

### List of accepted poster contributions

- Determination of light elements in steel and minerals using WDS on SEM.  
M. Abratis, J. Silbermann and R. Terborg
- Focussed interest group on microanalytical standards (FIGMAS): assessing the quality, availability and need for standards in the microanalytical community.  
J.M. Allaz, O.K. Neill and A. von der Handt
- Characterisation of iron oxide deposits on nickel-based alloy tubes.  
K. Ardon, F. Gaslain, C. Duhamel, G. Lefèvre, S. Delaunay and C. Goujon
- Methodology of expertise of uranium base powder to improve the manufacturing process.  
E. Brackx, S. Pages, O. Dugne, B. Boichard, E. Excoffier, M. Cabie, R. Podor and S. Picart
- Quantification of hypo eutectic B-C-Fe-O under severe accident conditions in nuclear material by EPMA.  
E. Brackx, H. Hikeuchi, P. Piluso, R. Domenger, C. David and E. Excoffier
- Application of electron probe microanalysis to the characterisation of irradiated metallic nuclear fuel containing minor actinides and rare earth elements.  
S. Brémier, P. Pöml, L. Capriotti, J. Himbert, V.V. Rondinella, H. Ohta and T. Ogata
- Large area EBSD scans with distortion correction.  
F. Brisset, T. Breivik, B. Eske Sørensen, Y. Yu, J.-C. Menard and J. Hjelen
- Modelling of X-ray emission in electron probe microanalysis based on deterministic transport equations.  
J. Bünger, S. Richter and M. Torrilhon
- A tool for predicting detection limits and errors in EPMA.  
B. Buse and S.L. Kearns
- Phase analysis: pitfalls and potential solutions to complex samples.  
B. Buse and S.L. Kearns
- Combined FIB-nanotomography and 3D-EDS of solid-oxide electrolysis cells.  
M. Cantoni, A. Nakajo and G. Pavia
- Quantitative EPMA compositional mapping of NWA 2995: characterisation and petrologic interpretation of mafic clasts.  
P.K. Carpenter, T. Hahn, R. Korotev, R. Zeigler and B. Jolliff
- Rh<sub>2</sub>MnZ (Z = Al, Bi) thin films for spintronic devices.  
S. Cichoň, J. Remiášová, J. Vlček and M. Rameš
- Multiscale microstructural analysis of dual phase steels.  
D. Cimen and K. Davut
- The SPARC cathodoluminescence system: a platform for nanoscale photonics, geology, and materials science.  
T. Coenen
- Five dimensional X-ray imaging with the Color X-ray Camera.  
J.M. Davis, J. Schmidt, M. Huth, R. Hartmann, H. Soltau and L. Strüder

- Uncertainties in quantitative electron probe microanalysis due to inaccurate mass attenuation coefficients.  
J. Dellith, R. Terborg and A. Scheffel
- Determination of soft X-ray emission spectrometry parameters using experimental data for quantitative microanalysis.  
H. Demers, C.M. MacRae, N.C. Wilson, P. Hovington, V. Timoshevskii, R. Gauvin and K. Zaghib
- Open source software for quantitative X-ray microanalysis: OPENMICROANALYSIS.  
H. Demers, P.T. Pinard, S. Richter and R. Gauvin
- Determination of crystallographic properties of Cu-Ga sputter target materials for Cu(In,Ga)Se<sub>2</sub> thin film solar cells by X-ray Kossel diffraction in the SEM.  
T. Dmali, E. Langer and S. Däbritz
- Benefits from Bremsstrahlung distribution evaluation to get unknown information from specimen in SEM and TEM.  
F. Eggert and P.P. Camus
- Electron microscopic characterisation of thermally modified surface layers generated by electro-discharge machining and grind hardening.  
L. Ehle, S. Schneider, B. Kolkwitz, A. Schwedt, S. Richter and J. Mayer
- The potential for mineralogical mapping through machine learning.  
J.F. Einsle, R.J. Harrison, B. Martineau, I. Buisman, A.M. Piotrowski, S.M. Collins, Z. Saghi, D. Johnstone, A. Eggerman and P.A. Midgley
- Experimental and thermodynamic analysis of differences in phase transformation of  $\beta$ -(Ni,Pt)Al coating during isothermal and cyclic oxidation.  
V.A. Esin, V. Maurel and F. Gaslain
- *In-situ* observation of electron-irradiation-induced agglomeration of CdSe thin films.  
Z.E. Fabrim, J. Kjelstrup-Hansen, E. Olson and P.F.P. Fichtner
- Element distribution at the interface of soft and hard materials.  
M. Falke, A. Kaepfel, T. Salge, B. Yu and R. Terborg
- On the role of prior austenite carbon inhomogeneity on martensite transformation in a low alloy dual phase steel.  
H. Farivar, S. Richter and U. Prahl
- Seven decades of trans-Atlantic cooperation in the development of EPMA.  
J.H. Fournelle
- Pushing the detection limit of light elements in steel using EPMA soft X-ray emission spectrometer.  
M. Gauvin, C. Roegiers and A. De Vyt
- A universal equation for computing beam broadening.  
R. Gauvin and S. Rudinsky
- Characterisation of nanomaterials at high spatial resolution in the electron microscope, what is next?  
R. Gauvin, N. Brodusch and H. Demers
- Shared backgrounds in wavelength-dispersive electron probe microanalysis.  
K. Goemann, J.J. Donovan, S.T. Freig and J. Thompson
- Atom probe tomography of reduced phases in Apollo 16 regolith sample 61501,22.  
P. Gopon, M. Spicuzza, T.F. Kelly, D.A. Reinhard, T.J. Prosa, D.J. Larson and J.H. Fournelle

- Atomic scale study on growth and heteroepitaxy of ZnO monolayer on graphene.  
H.-K. Hong, J. Lee, N.Y. Kim, S. Son, J.H. Kim, R. Erni and Z. Lee
- Iron oxidation state of hydrous basaltic glass: time dependent intensity flank method.  
E.C. Hughes, B. Buse and S.L. Kearns
- Low EPMA totals of hydrous basaltic glass: effect of sub-surface charging.  
E.C. Hughes, B. Buse and S.L. Kearns
- Development of a compact FE-SEM and X-ray microscope with a carbon nanotube electron source.  
M. Irita, S. Yamazaki, H. Nakahara and Y. Saito
- Electron microprobe measurements of element migration across domain boundaries in dimethyl ether conversion catalysts.  
A. Katerinopoulou, B. Davidsen, B. Voss and J. Sehested
- Direct observation of *a-b* twin laminate in monoclinic five-layered martensite of Ni-Mn-Ga magnetic shape memory single crystal.  
L. Klimša, J. Kopeček and O. Heczko
- EBSD observation of monoclinic variants in Ni<sub>50</sub>Mn<sub>28</sub>Ga<sub>22</sub> ferromagnetic shape memory alloy.  
J. Kopeček, L. Klimša, L. Straka, J. Drahokoupil and O. Heczko
- Microscopic stress characterisation of functional iron base alloys by white X-ray microbeam diffraction.  
E.P. Kwon, S. Sato, S. Fujieda, K. Shinoda, K. Kajiwara, M. Sato and S. Suzuki
- Influence of simulation parameters on the speed and accuracy of Monte Carlo calculations using PENEPMA.  
X. Llovet and F. Salvat
- Monte Carlo simulation of X-ray spectra from radioactive samples in electron beam instruments.  
X. Llovet, P. Pöml, T. Wiss and F. Salvat
- Cathodoluminescence and soft X-ray analysis at LN<sub>2</sub> temperatures.  
C.M. MacRae, N.C. Wilson and A. Torpy
- Use of advanced microscopical techniques for the characterisation of inorganic polymers synthesized from Fe-rich metallurgical slags.  
A. Malfliet, P. L'hoëst, T. Van der Donck, S. Onisei and Y. Pontikes
- Using a desktop SEM for gunshot residue analysis, X-ray mapping and cathodoluminescence.  
K. Mason and R. Wuhrer
- Cathodoluminescence (CL) of rocks and minerals using different JEOL CL systems on the JXA-8530F electron microprobe.  
S. Matveev, M.J.C. Bouten, G.M. Pennock and M.R. Drury
- Improved deposition of nanoparticles by electrospray for analysis with SEM/TEM and EDS.  
J. Mielke, P. Dohányosová, P. Müller, S. López-Vidal and V.-D. Hodoroaba
- The role of pores in the frame of fractal nature analysis of sintered ceramics materials  
V.V. Mitic, Lj. Kocic, V. Paunovic and M. Miljkovic
- Automatic processing of element maps by automated colour map filter and high-speed cluster analyses for EPMA.  
N. Mori, N. Kato and M. Morita
- Electron probe microanalysis of Sn-rich silicate glass at low accelerating voltage.  
A. Moy, J.H. Fournelle, A. Cavosie and D. Farthing

- SEM-EDS analysis of the niello inlays of a late Roman silver augur staff (lituus) found in Pannonia province (Hungary).  
V. Mozgai, B. Topa, T.G. Weiszbürg, B. Bajnóczi, I. Fórizs, Zs. Mráv and M. Tóth
- Study of plastic deformation mechanisms in a Fe-27%Co alloy.  
B. Nabi, A.L. Helbert, F. Brisset, T. Waeckerlé, H. Azzeddine, D. Bradai, V. Aubin and T. Baudin
- In-situ TEM study on structural change and light emission of a multiwall carbon nanotube during Joule heating.  
K. Nishikawa, K. Asaka, H. Nakahara and Y. Saito
- Measurements of the quantitative lateral analytical resolution at evaporated silver layers with the FEG-EPMA JEOL JXA-8530F.  
J. Nissen and D. Berger
- Asymmetry in cold heading by upsetting.  
A. Núñez Galindo, R. Sánchez, P. Acosta and J.F. Almagro Bello
- Functional properties in the Fe-Mn-Ga system.  
K. Onderková, M. Veis, M. Rameš, J. Kopeček and O. Heczko
- Boron characterisation in intermetallic bulk or thin film alloys using scanning electron microscopy and electron probe microanalysis.  
S. Pairis
- Large area orientation mapping on nanoscale materials using SEM.  
L. Palasse and D. Goran
- Electron probe microanalysis of carbon containing steels at a high spatial resolution.  
Philippe T. Pinard and S. Richter
- Numerical optimisation of analytical conditions for quantitative X-ray analysis.  
P.T. Pinard and S. Richter
- Combined EDs and  $\mu$ -XRF analysis of molybdenum in alloy steels.  
M. Procop
- Surface and in-depth analysis of functionalisation of TiO<sub>2</sub> nanoparticles for self-assembly in multiple layers.  
S. Rades, E. Ortel, T. Wirth, S. García, E. Gómez, M. Blanco, G. Alberto, G. Martra and V.-D. Hodoroaba
- Time-dependent investigation of morphology, elemental and chemical composition of CH<sub>3</sub>NH<sub>3</sub>PbI<sub>3</sub>/TiO<sub>2</sub> solar cell layered system.  
S. Rades, F. Oswald, S. Narbey, J. Radnik and V.-D. Hodoroaba
- Tracing fluorine at the surface and in the bulk of TiO<sub>2</sub> nanoplatelets by means of SEM-EDS, AES and ToF-SIMS.  
S. Rades, E. Ortel, T. Wirth, M. Holzweber, F. Pellegrino, G. Martra and V.-D. Hodoroaba
- Secondary fluorescence near phase boundaries – typical cases in steel.  
M.R. Rijnders and C.J.G. van Hoek
- Analytical TEM study of calcium phosphate nanoparticles in an intracellular environment.  
A.L. Rossi
- Simulations of electron-specimen interactions in electron microscopy using quantum trajectories.  
S. Rudinsky, A. Sanz and R. Gauvin

- Assessment of the preservation of impact residues in stardust analogue craters using advanced EDS imagery with an annular SDD.  
T. Salge, P.J. Wozniakiewicz, A.T. Kearsley, M. C. Price, M.J. Burchell and M.J. Cole
- Quantitative EPMA-WDS study of lanthanum-doped barium titanate ceramics.  
Z. Samardžija
- Monte Carlo study of the effect of surface roughness in EPMA measurements.  
D. Sánchez-Gonzalo, R. Graciani, X. Llovet and F. Salvat
- Using EDS for simultaneous estimation of thickness and composition of thin films.  
S. Schulze, S. Hahn, D. Lehmann, D. Dentel and D.R.T. Zahn
- Characterisation of niobium microsegregation and eutectic niobium carbide along the process chain in a microalloyed case hardening steel.  
M. Sharma, S. Richter, U. Prahla and W. Bleck
- Advanced 4D STEM imaging with the pnCCD (S)TEM camera.  
M. Simson, M. Huth, R. Ritz, J. Schmidt, H. Soltau, H. Yang, P. Nellist, R. Sagawa, Y. Kondo, H. Ryll and L. Strüder
- Calculation of catalyst crust thickness from full element LIBS maps.  
L. Sorbier, F. Trichard, S. Moncayo, C.-P. Lienemann and V. Motto-Ros
- High-resolution imaging, EBSD analysis and isotope mapping of experimentally produced micro- and nanocrystalline geological materials.  
L. Spruzeniece, S. Piazzolo, M.R. Kilburn and A. Putnis
- A convenient method for X-ray analysis in TEM that measures mass thickness and composition.  
P.J. Statham, J. Sagar, J. Holland, P.T. Pinard and S. Lozano-Perez
- SXES versus WDS in steel science: a Thai-German cooperation.  
P. Suwanpinij, B. Chayasombat, P.T. Pinard and S. Richter
- EDS/SEM characterisation of particulate matter from New Year's fireworks 2015 and 2016 in Munich (Germany).  
M. Sysoltseva, R. Winterhalter, C. Scheu and H. Fromme
- Parallel WDS detection using a newly developed grating JS2000 from a few hundred to 2300 eV with high energy resolution.  
H. Takahashi, T. Murano, M. Takakura, S. Asahina, Y. Konyuba, M. Terauchi and C. Dickinson
- Information observed in Ti-L $\alpha$ , $\beta$  and TiL $L$ , $\eta$  emission lines of Ti and its oxides.  
M. Terauchi, S. Koshiya and K. Kimoto
- Deconvolution of EDS steel spectra using low accelerator voltages and low energy X-ray lines.  
R. Terborg, T. Salge, P.T. Pinard and S. Richter
- Emergence and progression of abnormal grain growth in minimally strained nickel-200.  
O. Underwood, J. Madison, J. Michael, B. McKenzie, R. Martens, G. Thompson, S. Welsh and J. Evans
- Monte Carlo simulation of the effect of shape and thickness on SEM-EDS microanalysis of asbestos fibres and bundles: the case of anthophyllite, tremolite and actinolite.  
G. Valdré, D. Moro and G. Ulian
- Determination of major, minor, and trace elements in jadeite using scanning  $\mu$ -X-ray fluorescence.  
E.P. Vicenzi and T. Lam

- Dose-management strategies for TEM investigation of lithium-based materials for battery applications.  
F. Voisard, H. Demers, M. Trudeau, G.P. Demopoulos, R. Gauvin and K. Zaghib
- EPMA soft X-ray emission spectroscopy of nitrogen in silicate glasses and iron alloys.  
A. von der Handt, H. Takahashi, M. Takakura, C. Dalou, J. Mosenfelder and M.M. Hirschmann
- Discrete scale application in BaTiO<sub>3</sub>-ceramics structure characterisation.  
Z. Vosika, V.V. Mitic, Lj. Kocic, V. Paunovic, M. Miljkovic and G. Lazovic
- A multimodal micro-characterisation of trace elements in defective pearls by SEM-CL, EPMA,  $\mu$ -XRF and confocal Raman-in-SEM imaging.  
G. Wille, X. Bourrat, Y. Lefrais and U. Schmidt
- Using dual beam microscopy to investigate biological samples.  
A. Wolff, C. Bandara, S. Singh, I. Afara, T. Tesfamichel, K. Ostrikov and A. Oloyede
- Characterisation of porous TiO<sub>2</sub> nanoparticle films using on-axis TKD in SEM - a new nano-analytical tool for a large scale application.  
N. Wollschläger, L. Palasse, I. Häusler, E. Ortel, K. Dirscherl and V. D. Hodoroaba
- Synthesis and analysis of PuPO<sub>4</sub> - a potential analytical standard for EPMA actinide analysis.  
K. Wright, K. Popa and P. Pöml
- Extraction of optical constants of rare earth solids from reflection electron energy-loss spectroscopy data.  
H. Xu, A. Sulyok, M. Menyhard, L.H. Yang, J.M. Gong, K. Tökési and Z.J. Ding
- The latent order of core relaxation in high-angle grain boundary of GaN.  
S. Yoon, H. Yoo, S.-H. Kang, Y.-K. Kwon and M. Kim
- Effect of radiation damage in natural zircon on the Si-K $\beta$  X-ray emission line.  
D.A. Zamyatin, Yu.V. Shchapova, S.L. Votyakov and L. Nasdala
- Study of atomic structure and electron structure of uranium oxide and nitride.  
R.G. Zeng, Y.W. Zhao, X.D. Meng, T.W. Liu, Y. Hu, B. Bai, K.Z. Liu and H. Tan
- Spider silk observed by femtosecond second harmonic generation (SHG) microscopy.  
Y. Zhao, K.T.T. Hien, G. Mizutani and H.N. Rutt