

Preface for the Proceedings of SIMS XIX, Jeju, Korea 2013

The International Conference on Secondary Ion Mass Spectrometry has provided a forum for international colleagues from academia and industry to exchange their most recent results and ideas on Secondary Ion Mass Spectrometry and related techniques. This conference covers the advancement of scientific knowledge from fundamentals to applications. Discussions regarding present possibilities and future developments in view of anticipated needs in technology and basic research are particularly highlighted in the sessions of this conference.

This special issue includes more than 100 papers presented as plenary, invited, and contributed presentations at the 19th International Conference on Secondary Ion Mass Spectrometry (SIMS XIX), which was held at the Jeju International Convention Center from September 29 to October 4, 2013 in Korea. The local organizing committee prepared the conference emphasizing a balance between dynamic SIMS and static SIMS, Academia and Industry, together with Fundamentals and Applications.

More than 334 participants from 27 countries attended the conference. There were 3 plenary lectures, 29 invited lectures, and 275 contributions of oral and poster presentations. The first plenary lecture on Monday morning (Sept. 30th); 'Graphene Barristor: New Device Candidate for VLSI Applications and Challenges in Nanoanalysis' was presented by Dr. Sungwoo Hwang, followed by 'Challenges and (Un)Usual Solutions of SIMS for Next Generation Semiconductor Technology Nodes' by Dr. Wilfried Vandervorst with the final plenary dedicated to Professor Alfred Benninghoven entitled, 'Quantitative Ion Microscopy: A Universal Tool in Biomedical Research' presented by Professor Claude Lechene. The conference program consisted of the following topics: Biomedical Applications (Tissues & Cells); Fundamentals of Sputtering and Ionization Mechanisms; Cluster Sputtering; Polymers and Molecular Surfaces; USJ Depth; Depth Profiling (Inorganics); Depth Profiling (Organics); Semiconductor/Display; Complementary MALDI Imaging; Combination of SIMS with Other Techniques; Archaeology/Forensics; Geochemistry and Cosmochemistry; Ultra-High Spatial Resolution SIMS; Data Processing; Atom Probe; Instrumentation; and Energy/Nano Materials.

An Honorary Session was held on Monday to recognize the retirement of Professor John Vickerman. There were two discussion sessions on Thursday (Oct. 3rd). Discussion I, on 'Cluster Sputtering' was moderated by Professor John Vickerman and included a profound panel discussion by John Fletcher, Arnaud Delcote, Gregory Fisher, Satoka Aoyagi, Derk Rading, Jiro Matsuo, Andreas Wucher, and Tae Geol Lee. Discussion II focused on 'Industrial Applications of SIMS' was moderated by Dr. DaeWon Moon and panelists, including Michel Schuhmacher, Akiya Karen, Sven Kayser, Ian Gilmore, Sung-Chan Jo, Marinus Hopstaken, Scott Bryan, and Wilfried

Vandervorst. Audio recordings of these panel discussion sessions can be found on the SIMS XIX homepage. [<http://www.sims19.org>]

The organizers would like to thank the International Scientific Committee and the International Committee for their useful comments and helpful suggestions for the scientific program and for organizing the conference. We would like to express our special thanks to the plenary and invited speakers, the session chairs, and the contributors for their selfless efforts.

It was a great pleasure to award prizes for outstanding presentations to the following students, selected by the local organizing committee:

Student Awards:

- Tina Angerer (University of Gothenburg, Sweden)
- Yasuko Kajiwara (Tottori University, Japan)
- Manuela Killian (Friedrich-Alexander University of Erlangen-Nuremberg, Germany)
- Mateusz Marzec (AGH University of Science and Technology, Poland)
- Irma Razo (The University of Manchester, UK)
- Jin Gyeong Son (KAIST/KRISS, Korea)

The tutorial program was held at Jeju ICC from September 29 to 30, 2013, including 4 plenary tutorials and 5 tutorials. The purpose of the tutorial program was to provide an opportunity for industrial researchers, graduate students, and technicians to learn fundamental aspects together with practical applications tutored by outstanding lecturers (Nicholas Winograd, Ian Gilmore, David Castner, Fred Stevie, Daniel Graham, and Jae Cheol Lee). More than 80 researchers attended the two-day tutorial program.

The organizers would like to thank the sponsors and exhibitors for the financial support and instrumental exhibition. In addition, we would like to give our special thanks to three diamond sponsors, ULVAC-PHI Inc., CAMECA, and ION-TOF GmbH, for their financial contribution.

The editorial committee would like to thank the reviewers for their devoted efforts in thoroughly reviewing the evaluation, which is very time-consuming work. Additionally, we would like to deeply thank Professor John Watts of the University of Surrey and Paul Tresorrow of Wiley for their professional editorial and publishing work.

Finally, we would like to thank all participants who joined us at the beautiful island of Jeju for this event and contributed immensely to the success of the conference. We look forward to seeing you again in Seattle in September 2015.

Sincerely

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Correction added on 12 January 2015, after first online publication: changes were made to affiliations of Dr Tae Geol Lee and Dr Jae Cheol Lee.