Scientific Program of SISS-20

28th Jun, 2018 (Thu.)

- **Opening Remarks: 10:00-10:10**

- **Atom Probe Tomography: 10:10-11:40**
  O1-1. (10:10-10:50) - Plenary talk -
  Advances and Challenges in SIMS and Atomprobe Metrology for Next Generation Semiconductors
  Wilfried Vandervorst (IMEC, KU Leuven)

  O1-2. (10:50-11:20) - Invited talk -
  Atom-Probe Tomography of Nanoscale-Structured Materials via Targeted Preparation by Focused-Ion-Beam Techniques
  Dieter Isheim (Northwestern University)

  O1-3. (11:20-11:40)
  Atom Probe Tomography Investigation of Silicon Self-diffusion in Isotopically Modulated Nanopillars
  Ryotaro Kiga (Keio University)

- **Lunch: 11:40-13:00**

- **Organic: 13:00-14:20**
  O1-4. (13:00-13:30) - Invited talk -
  An Ion-storage Multi-Reflection Time-of-Flight Mass Spectrometer for High Sensitive SIMS Study
  Haiyang Li (Dalian Institute of Chemical Physics, Chinese Academy of Sciences)

  O1-5. (13:30-14:00) - Invited talk -
  Depth Profiling and 3D Imaging Using the 3D OrbiSIMS - New Capabilities for the Analysis of Organic Materials
  Rasmus Havelund (National Physical Laboratory)

  O1-6. (14:00-14:20)
  Sparse Modelling and Principal Component Analysis Application to TOF-SIMS Data of Three Polymers
  Satoka Aoyagi (Seikei University)

- **Coffee break: 14:20-14:40**
Sponsored Session: 14:40-16:00

O1-7. (14:40-15:00)
Advances in Cameca Atom Probe Tomography
Robert Ulfig (Cameca Instruments, Inc.)

O1-8. (15:00-15:20)
TOF-SIMS with MSMS, a Useful and Effective Tool for the Industrial World
Takahiko Suzuki (ULVAC-PHI, Inc.)

O1-9. (15:20-15:40)
Features and Usefulness of FILMER (FIB-TOF-SIMS & Laser-SNMS)
Akio Takano (TOYAMA Co., Ltd.)

O1-10. (15:40-16:00)
Recent Developments in TOF-SIMS Instrumentation from IONTOF
Markus Terhorst (IONTOF GmbH)

Short Presentation: 16:00-16:45

P-1
ToF-SIMS Data Interpretation of Organic Samples Using Machine Learning
Wataru Ishikura (Seikei University)

P-2
Effects of Thermal Annealing on Structural and Magnetic Properties of Mn Ions Implanted AlInN/GaN Films
Abdul Majid Sandhu (University of Gujrat)

P-3
Quantitative Evaluation of Inorganic Boundary Films Formed in Engine Oil by TOF-SIMS Depth Profiling with Low Energy Cs Sputtering
Atsushi Murase (Toyota Central R&D Labs., Inc.)

P-4
Mass Separation of AuGe Alloy Using Rotating Electric Fields (II)
Tokio Norikawa (Tokyo University of Science)

P-5
Investigation of Aliphatic Matrices for Bi Cluster TOF-SIMS
Rie Shishido (Tohoku University)

P-6
Sputtering Yields of Polymers Produced by Vacuum Electrospray Water Droplet Ion Beams
Satoshi Ninomiya (University of Yamanashi)
P-7
Matrix and Element Dependences of Useful Yield in Si and SiO₂ Matrices Using Laser-Ionization Sputtered Neutral Mass Spectrometry
Reiko Saito (Toshiba Memory Corporation)

P-8
Evaluation of Impurity Diffusion for Si Quantum Dot Multilayers
Reina Miyagawa (Nagoya Institute of Technology)

P-9
Segregation Behavior around CH₃O Molecular Ion Implantation Related Extended Defects for CMOS Image Sensors
Satoshi Shigematsu (SUMCO Corporation)

P-10
Secondary Ion Behavior of Residual Gas Components during TOF-SIMS Depth Profiling with Low Sputtering Rate
Junichiro Sameshima (Toray Research Center, Inc.)

P-11
Development of a Novel Analysis Technique by TOF-SIMS for the Visualization of Cell Structure with High Spatial Resolution
Takuro Hasegawa (Kogakuin University)

P-12
Dialysis Analysis of Aerosol using TOF-SIMS
Masaki Fujisawa (Kogakuin University)

P-13
Analysis of Cesium Distribution in Water-Containing Plant by TOF-SIMS
Yuta Miyashita (Kogakuin University)

P-14
Effect of Coimplanted Carbon on Boron Behavior in Silicon: SIMS and Atom Probe Study
Yasuo Shimizu (Tohoku University)

P-15
Quantitative Depth Profiling of Hydrogen in Metals by Cryogenic Secondary Ion Mass Spectrometry
Leiliang Zheng (Toray Research Center, Inc.)

P-16
Improvement in the Detection Sensitivity of Secondary Ions by Na Absorption with the Mist Deposition Method on a PEG Surface
Taiki Matsuda (Kyoto University)
P-17
Protonation and ionization of 1,4-didodecylbenzene under Water Cluster Bombardment
Kousuke Moritani (University of Hyogo)

P-18
High-Speed SIMS Imaging Using a High Brightness Cluster Ion Source
Shuhei Yamada (Kyoto University)

P-19
Degradation Analysis of OLEDs Model Samples by Ar-GCIB-TOF-SIMS and TOF-SIMS with MS/MS System
Daichi Shirakura (Toray Research Center, Inc.)

P-20
Atom Probe Mass Analysis of Organic Material: Polyethylene Glycol
Masahiro Taniguchi (Kanazawa Institute of Technology)

P-21
Reaction Rates of Isomeric C$_2$H$_5$O$^+$ and C$_3$H$_7$O$^+$ Ions with Polyethylene Glycols and Polyethylene Glycols Ethers with Fourier Transformation/Ion Cyclotron Resonance Mass Spectrometry (FT/ICRMS)
Mohamed GAKU (RealTECH Geophysics)

P-22
Bevel Depth Profiling by High-Spatial-Resolution Laser-SNMS
Takahiro Kashiwagi (TOYAMA Co., Ltd.)

- **Poster Session: 16:55-17:55**
- **Reception: 17:55-19:30**
29th Jun, 2018 (Fri.)

- **Bio 1: 9:00-10:30**
  
  O2-1. (9:00-9:30) -Invited talk- 
  Mitigation of Ion Suppression for Quantitative Imaging in Cluster Secondary Ion 
  Mass Spectrometry of Biological Systems
  
  Joseph Ellis (University of Illinois)

  O2-2. (9:30-10:00) -Invited talk- 
  The Cross Sectioning Method Protocols Using Focused Ion Beam
  
  Ichiro Mihara (Kuraray CO., LTD.)

  O2-3. (10:00-10:30) -Invited talk- 
  Micrometer Resolution Atmospheric Pressure Mass Spectrometric Imaging (AP-MSI) 
  System for Live Tissue Analysis
  
  Jae Young Kim (Daegu Gyeongbuk Institute of Science & Technology)

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

- **Mass Imaging: 10:45-11:45**

  O2-4. (10:45-11:15) -Invited talk- 
  Imaging Mass Spectrometry Analysis of Photosynthetic Products in Plants
  
  Miyuki Takeuchi (University of Tokyo)

  O2-5. (11:15-11:45) -Invited talk- 
  Development of Coordinate Analysis with FIB-STXM-NanoSIMS-TEM: Applications 
  to the Extraterrestrial Materials
  
  Motoo Ito (Japan Agency for Marine-Earth Science and Technology)

- **Lunch: 11:45-13:05**

- **Bio 2: 13:05-14:15**

  O2-6. (13:05-13:45) -Plenary talk- 
  Ambient Pressure SIMS Imaging with MeV Ions
  
  Roger Webb (University of Surrey)

  O2-7. (13:45-14:15) -Invited talk- 
  Correlated ToF-SIMS and Confocal Microscopy Imaging Visualizes the Recognition 
  between Platinum-Damaged DNA and Proteins in Single Cells
  
  Fuyi Wang (Institute of Chemistry, Chinese Academy of Sciences)
- **Inorganic: 14:15-15:05**
  O2-8. (14:15-14:45) -Invited talk-
  Dynamic Secondary Ion Mass Spectrometry: Present Status, Problems and Prospects
  Yuji Kataoka (Fujitsu Laboratories Ltd.)
  
  O2-9. (14:45-15:05)
  Helium and Neon Isotope Analysis of Genesis DOS Sample with LIMAS
  Kenichi Bajo (Hokkaido University)

- **Coffee break: 15:05-15:25**

- **Instrumentation & Application: 15:25-16:55**
  O2-10. (15:25-15:55) -Invited talk-
  Development of Cryogenic SIMS Technique for Biology and Cosmochemistry
  Naoya Sakamoto (Hokkaido University)
  
  O2-11. (15:55-16:15)
  Dynamic SIMS for Characterization of Nuclear Materials
  Paula Peres (CAMECA)
  
  O2-12. (16:15-16:35)
  Hybrid SIMS: A New Instrument for High Resolution Organic Imaging with Highest Mass-Resolving Power and MS/MS
  Derk Rading (IONTOF GmbH)
  
  O2-13. (16:35-16:55)
  Secondary Molecular Ion Emission of Polymers with Various Molecular Weights under Large Cluster Ion Bombardment: Enhancement with the Cationization Technique
  Jiro Matsuo (Kyoto University)

- **Closing Remarks: 16:55-17:05**