Ver.: April 15, 2017

Scientific Program of SISS-19

11th May, 2017 (Thu.)

- **Opening Remarks: 9:30-9:40**

- **Bio-SIMS 1: 9:40-10:50**

O1-1. (9:40-10:20) -Plenary Talk-
Mass Spectrometry Imaging in Flies, Cells, and Vesicles
Andrew Ewing (Chalmers University of Technology, University of Gothenburg)

O1-2. (10:20-10:50) -Invited-
Development of Multiplex Protein SIMS Imaging Methodology and its Application to Mouse Hippocampal Tissues
Dae Won Moon (Daegu Gyeongbuk Institute of Science and Technology)

- **Coffee break: 10:50-11:05**

- **Bio-SIMS 2: 11:05-12:05**

O1-3. (11:05-11:35) -Invited Talk-
Profiling of Soft Materials with Cluster-Atomic Ion Co-Sputter
Jing-Jong Shyue (Academia Sinica)

O1-4. (11:35-12:05) -Invited Talk-
Applications of SIMS in the field of Cosmetic Science
Masayuki Okamoto (Kao Corporation)

- **Lunch: 12:05-13:15**

- **Data Analysis and Simulation: 13:15-15:05**

O1-5. (13:15-13:45) -Invited Talk-
Recent Advances in Computer Modeling of Cluster Bombardment of Organic Materials
Zbigniew Postawa (Jagiellonian University)

O1-6. (13:45-14:15) -Invited Talk-
Rise of the Machines: The Use of Machine Learning in SIMS Data Analysis
Alex Henderson (University of Manchester)

O1-7. (14:15-14:45) -Invited Talk-
Hyperspectral Image Analysis of Spatially/Spectrally Overlapped Datasets for Chemical Imaging
Shunsuke Muto (Nagoya University)

O1-8. (14:45-15:05)
Development of TOF-SIMS Data Analysis for Images and Spectra
Satoka Aoyagi (Seikei University)

- **Coffee break: 15:05-15:20**

- **Sponsor Session: 15:20-16:40**

O1-9. (15:20-15:40)
Most Recent Data Obtained with CAMECA SIMS Instruments (IMS1300-HR^3, NanoSIMS50L; IMS7f-Auto)
Philippe Saliot (Cameca Instruments, Inc.)

O1-10. (15:40-16:00)
PHI nanoTOF II State-of-the-art Techniques and its Applications
Shinichi Iida (ULVAC-PHI, Inc.)

O1-11. (16:00-16:20)
Introduction What FILMER Can (FIB-TOF-SIMS & Laser-SNMS) Do
Akio Takano (TOYAMA Co., Ltd.)

O1-12. (16:20-16:40)
Key Features and Latest Developments of the TOF.SIMS 5
Markus Terhorst (ION-TOF GmbH)

- **Short Presentation: 16:40-17:20**

- **Poster Session: 17:30-18:30**

P-1. Distribution Variation of Inorganics in the Stem of Hydrangea Macrophylla by Al-Treatment
Peiming Zheng (Advanced Industrial Science and Technology)

P-2. Oxygen Gettering Mechanism of Carbon Cluster Ion-Implanted Silicon Wafers for CMOS Image Sensors Revealed by Three-Dimensional Laser-Assisted Atom Probe Tomography
Satoshi Shigematsu (SUMCO Corporation)

P-3. 3D In Situ ToF-SIMS Imaging of Perovskite Films under Controlled Humidity Environmental Conditions
Hsun-Yun Chang (ULVAC-PHI)

P-4. Analysis of Intracellular Fatty Acids Distribution Using GCIB-TOF-SIMS
Makoto Horikawa (Hamamatsu University School of Medicine)

P-5. Analyses of Phosphorus Segregation in Steel by the Hokudai Isotope Microscope
Suguru Nishinomiya (Nippon Steel & Sumitomo Metal Corporation)

P-6. 2-Dimential Concentration Distribution between Light Elements in Duplex Stainless Steel with Bi Cluster TOF-SIMS
Rie Shishido (Tohoku University)

P-7. MeV-SIMS of Peptides with Room Temperature Ionic Liquid Matrices
Kaoru Nakajima (Kyoto University)

P-8. Measurement of Biomolecules by Argon Gas Cluster Ion Beam Connected with Q-ToF Mass Analyzer System
Prutchayawoot Thopan (Chiang Mai University)

P-9. Development of Shape-Classification Method for Aerosol Particles Based on Image Clustering
Masato Morita (Kogakuin University)

P-10. Evaluation of Moisture Permeation Properties in Sealants by Secondary Ion Mass Spectrometry
Tatsuru Nakamura (Toray Research Center, Inc.)

P-11. Desorption and Ionization of Organic Molecules Induced by Ar and Water Cluster Ion Beams
Atsushi Tanaka (University of Hyogo)

P-12. Mass Separation of AuGe Alloy Using Rotating Electric Fields
Masashi Nojima (Tokyo University of Science)

P-13. Evaluation of Charge States for Droplet Ion Beams Produced by Vacuum Electrospray
Ryo Watanabe (University of Yamanashi)

P-14. Hydrogen Diffusion Profiles with Cameca ims-4f-E7 Secondary Ion Mass Spectrometry
Shoichi Itoh (Kyoto University)

P-15. Analysis of Cesium Distribution in Plant under Frozen Condition by TOF-SIMS
Keita Kanenari (Kogakuin University)

P-16. Novel Embedding-Free Cross Sectioning Method of Organic Materials for Micro Chemical Analysis Using Gas Cluster Ion Beam Sputtering
Ichiro Mihara (KURARAY Co., Ltd.)

P-17. Prototype of VUV Laser-SNMS Instrument for Analysis of Organic Materials
Takeharu Ishikawa (TOYAMA Co., Ltd.)

P-18. An Effect of Residual Gas Component on Detected Secondary Ions during TOF-SIMS Depth Profiling
Junichiro Sameshima (Toray Research Center, Inc.)

P-19. Ambient Analysis Using MeV-SIMS with a Pipe Nozzle
Kenta Ishii (Kyoto University)

- **Reception: 18:30-20:00**

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12th May, 2017 (Fri.)

- **Mass Imaging: 9:00-10:30**

O2-1. (9:00-9:40) -Plenary Talk-
Multimodal Imaging Mass Spectrometry in Translational Research
Ron M. A. Heeren (Maastricht University)

O2-2. (9:40-10:10) -Invited Talk-
Development of an Imaging Mass Spectrometry Technique for Visualizing Localized Cellular Signaling Mediators in Tissues
Yuki Sugiura (Keio University)

O2-3. (10:10-10:30)
Transmission SIMS Imaging Using a Secondary Electron Microscope
Kaoru Nakajima (Kyoto University)

- **Coffee break: 10:30-10:45**

- **Instrumentation & Application 1: 10:45-12:15**

O2-4. (10:45-11:15) -Invited Talk-
Time-of-Flight SIMS (Real Time) Imaging of Deuterium in a Duplex Stainless Steel Microstructure and Data Fusion with SEM Topography Data: Towards a Better Understanding of Hydrogen Assisted Cracking in Steel
Wolfgang E. S. Unger
(BAM - Federal Institute for Materials Research and Testing)

O2-5. (11:15-11:45) -Invited Talk-
Highly Sensitive Detection of Hydrogen in Metallic Materials with Secondary Ion Mass Spectrometry -Interstitial Hydrogen and Hydrogen Trapped by Trap Sites-
Toru Awane (Kyushu University)

O2-6. (11:45-12:15) -Invited Talk-
Study of III-V Semiconductor Materials and Devices Using SIMS
Lixia Zhao (Chinese Academy of Sciences)

- **Lunch: 12:15-13:15**

- **Atom Probe Tomography: 13:15-14:15**

O2-7. (13:15-13:45) -Invited Talk-
Secondary Ion Mass Spectrometry and Other Ion- and Electron-Based Analytical Microscopies: Successful Examples of a Synergetic Approach
Hugues François Saint-Cyr (Cameca Instruments, Inc.)

O2-8. (13:45-14:15) -Invited Talk-
Quantitative Measurement of Compositions in Steels by Atom Probe Tomography
Goro Miyamoto (Tohoku University)

- **Coffee break: 14:15-14:30**

- **Instrumentation & Application 2: 14:30-16:00**

O2-9. (14:30-15:00) -Invited Talk-
Is Low Energy Cesium the Solution for Depth Profiling Hybrid Materials ?
Laurent Houssiau (University of Namur)

O2-10. (15:00-15:30) -Invited Talk-
Surface Electrochemistry of Rechargeable Li-, Na- and K-ion Batteries
Shinichi Komaba (Tokyo University of Science)

O2-11. (15:30-16:00) -Invited Talk-
Mass Spectrometric Characterization of Electric Double Layer at Electrode-Electrolyte Interface Using in situ Liquid SIMS
Zihua Zhu (Pacific Northwest National Laboratory)

- **Coffee break: 16:00-16:10**

- **Instrumentation & Application 3: 16:10-17:50**

O2-12. (16:10-16:50) -Plenary Talk-
Towards Super-Resolution Metabolic Imaging Using Secondary Ion Mass Spectrometry
Ian S. Gilmore (National Physical Laboratory)

O2-13. (16:50-17:10)
Rapid 500 nm-Resolution Imaging of the Cellular Lipidome in Model Neurons by TOF-SIMS Parallel Imaging MS/MS
Gregory L. Fisher (Physical Electronics)

O2-14. (17:10-17:30)
Large O_2 Cluster Ions as a Sputter Beam for ToF-SIMS Depth Profiling of Alkali Metals in Thin SiO_2 Films
Julia Zakel (ION-TOF GmbH)

O2-15. (17:30-17:50)
SIMS Measurement of Polymer Films Using a Tandem Mass Spectrometer Combined with a Gas Cluster Ion Source
Jiro Matsuo (Kyoto University)

- **Closing Remarks: 17:50-18:00**