



List of accepted poster contribution abstracts

- A new empirical model of the 2-dimensional ionisation probability $\phi(\rho_r, \rho_z)$ described by an analytical function.
Gaurav Achuda, M. Torrilhon, J. Bünger, P.T. Pinard and S. Richter
- Investigating the soft X-ray emission spectra of nickel silicides in EPMA.
Gaurav Achuda, H. Löchel, J. Probst, A. Erko, C. Seifert, T. Krist and S. Richter
- Using a deterministic model, the spherical harmonic (P_N) method, for thin film analysis in EPMA.
Gaurav Achuda, T. Claus, M. Torrilhon and S. Richter
- Microstructure of high-entropy alloy from Ni-Co-Fe-Mn-Ti system produced with elementary powders by selective laser melting.
Radosław Bardo, R. Dziurka, K. Fryzowicz and P. Bała
- Habit plane determination based on 2D-EBSD data including use of orientation relationships.
Hanka Becker, R. Hielscher and A. Leinewehr
- EBSD/TKD investigation of lamellar Zn/LiZn₄ microstructure.
Wiktor Bednarczyk and M. Lewandowska
- Large-volume three-dimensional tomography of a solid oxide fuel cell electrode by Xe plasma FIB (PFIB).
Katarzyna Berent, V. Bertschová, K. Novotný, S. Kakizawa, T.A. Prokop, A. Takasaki and G. Brus
- Microstructural investigation of influence of alloying and plastic deformation on mechanical properties of biodegradable low-alloyed zinc for orthopaedic applications.
Magdalena Bieda-Niemiec, A. Jarzębska, M. Wróbel, Ł. Maj, Ł. Rogal and J. Skiba
- Interface bonding of co-laminated and annealed sheets - A short review of recrystallization and grain growth mechanisms.
François Brisset, H. Azzeddine, D. Bradai and T. Baudin
- Fast and reliable gunshot residue examinations with SEM-EDS – Experiences of one forensic laboratory.
Zuzanna Brożek-Mucha and I. Klag

- Advanced diffraction mapping of nitride semiconductor thin films and nanostructures.
Jochen Bruckbauer, G. Ferenczi, R. McDermott, K. Hiller, B. Hourahine, A. Winkelmann and C. Trager-Cowan
- High throughput nanoparticle analysis using transmission Kikuchi diffraction.
Grzegorz Cios, T. Tokarski, P. Bała and V.-D. Hodoroaba
- High-resolution reconstruction using a flexible material parametrisation in EPMA.
Tammy Claus, S. Richter and M. Torrilhon
- Surface and microstructural properties related to haze defect of bright-annealed AISI 430 ferritic stainless steel.
Irene Collado-Garcia, A. Nuñez Galindo, A. Ruiz Flores and J.F. Almagro Bello
- Thickness determination of thermoelectric thin films.
Jan Dellith, R. Terborg, A. Dellith and P. Lorenz
- Quantitative microstructural analysis of nuclear fuels by correlative EPMA/EBSD/BSE electron microscopy.
R. Delville, Jelle Van Eyken and N. Vanhove
- Investigation of thin Si_xNb_y -films with energy-dispersive X-ray microanalysis, X-ray reflectometry, and Rutherford backscattering spectrometry.
Marco Diegel, J. Dellith, A. Dellith, K. Peiselt and R. Terborg
- Probabilistic machine-learning for high spatial resolution energy-dispersive X-ray spectrometry (EDS) maps: Applications in classifying intra-phase variation of reef-style chromite seam deposits.
Matthew Divers, J.F. Einsle, I. Buisman, B. O'Driscoll and F. Perrone
- Automated mineralogy as a part of complex analytical workflows in petrological research.
Marek Dosbaba
- Light-injection in the SPARC Spectral cathodoluminescence system for multimodal imaging.
Herman Duim, N. Bonnet, S. Hari and T. Coenen
- The importance of detector efficiency for quantification models accuracy and a precondition for improvement.
Frank Eggert, J. Rafaelsen and P.P. Camus
- Electron transparent specimens in SEM: T-SEM EDS and TKD combined.
Meiken Falke, P. Soni and L. Palasse

- SEM imaging characterisation in research of additively manufactured tool steels.
Krzysztof Fryzowicz, R. Dziurka, R. Bardo and P. Bała
- Low energy EDS applied to energy related material including Li quantification.
Ute Golla-Schindler, C. Weisenberger, T. Bernthaler, V. Knoblauch and G. Schneider
- Pattern matching of sub-grains in partly recrystallised Al in a conventional WSEM.
J. Hjelen and Håkon W. Ånes
- Study of curtaining effect reduction methods in Inconel 718.
Franco Jaime, A. Nicolaÿ, N. Bozzolo and M. Bernacki
- Creep-damage assessment of low alloy heat resistant steels through electron backscatter diffraction (EBSD) method.
Magdalena Jakubowska, A. Wrobel, A. Sypień and M. Lucki
- Why are EBSD investigations so important in the evaluation of biodegradation behaviour of zinc alloys?
Anna Jarzębska, M. Wróbel, M. Bugajska, Ł. Maj, D. Wojtas, Ł. Rogal, J. Skiba and M. Bieda-Niemiec
- Free open source HUSSARIX software: Its planned features and current capabilities.
Petras Jokubauskas
- A technology-led approach for combined WDS-EDS analysis on the SEM.
Rosie Jones, P.T. Pinard and S. Burgess
- Irradiation passport for art.
Ineke Joosten, K. Keune, M. Stols-Witlox and M. Tromp
- Structural changes in wurtzite (Ga,Mn)As nanowire shell during in-situ annealing in a transmission electron microscope.
Anna Kaleta, S. Kret, S. Kryvyi, A. Kumar, X. Chen, M. Xu, M. Hauwiller, A. Penn, J.M. LeBeau, B. Kurowska, M. Bilska, K. Gas, M. Sawicki and J. Sadowski
- The effect of ion irradiation on the microstructure of high entropy alloys (HEA) for nuclear applications.
Damian Kalita, W. Chromiński, K. Mulewska, S.T. Noru, Y. Zhang, W.J. Weber, I. Józwick and Ł. Kurpaska
- Microstructural aspects of the substrate state and conversion coating formation on the biodegradability rate of magnesium alloys.
Michał M. Karaś, S. Boczekal, Ł. Maj and M. Bieda-Niemiec

- Correlative AFM-in-SEM microscopy in materials science.
Pavel Komarov, V. Hegrova, R. Dao and J. Neuman
- Microstructure in rotary swagged copper.
Jaromir Kopeček , T. Kmječ, P. Veřtát, D. Šimek, U. Ahmed, J. Duchoň, M. Klementová, L. Bajtošová, L. Kunčická and R. Kocich
- The current development status of electron beam induced soft X-ray emission spectrometer.
Shogo Koshiya, T. Murano, M. Takakura, Y. Kato, H. Takahashi, S. Matveev, Y. Uetake, M. Koike, K. Kondo, T. Hatano and M. Terauchi
- Nanoindentation induced incipient plasticity in crystalline BCC Fe: Direct observations and atomistic computational insights.
Anna Kosińska, K. Mulewska, F.J. Dominguez-Gutierrez and I. Jóźwik
- X-ray absorption effects in multi-detector XEDS systems.
Tobias Krekeler, S. Selve, D. Berger and M. Ritter
- Relationship between the microstructure of MOX fuel pellets and their dissolution behaviour.
Florent Lebreton, G. Jouan and S. Lalleman
- Challenges in EBSD based microstructure analysis of Sn-rich intermetallics.
Andreas Leineweber and S. Martin (presented by Hanna Becker)
- Orientation determination of structurally complex alloy phases including quasicrystals in Al-Mn-based alloys.
Blaž Leskovar, G. Cios, P. Bała and B. Markoli
- Microstructure modification of Al-Mg alloys with high content of Mg containing Sc and Er.
Kamila Limanówka, S. Boczkal and A. Góral
- Enhanced performance and usability of analytical 4D-STEM applications.
P. Mareš, Marek Dosbaba and D. Němeček
- TEM characterisation of precipitates in an aluminium alloy after the Zr, Cu and Ni laser alloying process.
Krzysztof Matus and W. Pakieła
- Following recrystallisation in metallic materials through SEM combined with sequential heat treatment experiments.
Alexis Nicolaÿ, S Ouhiba, B. Murgas, C. Collin and N. Bozzolo

- Measurements of the quantitative analytical depth resolution at evaporated Au-layers with the FEG-EPMA JEOL JXA-8530F.
Jörg Nissen and D. Berger
- Electron backscatter diffraction (EBSD) analysis of AISI 430 during hot rolling after HTTT simulation.
Andres Núñez Galindo, I. Collado Garcia and J.F. Almagro Bello
- Advancing Life Science SEM-EDS analysis with an annular silicon drift detector.
Max Patzschke and A. Menzies
- Recent innovation in scanning electron microscope (SEM) in-situ extreme mechanics at the micro- and nanoscale.
Renato Pero, R. Widmer and N. Randall
- WDSX-300: Ultra-light element spectrometer.
Jürgen Probst, H. Löchel, C. Braig, G. Achuda, S. Richter, A. Kempe, C. Seifert, T. Krist and A. Erko[†]
- The use of FIB as a new technique for characterising surface defects in stainless steels.
Andrés Ruiz Flores, A. Nuñez Galindo, I. Collado García, A. Vargas Velasco and J.F. Almagro Bello
- Optimisation of projection centre based on EBSD Kikuchi band intensity profiles.
Łukasz Rychłowski, T. Tokarski, G. Cios, A. Winkelmann, G. Nolze and P. Bała
- Non-destructive, non-invasive SEM/EDS of the Winchcombe meteorite using an annular SDD.
Tobias Salge, A.J. King and S.S. Russell
- Competing interactions and magnetisation dynamics in doped rare-earth manganite nanostructural materials.
Wiqar Hussain Shah, A. Ali and L. Ali
- Observation of defects in GaN/InGaN multi-quantum wells grown on semi-polar substrate using cathodoluminescence in transmission electron microscopy.
M.-H. Sheen, S.-D. Kim, Y. Lee, J. Jang, O. Nam and Young-Woon Kim
- Using MTEX to quantify crystallographical orientations of planar deformation features in olivine using combined optical and EBSD data.
Bjørn E. Sørensen, E.J. Ryan, R.B. Larsen and S. Lode
- A new compact electron detector with REELS, EPES and elastic peak imaging capabilities for SEM.
Philippe Staib

- Comparison of theoretical and experimental X-ray production efficiencies for copper, zirconium, and tungsten.
Ralf Terborg and M. Procop
- Quantitative analysis of Ni-Si samples using energy-dispersive and wavelength-dispersive EPMA.
Ralf Terborg and S. Richter
- Thin film analysis with energy-dispersive EPMA.
Ralf Terborg, K.J. Kim and V.-D. Hodoroaba
- Old Imari ware development process revealed by EPMA.
Rie Wakimoto, S. Kakubuchi and S. Matveev
- Effect of grain size on deformation behaviour of pure magnesium at room temperature.
Michał Wałag, P. Noga, T. Tokarski, M. Niewczas and A. Kula
- Experimental analysis of plastic deformation in single-crystalline and ultrafine-grained Zn micropillars.
Maria Wątroba, W. Bednarczyk, C. Tian, J. Michler and J. Schwiedrzik
- Focussed ion beam time-of-flight secondary ion mass spectrometry (FIB-ToF-SIMS) taken to the next level with fluorine gas co-injection.
Krzysztof Wieczerzak and J. Michler
- 3D visualisation and analysis of ODS steels with AVIZO software.
Magdalena Wilczopolska, M. Frelek-Kozak, I. Józwik and D. Kalita
- Mapping of the local lattice parameter ratios by a direct lattice metric reconstruction.
Karolina Wójciak, G. Cios, T. Tokarski and G. Nolze
- Electron probe microanalysis of UO₂ for stoichiometry determination.
Karen E. Wright and C. Adkins
- The effect of annealing temperature on the microstructure and mechanical properties of zinc alloys – Quasi-in-situ and in-situ SEM/EBSD investigation.
Magdalena Wróbel, A. Jarzębska, Ł. Maj, P. Petrzak, M. Kulczyk and M. Bieda-Niemiec
- Characterisation of ternary intermetallic alloys for catalytic applications.
Amelia Zięba, K. Stan-Głowińska, Ł. Rogal, D. Duraczyńska and L. Lityńska-Dobrzyńska
- Investigation of the structure evolution in CoCr alloy during deformation.
A. Ziębowicz, Mirosława Pawlyta and B. Sobel



Early Career Scientists' Session

- EBSD/TKD investigation of lamellar Zn/LiZn₄ microstructure.
Wiktor Bednarczyk and M. Lewan
- Probabilistic machine-learning for high spatial resolution energy-dispersive X-ray spectrometry (EDS) maps: Applications in classifying intra-phase variation of reef-style chromite seam deposits.
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