceremony
- 16:15** **Plenary Session I : TEM & HREM – Today and Future**  
Chairmen: **G. Thomas, J. Kusiński, Z. Kędzierski**
- 16:15 - 16:45** **K. Urban** : "Aberration-Corrected Electron Microscopy -  
at the Frontier of Materials Science in Atomic  
Dimensions"
- 16:45 - 17:15** **P.A. Buffat** : "How to Improve Investigation Conditions  
for Sound Interpretation of Electron Diffraction and  
Spectrometries?"
- 17:15 - 17:45** **A. Czyrska-Filemonowicz, P.A. Buffat, H.J. Penkalla** :  
"Characterisation of Phases in Multilayered Coatings on  
Ti-Base Alloys by Electron Microscopy and Spectroscopy  
Methods"
- 17:45 - 18:15** **T. Oikawa** : "Atomic Resolution Elemental Analysis with  
Cs-Corrected Electron Microscopy"
- 18:15** Opening of Exhibition
- 19:30** "Krywań" with Welcome Reception

09.06 - Monday

"Piłsudski Hall"

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- 9:00**                    **Session I** : TEM & HREM – Application to Materials  
Characterisation  
Chairmen: **A. Czyrska–Filemonowicz, K. Urban, P.A. Buffat**
- 9:00 - 9:30**            **R. Sinclair** : "Characterization of Magnetic  
Nanoparticles by High Resolution TEM"
- 9:30 - 10:00**        **W. Neumann, A. Mogilatenko** : "Strategy of Structure  
Analysis of Polar and Non-Polar GaN Layers"
- 10:00 - 10:30**      **D.J.H. Cockayne** : "Structural Studies of Interfaces and  
Amorphous Nanovolumes"
- 10:30**                    Coffee Break
- 11:00**                    **Session II** : TEM & HREM – Application to Materials  
Characterisation  
Chairmen: **R. Sinclair, J. Dutkiewicz, W. Neumann**
- 11:00 - 11:30**      **S. Bals, S. Van Aert, J. Verbeeck, G. Van Tendeloo** :  
"Imaging of Nanostructures in 3d Space and in Energy  
Space"
- 11:30 - 12:00**      **J. Morgiel, J. Grzonka, A. Tokarz, P. Wiczorek, M.T.  
Vieira, J. Noro, A.S. Ramos, J. Labar** : "Microstructure of  
Ni/Cu and Ni/Al Multilayers Obtained with Magnetron  
Sputtering or Electrodeposition"
- 12:00 - 12:30**      **E. Spiecker** : „High-Resolution TEM of Layered Crystals  
and Incommensurate Misfit Layer Compounds and their  
Interfaces"
- 12:30 - 13:00**      **M.J. Hÿtch, F. Houdellier, F. Hÿe, E. Snoeck** :  
"Quantitative Strain Mapping in Electronic Devices and  
nanostructures"
- 13:00**                    Lunch Break

- 14:30 - 16:30**      **Seminar on** : "TEM Opportunities for New EC Countries Through ESTEEM"  
Organizers: **D. Cockayne, M. Ceh, A. Czyrska-Filemonowicz**
- 16:30 - 18:30**      Coffee and Poster
- 19:00**                Highlander Evening

**10.06 - Tuesday**  
"Grabski Hall"

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- 9:00**                **Session III** : TEM & HREM – Application to Materials Characterization - Nanowires  
Chairmen: **V. Radmilovic, M. Richert**
- 9:00 - 9:30**        **A. Gustafsson, N. Sköld, J. Trägårdh, J. Eriksson, L. Samuelson** : "From Quantum-Well Wires to Nanowires Using Cathodoluminescence Imaging"
- 9:30 - 10:00**      **Z. Liliental-Weber** : "Structural Perfection of InN (Nanorods, Nanowires and Epilayers)"
- 10:00 - 10:15**    **G. Kusinski, J.R. Jokisaari, L. Goris, M. Donovan, R. Noriega, A. Salleo** : "TEM Characterization of Solution-Processed, Intrinsic and Al Doped ZnO Nanowires for Transparent Electrode Fabrication"
- 10:15 - 10:30**    **P. Dłużewski, E. Janik, S. Kret, W. Zaleszczyk, D. Tang, T. Wojtowicz** : "TEM Characterisation of MBE Grown CdTe/ZnTe Axial Nanowires"
- 10:30**                Coffee Break
- 11:00**                **Session IV** : TEM & HREM – Application to Materials Characterisation – Alloys and Composites  
Chairmen: **A. Gustafsson, J. Morgiel**
- 11:00 - 11:30**    **J. Dutkiewicz, L. Lityńska-Dobrzyńska, A. Kováčová, W. Maziarz** : "HREM Studies of ZrNiTiCu and NiTiZr Amorphous Nanocrystalline Composites"

- 11:30 - 12:00**      **J. L. Lábár, D. Mangelinck** : “Usage and Limitations of Elemental Maps in AEM: a Case Study on Ni-Si and Additives”
- 12:00 - 12:15**      **A. Kula, L. Błaż, J. Kaneko, M. Sugamata** : “Effect of Annealing Temperature on the Structure and Mechanical Properties of Mechanically Alloyed AlMg – Nb<sub>2</sub>O<sub>5</sub> and AlMg – ZrSi<sub>2</sub> Composites”
- 12:15 - 12:30**      **M. Lipińska-Chwałek, S. Roitsch, M. Feuerbacher, A. Czyrska-Filemonowicz, K. Urban** : “Microstructural Analysis of Deformed  $\beta$ -Al<sub>3</sub>Mg<sub>2</sub> Phase”
- 12:30 - 12:45**      **B. Dubiel, K. Płońska-Niznik, A. Czyrska-Filemonowicz** : “Microstructural Changes During High Temperature Creep of CmSx-4 Single Crystal Ni Base Superalloy”
- 13:00**                      Lunch Break
- 14:30**                      **Session V** : TEM & HREM – Application to Materials Characterisation  
Chairmen: **Ch. Leroux, A. Zielinska-Lipiec**
- 14:30 - 15:00**      **V. Radmilovic, M.D. Rossell, A. Tolley, E.A. Marquis, R. Erni, U. Dahmen** : “L<sub>1</sub><sub>2</sub> Core/Shell Nanostructures Embedded in Solids”
- 15:00 - 15:30**      **K. Matsuda, J. Nakamura, T. Kawabata, T Sato, S. Ikeno** : „Precipitation in Al-Mg-Si-Ag Alloys”
- 15:30 - 15:45**      **I. Kalemba, S. Dymek, C. Hamilton, M. Blicharski** : “Microstructural Investigation of Friction Stir Welded 7136-T76511 Aluminum”
- 15:45 - 16:00**      **S. Dymek, M. Wróbel, M. Blicharski, M. Dollar** : “The Effect of Prolonged Ageing on Microstructure and Mechanical Properties of a Haynes 242 Alloy”
- 16:00 - 16:15**      **A. Kostka, R. Coelho, J. Dos Santos, A. Pyzalla** : “Microstructure of Dissimilar Al to Steel Friction Stir Weld”

- 16:15 - 16:30**      **M. Lewandowska , K.J. Kurzydłowski :** “Nanoscale Characterisation of Materials Processed by Heavy Plastic Deformation”
- 16:30**                      Coffee Break
- 17:00**                      **Session VI :** TEM & HREM – Application to Materials Characterization – Thin Films and Coatings  
Chairmen: **J. L. Lábár, P. Dłużewski**
- 17:00 - 17:30**        **Ch. Leroux , R. Chmielowski, V. Madigou, M. Blicharski :**  
“Microstructure of  $Sr_4Ru_2O_9$  Thin Films, Obtained by Pulsed Laser Deposition”
- 17:30 - 17:45**        **D. Stróż ,M. Psoda :** “TEM Studies of Plasma Nitrided Austenitic Stainless Steel”
- 17:45 - 18:00**        **H. Garbacz , P. Wieceński, B. Adamczyk-Cieślak,  
J. Mizera, K.J. Kurzydłowski :** “Studies of Aluminium Coatings Deposited by Vacuum Evaporation and Magnetron Sputtering”
- 18:00 - 18:15**        **Ł. Major , J. Morgiel, M. Kot, J.M. Lackner :** “TEM and HRTEM Characterisation of TiN Coatings Damage During Ball-on-Disc Test”
- 18:15 - 18:30**        **P. Nowakowski, A. Kopia, S. Villain, J-R Gavarrí :** “ $RuO_2$  Thin Films Deposited by Spin Coating on Si Substrates: pH Dependence of Microstructure and Catalytic Properties”

“Kwiatkowski Hall”

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- 9:00**                      **Session VII :** SEM and Microanalysis  
Chairmen: **M. Hytch, M. Żelechower**
- 9:00 - 9:30**            **J.M. Dijkstra :** "Quantitative X-Ray Mapping: The Only X-Ray Mapping Results that Can Be Trusted"
- 9:30 - 10:00**        **J. Cwajna :** “Quantitative Materialography in Scanning Electron Microscopy”

- 10:00 - 10:15** **O. L. Orelovich, B. A. Sartowska, P. Yu. Apel** : “ Analysis of the Channel Shapes in Track Membranes by the Electron Microscopy Method”
- 10:15 - 10:30** **K. Konopka, P. Mazur, A. Witkowski, K. J. Kurzydłowski** : “Nano-Pores in Diatoms Chalange for Materials Science and Engineering”
- 10:30** Coffee Break
- 11:00** **Session VIII** : SEM and Microanalysis  
Chairmen: **F. Hofer, L. Błaż**
- 11:00 - 11:30** **M. Żelechower** : “The Application of Monte Carlo Simulation in Electron Microscopy and X-Ray Microanalysis - Review Lecture”
- 11:30 - 12:00** **G.F. Bastin, H.J.M. Heijligers** : “Wavelength-Dispersive Analysis of Ultra-Light Elements in the Electron Probe Micro-Analyzer; a Challenge”
- 12:00 - 12:15** **M. Faryna, M. Płońska, A. Walaszek** : “LV-SEM/EBSD Analysis of PLZT Ceramics”
- 12:15 - 12:30** **M. Bieda, K. Sztwiertnia, A. Korneva, G. Sawina** : “Application of Orientation Mapping in TEM for In-Situ Study on the Inhomogeneous Microstructural Evolution During Annealing of Aluminum Alloy With Bimodal Particle Distribution”
- 12:30 - 12:45** **P. H. A. Araqão, C. G. T. J. Andrade, N. M. Suguihiro** : “Analysis of Chemical Elements in Soy Leaves Infected by Phakopsora Pachyrhizi Fungus Employing EDS by SEM Technique”
- 13:00** Lunch Break

- 14:30**                    **Session IX** : TEM Examination of Electronic Materials  
 Chairmen: **G.F. Bastin, Z. Liliental-Weber**
- 14:30 - 15:00**        **J.R. Yang, W.C. Li, J.T. Hsu, M. Shiojiri** : “Electron Microscopy Investigations of Defects in InGaN/GaN MQWs and Morphology of High Density in GaN QDs”
- 15:00 - 15:30**        **J. Kątccki, J. Ratajczak, A. Łaszcz, F. Phillipp, N. Reckinger, X. Tang, G. Larrieu, E. Dubois** : “Electron Microscopy of Silicides Formation in Schottky Barrier Contacts to Electronic Devices”
- 15:30 - 15:45**        **M. A. Małecka, L. Kępiński, M. Ruszel, B. Grzybowska-Świerkosz** : “Microstructural Characterization of Nanocrystalline Gold Supported on  $\text{CoCr}_2\text{O}_4$ ”
- 15:45 - 16:00**        **M. Zouaoui, D. K. Mani, F. Ben Azzouz, M. Annabi, M. Ben Salem** : “Effect of PbO Addition on Microstructure and Electrical Properties of  $\text{YBa}_2\text{Cu}_3\text{O}_y$ ”
- 16:00 - 16:15**        **A. Demolliens, Ch. Turquat, C. Ducruet, C. Maunoury, Y. Conraux, I.L. Prejbeanu, J-P. Nozières, Ch. Muller** : “Advanced HRTEM Analyses for Process Improvement of Thermally Assisted MRAM Cells”
- 16:30**                    Coffee Break
- 17:00**                    **Session X** : TEM Examination of Magnetic and Ferromagnetic Materials  
 Chairmen: **J. Kątccki, F. Hofer**
- 17:00 - 17:30**        **E. Snoeck, B. Warot-Fonrose, C. Gatel, R. Serra, L. Calmels, V. Serin, F. Houdellier, M.J. Hÿtch** : “Local Magnetic Measurements in a TEM”
- 17:30 - 17:45**        **G.F. Korznikova** : “Domain Structure and Magnetization Reversal Processes of Ferromagnets”
- 17:45 - 18:00**        **R. Schierholz, L. Schmitt, J. Kling, H. Fuess** : “Can Ferroelectric Phases be Distinguished by Selected Area Electron Diffraction (SAED) ?”

- 18:00 - 18:15**      **J. Rusz, H. Lidbaum, K. Leifer, P. Oppeneer** : “Sum Rules and Quantitative Magnetic Measurements with TEM”
- 18:15 - 18:30**      **W. Maziarz, J. Dutkiewicz, L. Lityńska-Dobrzyńska, R. Santamarta, E. Cesari** : “Structure Investigations of Ferromagnetic Co-Ni-Al Alloys Obtained by Powder Metallurgy”
- 18:00 - 19:00**      Polish Society for Microscopy meeting (Library)
- 20:00**              Conference Dinner

**11.06 - Wednesday**

“Grabski Hall”

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- 9:00**                **Plenary Session II** : New Techniques and Methods in Electron Microscopy  
Chairmen: **D. Stróż W. Jaeger, R.A. Portier**
- 9:00 - 9:30**        **J. P. Morniroli** : “Applications of Electron Precession in Materials Science”
- 9:30 - 10:00**      **E. Jezierska** : “Antiphase Boundaries Recognition and Characterization”
- 10:00 - 10:30**     **M. Čeh, S. Šturm** : “The Influence of the Debye-Waller Factor on Intensities in HAADF-STEM Image Calculations”
- 10:30**              Coffee Break
- 11:00**              **Plenary Session III** : New Techniques and Methods of Samples Preparation in Electron Microscopy  
Chairmen: **E. Jezierska, J. P. Morniroli, J. Cwajna**
- 11:00 - 11:30**     **F. Hofer, W. Grogger, G. Kothleitner, B. Schaffer** : “Low-Loss EELS with Monochromated Electrons”
- 11:30 - 12:00**     **H. J. Penkalla** : “Focused Ion Beam - A Modern Tool for Materials Analysis”



- 12:00 - 12:30**      **R. A. Portier, P. Vermaut, K. Chastaing, A. Denquin, D. Caillard** : “Microstructural Investigation and Functional Properties of High Temperature Shape Memory Alloys Based on the RuNb System”
- 12:30**              *Closing Ceremony*
- 13:00**              *Lunch Break*