



List of accepted poster contributions

- Processing and indexing of electron backscatter patterns using open source software.
H.W. Ánes, J. Hjelen, A.T.J. van Helvoort and K. Marthinsen
- Characterisation of the multi-layered microstructure of *Cellana Testudinaria* shell using electron backscatter diffraction (EBSD).
K. Berent and A.G. Checa
- Ga FIB/TOF-SIMS analysis of lithium materials.
S. Bessette, M. Golozar, P. Hovington, R. Gauvin and K. Zaghbi
- EBSD-like orientation mapping in TEM - New possibilities.
M. Bieda-Niemiec, K.Kudłacz, A. Jarzębska, S. Boczkal, P. Koprowski, M. Faryna and K. Sztwiertnia
- 3D-EBSD analysis of grain boundary structures in copper and aluminium deformed by channel die pressing.
P. Bobrowski and A. Tarasek
- Versatility of X-ray microanalysis in examinations of forensic cases.
Z. Brożek-Mucha
- Microstructure, crystal structure and martensitic transformation temperature of Cu, Co-doped Ni-Mn-Ga Heusler alloys.
A. Brzoza, S. Sumara, J. Wojewoda-Budka, A. Wierzbicka-Miernik, T. Czeppe, E. Cesari and M.J. Szczerba
- Deterministic modelling of electron transport for electron probe microanalysis using the spherical harmonic method.
J. Bünger, S. Richter and M. Torrilhon
- Local tetragonality of martensite investigated by EBSD.
G. Cios, A. Winkelmann, G. Nolze, T. Tokarski and P. Bała
- Application of the adjoint method in gradient-based optimisation to the M1-model in electron beam microanalysis.
T. Claus, J. Bünger, S. Richter and M. Torrilhon
- Austenite-ferrite transformation of AISI 430 ferritic stainless steel during its manufacturing.
I. Collado Garcia, A. Núñez Galindo, A. Ruiz Flores, J.F. Almagro Bello and J. Botana
- Electron microscopy study of the effect of heat treatment on the superelasticity in Fe-based shape memory alloys.
M. Czerny, T. Tokarski, W. Maziarz, G. Cios, N. Schell, Y.I. Chumlyakov and R.Chulist
- Characterisation of magmatic-hydrothermal tourmaline from the Land's End granite - Going from metres to micrometres.
K. Drivenes, W. Brownscombe, R.B. Larsen, R. Seltmann, J. Spratt and B.E. Sørensen
- From experiments to reaction mechanisms: Application of microbeam techniques to understand albitisation reactions.
G. Duan, J. Brugger, B. Etschmann, R. Ram, S. Micklethwaite and A. Friedrich

- Very low energy peak shifts in EDS spectra.
F. Eggert, P.P. Camus and F. Reinauer
- Identification of crystal structures and elemental composition of reactive air-brazed $Ba_{0.5}Sr_{0.5}Co_{0.8}Fe_{0.2}O_{3-\Delta}$ -Ag-14CuO joints by EBSD, EPMA and analytical TEM.
L.C. Ehle, S. Herzog, S. Richter, A. Kaletsch, C. Broeckmann and J. Mayer
- In situ composition analysis by EDS at elevated temperatures in SEM and STEM.
M. Falke and I. Nemeth
- An X-ray micro-fluorescence spectrometry analysis for determination of bromine content in alkaline rocks.
C.F. Faranda, I. Di Carlo, B. Scaillet and J. Andujar
- Micro-ring coring as a tool for residual stress evaluation.
M. Faryna and B. Kania
- Microstructure evolution of innovative thermal bridge composite (i-TBC) for power electronics during elaboration.
H. Fekiri, V.A. Esin, V. Maurel, A. Köster, Y. Bienvenu and F. Gaslain
- A Monte Carlo simulation programme for X-ray fluorescence.
R. Gauvin and Y. Yuan
- Analytical STEM at 30 keV and less.
R. Gauvin and N. Brodusch
- Analysis of light elements in carbon-coated samples using soft X-ray emission spectrometry: First results on lithium and boron.
S. Goldmann and C. Wöhrl
- Characterisation of Li-ion batteries by combined LM, CT, EDS, WDS and SIMS using helium-ion microscopy (Carl Zeiss Orion).
U. Golla-Schindler, F. Khanom, D. Zeibig, A. Casares, P. Gnauck, T. Bernthaler and G. Schneider
- In situ SEM study of lithium metal batteries.
M. Golozar, H. Demers, R. Gauvin and K. Zaghib
- Matlab-based algorithm associated with the CAMECA SX100 electron microprobe for fast and precise (re-)exploration and re-measurement of documented samples.
J. Haifler and R. Škoda
- Characterisation of super duplex stainless steel by optimisation of EBSD parameters.
M. Haukali, I. Westermann, M. Karlsen, Y. Yu, R. de Kloe and J. Hjelen
- Check of the performance of EDS systems attached to the SEM with the test material EDS-TM001/002 and evaluation software EDS spectrometer test - Application, experiences and updates.
V.-D. Hodoroaba and M. Procop
- High-quality experimental data in electron microscopy and microbeam analysis – Possible joint exercises.
V.-D. Hodoroaba
- Measurement of elemental composition of FeNi and SiGe alloy thin films by EPMA and μ -XRF.
V.-D. Hodoroaba, R. Terborg, S. Boehm and K.J. Kim
- Ferric ion determination by EPMA: Applications in Earth Sciences.
H.E. Höfer and G.P. Brey

- Molybdenum homogenisation in γ -U(Mo) alloy atomized particles.
X. Iltis, V. Klosek, R. Belin, K. Hanifi, E. Suard, J. Drnec and H. Palancher
- Using ECCI and EBSD to study the microstructure of hardmetals.
B.M. Jablon, K. Mingard, G. Naresh-Kumar and C. Trager-Cowan
- SEM/EBSD studies on recrystallisation processes in biodegradable low-alloyed zinc after cold plastic deformation
A. Jarzębska, M. Bieda-Niemiec, M. Strąg, D. Wojtas, R. Chulist, M. Faryna, W. Pachla and K. Sztwiertnia
- Towards magnetic micro-actuation: Preparation of Ni-Mn-Ga micropillars using Xe plasma source FIB-SEM.
L. Klimša, L. Straka, D. Musiienko, J. Balogová and J. Kopeček
- Bright combination of compositional and topographical information in a single image.
J. Kolář, J. Dluhoš and R. Váňa
- Analysis of the polycrystalline microstructure of Al-3at%Mg-0.2at%Sc alloy by 3D-EBSD.
J. Kopeček, L. Klimša, J. Staněk, F. Seitzl, V. Beneš, D. Westhoff, L. Petrich, C.E. Krill III and V. Schmidt
- Relation between growth of selected phases in Ni/Al/Ni system during diffusion soldering process.
I. Kwiecień, P. Bobrowski, A. Wierzbicka-Miernik and J. Wojewoda-Budka
- Strain analysis and twin domains in Phalaborwa baddeleyite characterised by EBSD, RTKD and TEM.
M.E. Lee, W.E. Goosen and J.H. O'Connell
- Imaging and analytical improvements with a recent FEG microprobe.
J.L. Longuet
- Microstructural characterisation of joints between Ti6Al4V elements obtained with the use of Ti/Al multilayers through resistive heating.
L. Maj, J. Morgiel, K. Mars and G. Cios
- Characterisation of precipitates in a 12 % Cr tempered martensite ferritic steel.
G. Marx, W.E. Goosen and J.E. Westraadt
- Characterisation of carbide-reinforced composite surface layers on a ductile cast iron.
K. Matus and D. Janicki
- New trends in EPMA - Overview.
S. Matveev
- Silicon drift detector incorporated into a wavelength-dispersive X-ray spectrometer (SD-WDS) – Allowing bremsstrahlung determination by theoretical calculation.
K. Moran and R. Wuhrer
- Characterising nanowire arrays by computer vision based on SEM images.
A.B. Mosberg, D. Ren, S. Myklebost, H. Weman, B.-O. Fimland and A. van Helvoort
- Analysis of oxide scales on oxidised AISI 441 ferritic stainless steel catalyst support by scanning electron microscopy.
P. Navarro Vicente, A. Nuñez Galindo, J.F. Almagro Bello and J.A. Odriozola
- Measurements of the quantitative analytical depth resolution at evaporated metal layers with the FEG-EPMA JEOL JXA-8530F.
J. Nissen and D. Berger

- Evolution of crystalline orientations in the production of ferritic stainless steel.
A. Núñez Galindo, I. Collado, D.L. Sales and J.F. Almagro Bello
- Experimental determination of mass attenuation coefficients for O-K α in actinides.
P. Pöml, X. Llovet and J. Himbert
- Two-dimensional variable line space gratings: Production and application.
J. Probst, H. Löchel, C. Braig and A. Erko
- New strategies in EPMA to analyse fine structures using Monte Carlo based reconstruction techniques.
S. Richter, P.T. Pinard and M. Torrilhon
- Comparison of 3D-FIB tomography volume reconstruction with various in-column detectors on an epoxy-infiltrated nanoporous metal test sample.
M. Ritter
- Analysis of elemental composition and porosity of mesoporous iridium-titanium mixed oxide thin films for energy applications by SEM/EDS.
R. Sachse, A. Hertwig, R. Kraehnert and V.-D. Hodoroaba
- XRD and EPMA characterisation of serpentinite from Tuscany (Italy).
A.P. Santo, E. Pecchioni and C.A. Garzonio
- EBSD investigations applied to characterise the crystallographic relationships at the interfaces of biocomposite mollusc shells.
M. Strag, M. Bieda-Niemiec, K. Berent, K. Nalepka, A. Jarzębska, A.G. Checa and K. Sztwiertnia
- Investigation of the structure of multiaxial forged steel by electron backscattered diffraction.
P.J. Szabó
- Comparison of the quantification of borides with WDS and EDS.
R. Terborg and S. Richter
- Determination of the K β /K α line ratios of pure elements.
R. Terborg, F. Reinhardt, F. Nitsche and T. Wolff
- Quantification of energy-dispersive X-ray spectra acquired with large solid angle detectors.
R. Terborg and M. Falke
- A combined mapping and time-dependent intensity correction approach to improve EPMA analysis of beam-sensitive materials.
A. von der Handt and J.J. Donovan
- Calibration device for accurate current measurement on a CAMECA SX100 EPMA.
B. Vos and A. Leenaers
- TEM characterisation and Raman spectroscopy of vitrinite.
S. Vranjes-Wessely, D. Misch, D. Kiener, G. Rantitsch, D. Gross and R.F. Sachsenhofer
- Application of automated mineralogy for evaluation of metylal recovery potential of incineration bottom ash from municipal solid waste.
J. Výravský and M. Šyc
- Automated orientation imaging and phase mapping in the TEM: Detection limits for reliable martensite identification in steels.
J. Werner and T.E. Weirich
- TEM studies on Fe-Co-B soft magnetic melt spun ribbons.
A. Wojcik, W. Maziarz, M. Kowalczyk, J. Ferenc, P. Zackiewicz and A. Kolano-Burian

- Combined XRD and TEM studies of the antibacterial coatings deposited on titanium.
D. Wojtas, K. Wierzbowski, M. Bieda-Niemiec, R. Chulist, A. Jarzębska, Ł. Maj, A. Brzoza, K. Sztwiertnia, H. Çimenoglu and F. Muhaffel
- Electron probe microanalysis of non-safety tested and safety tested irradiated TRISO AGR-2 nuclear fuel.
K.E. Wright and I. Van Rooyen
- In-situ EBSD investigation of thermal stability of a steel nanocrystallised by surface mechanical attrition treatment.
Y. Wu, Z. Sun, F. Brisset, T. Baudin, A.L. Helbert and D. Retrain
- Probing the native structure and chemistry of Li-metal batteries by cryo-electron microscopy.
M.J. Zachman, Z. Tu, M. Chi, L.A. Archer and L.F. Kourkoutis
- Internal texture, metamict state and deformations of zircon by data from microbeam methods: EPMA, Raman, EBSD.
D.A. Zamyatin, D.V. Semenova, V.G. Vladimirov and S.L. Votyakov



Young Scientists' Session

- Local tetragonality of martensite investigated by EBSD.
Grzegorz Cios, A. Winkelmann, G. Nolze, T. Tokarski and P. Bała
- Austenite-ferrite transformation of AISI 430 ferritic stainless steel during its manufacturing.
Irene Collado Garcia, A. Núñez Galindo, A. Ruiz Flores, J.F. Almagro Bello and J. Botana
- Identification of crystal structures and elemental composition of reactive air-brazed $\text{Ba}_{0.5}\text{Sr}_{0.5}\text{Co}_{0.8}\text{Fe}_{0.2}\text{O}_{3-\Delta}$ -Ag-14CuO joints by EBSD, EPMA and analytical TEM.
Lisa C. Ehle, S. Herzog, S. Richter, A. Kaletsch, C. Broeckmann and J. Mayer
- In situ SEM study of lithium metal batteries.
Maryam Golozar, H. Demers, R. Gauvin and K. Zaghbi
- Analysis of oxide scales on oxidised AISI 441 ferritic stainless steel catalyst support by scanning electron microscopy.
Pablo Navarro Vicente, A. Núñez Galindo, J.F. Almagro Bello and J.A. Odriozola
- Automated orientation imaging and phase mapping in the TEM: Detection limits for reliable martensite identification in steels.
Jonas Werner and T.E. Weirich

MAS-USA Student Award Winner presentation

- Probing the native structure and chemistry of Li-metal batteries by cryo-electron microscopy.
M.J. Zachman, Z. Tu, M. Chi, L.A. Archer and L.F. Kourkoutis

AMAS Student Award Winner presentation

- From experiments to reaction mechanisms: Application of microbeam techniques to understand albitisation reactions.
G. Duan, J. Brugger, B. Etschmann, R. Ram, S. Micklethwaite and A. Friedrich