Last update: 05 September 2024

POSTER SESSIONS

Poster Session #2
Thursday 12 September (11:10 – 15:00)

BIO / Biomaterials, life science and biotechnology, tissue imaging

BIO-P2-013 The evaluation of the permeation of a beauty ingredient derived from a biomolecule to stratum corneum
E. Nakata[1], M. Fujita[2], T. Ueno[2], D. Hayashi[1], S. Aoyagi[1]
[1] Seikei Univ. - Tokyo (JP)
[2] JSR Corporation - Mie (JP)

BIO-P2-019 Microbial induced corrosion of glass by Paenibacillus polymyxa SCE2 using ToF-SIMS
G. Parker[1], A. Plymale[2], J. Hager[2], J. Dhas[2], Z. Zhu[2], L. Hanley[1], X.Y. Yu[3]
[1] Univ. of Illinois Chicago - Chicago (US)
[2] Pacific Northwest National Laboratory - Richland (US)
[3] Oak Ridge National Laboratory - Oak Ridge (US)

BIO-P2-080 In situ matrix enhanced SIMS
A. Delcorte, T. Daphnis, B. Tomasetti, C. Nicolay, C. Poleunis, C. Dupont-Gillain
Univ. Catholique de Louvain - Louvain-la-Neuve (BE)

BIO-P2-098 Imaging analysis of plant samples with SIMS and electron microscopy
M. Takeuchi[1], A. Isogai[2]
[1] Institute of Engineering Innovation, Univ. Tokyo (JP)
[2] Graduate School of Agricultural and Life Sciences, Univ. Tokyo (JP)

BIO-P2-137 Plasmon-activated water successfully facilitates re-epithelialization process and wound healing through enhancing epidermal calcium expression: functional anatomical analysis by ToF-SIMS
H-M. Chang[1], T.Y. Renn[1], L.Y. Chen[2], F.D. Mai[1]
[1] Taipei Medical Univ. (TW, CN)
[2] Chung Shan Medical Univ. - Taichung (TW, CN)

BIO-P2-140 Utilizing time-of-flight secondary ion mass spectrometry (ToF-SIMS) to analyze localized surface plasmon resonance-activated water enhances the anti-viral and anti-oxidative activities of melatonin
F-D. Mai, Y.C. Liu, H.M. Chang
Taipei Medical Univ., Taiwan (CN)

BIO-P2-163 Insights into in vivo topical antibacterial permeation enabled using ToF-SIMS
M. Berrow, D. Scurr, F. De Cogan
Univ. Nottingham (UK)

BIO-P2-170 Building bioactive enzyme surfaces in vacuo with gas cluster ion beams: from lysozyme (14 kDa) to Glucose Oxidase (80 kDa)
M. Lakhdar, B. Tomasetti, C. Dupont-Gillain, A. Delcorte
UCLouvain (BE)

BIO-P2-178 Molecular 3D analysis of skin – distribution of topically applied compounds and endogenous components in stratum corneum by ToF-SIMS
P. Sjövall[1], S. Gregoire[2], W. Wargniez[2], L. Skedung[3], G.S. Luengo[2]
[1] RISE Research Institutes of Sweden - Borås (SE)
[2] L'Oréal Research and Innovation - Aulnay-Sous-Bois (FR)
[3] RISE Research Institutes of Sweden - Stockholm (SE)

BIO-P2-223 OrbiSIMS spatial lipidomics reveals metabolic changes in the developing brain during environmental stress
Y. Jin[1], C. Newell[1], I. Gilmore[2], A. Gould[1]
[1] The Francis Crick Institute - London (UK)
[2] National Physical Laboratory - London (UK)

BIO-P2-250 ToF-SIMS and XPS analysis of cholesterol-based nanoparticles for Huntington disease
G. Ceccone[1], M. Valenza[2], G. Tosi[3], J.T. Duskey[3], B. Ruozi[3], I. Ottonelli[3], G. Birolini[2,4], M. Vitali[2], D. Mehn[1], F.R.A.N.C. Fumagalli[1], E. Cattaneo[2,4]
[1] European Commission Joint Research Centre - Ispra (IT)
[2] Univ. degli studi Milano Department of Biosciences - Milan (IT)
[3] Univ. di Modena e Reggio Emilia, Department of Life Sciences, Modena, - Modena (IT)
[4] Istituto Nazionale di Genetica Moleculare, Milan (IT)

COMP / Analysis of complex samples, depth profiling and imaging

COMP-P2-044 ToF-SIMS in the research of green energy materials
L. Zhang, C. Dai
Shenyang National Lab. for Materials Science, Institute of Metal Research, Chinese Academy of Sciences - Shenyang (CN)

COMP-P2-071 Etching monitoring of advanced forksheet devices using AKONIS SIMS tool
A-S. Robbes[1], O. Dulac[1], K. Soulard[1], M. Adier[1], S. Choi[1], A. Merkulov[2], R. Tilmann[2], P.A.W. Van Der Heide[2], A. Franquet[2]
[1] CAMECA - Gennevilliers (FR)
[2] IMEC - Leuven (BE)

COMP-P2-081 Artifacts in multilayer depth profiling: origin and quantification of a double peak layer profile of Ag in ToF-SIMS depth profiles of an Ag/Ni multilayer by MRI model
J. Kovač[1], J. Ekar[1], S. Hofmann[2], J.Y. Wang[3]
[1] Jozef Stefan Institute - Ljubljana (SI)
[2] Max Planck Insititute for Intelligent Systems - Stuttgart (DE)
[3] Shantou Univ. - Shantou (CN)

COMP-P2-093 Impurity analysis of synthetic diamond for electronics and quantum physics
E. Loire, F. Jomard, M.A. Pinault-Thaury
Univ. Paris-Saclay, UVSQ, CNRS, GEMaC (FR)

COMP-P2-127 Development and surface analysis of 3D-printed titanium alloy composites for implantable medical devices
K. Varda[1], M. Knez Marevci[1], Ž. Knez[1], I. Drstvenšek[2], M. Finšgar[1]
[1] Univ. Maribor, Faculty of Chemistry and Chemical Engineering - Maribor (SI)
[2] Univ. Maribor, Faculty of Mechanical Engineering - Maribor (SI)

COMP-P2-135 Identifying the composition, origin and formation pathways of pollution inducing engine deposits with OrbiSIMS
J. Viggars[1], M. Edney[2], J. Barker[2], C. Snape[1], D. Scurr[1]
[1] Univ. Nottingham (UK)
[2] Innospec Inc., Chester (UK)

COMP-P2-145 SIMS study of a semiconductor opening switch diode
F. Jomard[1], M.R. Degnon[2], A. Gusev[3], M.A. Pinault-Thaury[1]
[1] Univ. Paris-Saclay, UVSQ, CNRS, GEMaC - Versailles (FR)
[2] Univ. Pau et des Pays de l'Adour, E2S UPPA, SIAME, Pau // ITOPP, Thégra - Pau (FR)
[3] Univ. Pau et des Pays de l'Adour, E2S UPPA, SIAME - Pau (FR)

COMP-P2-177 Insights into battery chemistry using ToF-SIMS, XPS, and AES
J. Schmidt, G. Fisher, S. Zaccarine
Physical Electronics - Chanhassen (US)

COMP-P2-181 ToF-SIMS physico-chemical characterization of hybrid organic photovoltaic cells
G. Ragusano, A. Auditore, N. Tuccitto, A. Licciardello, V. Spampinato
UNICT - Catania (IT)

COMP-P2-222 Preliminary results from a VAMAS Interlaboratory study to determine sensitivity and repeatability of drug dosed tissue homogenate reference materials
J-L. Vorng, I. Gilmore
National Physical Laboratory (UK)

COMP-P2-226 Depth profiling of thin metal layers by ToF-SIMS: what about the oxidation state
H. Montigaud[1], T. Cretin[2], J. Voronkoff[2]
[1] Laboratoire SVI CNRS-Saint Gobain-UMR125 - Aubervilliers (FR)
[2] Saint Gobain Research Paris - Aubervilliers (FR)

COMP-P2-258 SIMS method improvements for non-ideal sample types
J. Angle, N. Sievers, R. Reedy, M. Zimmer, E. Mcgarrah
Pacific Northwest National Laboratory - Richland (US)

FUN / Fundamental science

FUN-P2-032 Secondary Ion Mass Spectrometry imaging using home-built Ar-GCIB and ToF-SIMS
J. Baek, C.M. Choi
Korea Basic Science Institute - Cheongju (KR)

FUN-P2-076 Impact of boron doping on the sputtering dynamics of graphene: a molecular dynamics simulation study
S. Louerdi[1], Ş. Bektaş[2], K. Wyrwich[1], M. Kański[1], Z. Postawa[1]
[1] Jagiellonian Univ., Dpt. of Physics, Astronomy and the Applied Computer Science - Krakow (PL)
[2] Izmir Institute of Technology - Izmir (TR)

FUN-P2-117 Bond-specific ion-induced fragmentation of biomolecules at high ion energies
M. Dürr[1], P. Keller[1], P. Schneider[1], I. Schubert[2], M. Bender[3], C. Trautmann[4]
[1] Justuts Liebig Univ. Giessen - Giessen (DE)
[2] GSI Helmholtzzentrum für Schwerionenforschung - Darmstadt (DE)
[3] GSI Helmholtzzentrum für Schwerionenforschung & Hochschule RheinMain - Wiesbaden (DE)
[4] GSI Helmholtzzentrum für Schwerionenforschung & Technische Univ. Darmstadt - Darmstadt (DE)

FUN-P2-131 Fundamental aspects of nanoparticle SIMS operating in transmission mode
S. Verkhoturov[1], D. Verkhoturov[1], M. Kański[2], S. Louerdi[2], P. Hirchenhahn[1], Z. Postawa[2], M. Eller[3], S. Della Negra[4], E. Schweikert[1]
[1] Dpt. of Chemistry, Texas A&M Univ., College Station, Texas (US)
[2] Dpt.of Physics, Astronomy & the Applied Computer Science, Jagiellonian Univ., Kraków, (PL)
[3] Dpt. of Chemistry and Biochemistry, California State Univ. Northridge, CA (US)
[4]Laboratoire de Physique des 2 Infinis Irène Joliot-Curie, Orsay (FR)

FUN-P2-169 Effects of sample mechanical property on secondary ion yield of organicmolecules in Ar cluster SIMS
K. Moritani, T. Toku, N. Inui
Univ. Hyogo - Himeji (JP)

GEO / Geology, geo-and cosmochemistry, archaeology, environment

GEO-P2-220 A ToF-SIMS analytical study of a lithium ore from flotation test products
B. Almusned[1], B. Hart[1], T. Di Feo[2], C. Hill-Svehla[1], M. Biesinger[1]
[1] Surface Science Western, Univ. Western Ontario - London (CA)
[2] CanmetMINING, Natural Resources Canada - Ottawa (CA)

GEO-P2-268 Study of speleothems colours by XPS and ToF-SIMS
A. Felten[1], M. Dechamps[2], M. Vlieghe[3], L. Houssiau[2], J. Yans[3]
[1]SIAM platform, Univ. Namur (BE)
[2]Namur Institute of Structured Matter, Univ. Namur (BE)
[3]Institute of Life, Earth and Environment, Univ. Namur (BE)

HIRES / High mass/lateral resolution analysis

HIRES-P2-213 Cs+ Low temperature ion source: a high-brightness, low-energy-spread ion source for SIMS
B. Knuffman, A.V. Steele
zeroK NanoTech Corporation - Gaithersburg (US)

HIRES-P2-228 Light element mapping in metals with High-Resolution SIMS
K. Moore, K. Li, Y. Aboura, Y. Ding
Univ. Manchester (UK)

IND / Industrial applications (bio, organic, and inorganic)

IND-P2-005 Some examples of industrial applications using ToF-SIMS
L. Dupuy, J. Amalric
SERMA TECHNOLOGIES - Ecully (FR)

IND-P2-016 ToF-SIMS analysis to solve a case of molecular contamination in the cleanroom in a new lithography mask zone
V. Guyader[1], Y. Borde[1], C. Coquand[1], M. Cascarano[1], G. Beatini[1], J. Lavie[1], J.P. Barnes[2], F. Pierre[2], P. Hirchenhahn[2]
[1] STMicroelectronics - Crolles (FR)
[2] CEA-Leti - Grenoble (FR)

IND-P2-191 Leveraging SIMS for the understanding of critical mineral and precious metal ores for the mining and mineral processing industries
C. Hill-Svehla, B. Almusned, J. Hedberg, M. Biesinger
Surface Science Western, Univ. Western Ontario - London (CA)

IND-P2-194 Combination of SIMS and machine learning as a screening technique in an industrial context
B. Hagenhoff[1], D. Heller-Krippendorf[1], J. Tröger[1,2], E. Tallarek[1]
[1] Tascon GmbH - Münster (DE)
[2] Univ. Münster (DE)

IND-P2-214 Absolute quantification of alkali metals in diamond-type semiconductors
B. El Adib[1], D. Colombara[2], N. Valle[1]
[1] Luxembourg Institute of Science and Technology - Belvaux (LU)
[2] Univ. degli Studi di Genova, Genoa (IT)

IND-P2-274 Bonding and responding: ToF-SIMS in Sputter Target Manufacturing
R. Goacher
Materion Corporation – Buffalo, NY (US)

ML / Machine learning, data analysis

ML-P2-012 Quantitative and qualitative analyses of mass spectra of organic electroluminescent (OEL) mixed samples using supervised machine learning
Y. Kiuchi[1], M. Lagator[2], N. Lockyer[2], K. Ishikawa[3], M. Okamoto[3], Y. Murayama[4], D. Hayashi[1], S. Aoyagi[1]
[1] Seikei Univ. - Tokyo (JP)
[2] Univ. Manchester (UK)
[3] Kao Corp - Wakayama (JP)
[4] Canon Inc - Shizuoka (JP)

ML-P2-154 Tree based algorithm for ToF-SIMS spectra classification of plastic samples and feature extraction
J. Son, H.K. Shon, I.H. Lee, T.G. Lee
Korea Research Institute of Standards and Science - Daejeon (KR)

INST / Instrumentation & novel ion beams

INST-P2-102 Preliminary study on a pulsed electrospray droplet ion source for Secondary Ion Mass Spectrometry
S. Ninomiya[1], L.C. Chen[2], K. Hiraoka[1]
[1] Clean Energy Research Center, Univ. Yamanashi - Kofu (JP)
[2] Graduate Faculty of Interdisciplinary Research, Univ. Yamanashi - Kofu (JP)

INST-P2-149 Combining immunohistochemistry with fast mass spectrometry imaging
M. Shamraeva, E. Sandström, K.G. Garcia, R.M.A. Heeren, I.G.M. Anthony, S.Van Nuffel
Maastricht MultiModal Molecular Imaging Institute (M4i), Maastricht Univ. - Maastricht (NL)

CORR / Correlative analysis or multitechnique analysis

CORR-P2-058 Multimodal SIMS Imaging of PS-PMMA polymer blend and polymer fragmentation investigation of its homopolymers using light primary ion beam
V. Benito Olmos, A. Biesermeier, T. Wirtz, J.N. Audinot
Luxembourg Institute of Science and Technology - Esch-Sur-Alzette (LU)

CORR-P2-106 Metabolomic and proteomic analysis via OrbiSIMS and LC-MS/MS- reveals molecular alterations of ApoE4 gene carrying H4 neuroglioma cells
L. Lu[1], A. Kotowska[1], M. Fang[2], M. Alexander[1], D. Scurr[1], Z. Zhu[1]
[1] Univ. Nottingham (UK)
[2] Medicines and Healthcare products Regulatory Agency - South Mimms (UK)

CORR-P2-155 Exploring the SIMS matrix effect in high-entropy alloy thin-films
E. John, M. Weise, M. Sahre, J.M. Stockmann, T. Lange, J. Radnik, V.D. Hodoroaba
Bundesanstalt für Materialforschung und -prüfung - Berlin (DE)

CORR-P2-167 Characterization of the surface of cement clinker corn with different methods
F. Kakar, Y. Badran, C. Pritzel, M. Killian
Chemistry and Structure of Novel Materials, Univ. Siegen (DE)

CORR-P2-183 Enhancing lithium-ion battery material characterization with FIB-SEM Integrated ToF-SIMS and 3D ToF-SIMS tomography
T. Šamořil[1], J. Dluhoš[1], J. Honč[1], T. Sui[2], Y. Xuhui[3]
[1] TESCAN GROUP - Brno (CZ)
[2] School of Mechanical Engineering Sciences, Univ. Surrey - Guildford (UK)
[3] National Physical Laboratory - Teddington (UK)

CORR-P2-239 Correlative ToF-SIMS & XPS for the analysis of dopants for organic light-emitting diodes layers
J-P. Barnes, C. Guyot, O. Renault, D. Mariolle, T. Maindron
Univ. Grenoble Alpes, CEA, Leti, Grenoble (FR)

CORR-P2-249 Detection of Lithium traces in microelectronics materials: a preliminary study
V. Thoréton, D. Truffier-Boutry, J.P. Barnes
Univ. Grenoble Alpes, CEA, Leti - Grenoble (FR)

CORR-P2-270 Deciphering three-dimensional and atomically-dispersed microstructures of ion channels in deep-sea snails
Z. Ying[1], N. Wang[2], L.T. Weng[1]
[1] The Hong Kong Univ. of Science and Technology - Guangzhou (CN)
[2] The Hong Kong Univ. of Science and Technology - Hong Kong (HK)