

Conference Report

42nd Swiss Group for Mass Spectrometry Meeting

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Swiss Group for Mass Spectrometry (SGMS) Board

The 42nd annual meeting of the Swiss Group for Mass Spectrometry (SGMS), together with the 6th SGMS School, was held in October 2025 at the scenic Dorint Resort Blüemlisalp in Beatenberg, Switzerland. The event once again demonstrated the society's success in fostering scientific exchange, collaboration, and education within the Swiss and international mass spectrometry community.^[1,2] A total of 120 participants attended from academia, regulatory institutions, and industry.

6th SGMS School on Mass Spectrometry

The 6th SGMS School (October 22–23, 2025) focused on 'Ionization: Mechanisms, Artifacts, and Applications.' It was organized by SGMS Board members, **Sonja Klee** (TOFWERK AG, Thun) and **Richard Knochenmuss** (RKResearch GmbH, Bern), supported by an expert invited faculty from Switzerland and abroad: **Christian Bartelmus** (Roche), **Laurent Bigler** (University of Zürich), **Valérie Gabelica** (University of Geneva), **Natalia Gasilova** (EPFL), **Elyssia Gallagher** (Baylor University, USA), and **Julia Laskin** (Purdue University, USA). Covering both fundamental and applied aspects, the school emphasized the understanding of ionization processes and their impact on the results. Interactive workshop sessions enabled participants to present and discuss their own experimental ionization challenges with the faculty.

The school attracted strong participation from both academia and industry, mainly from Switzerland. The enthusiasm reflects the continuing importance of mass spectrometry education within the Swiss analytical sciences landscape. SGMS schools remain a cornerstone of the society's mission to address educational gaps in academic curricula and nurture the next generation of professionals. The Board welcomes suggestions for future school topics.

42nd SGMS Meeting

The 42nd SGMS meeting featured a comprehensive scientific program spanning four plenary lectures, eight regular talks (including five by PhD students), a record 31 poster contributions and presentations from SGMS sponsor companies. The society extends sincere gratitude to the plenary speakers, who travelled from Switzerland, Luxembourg, and the United States to share their expertise and most recent research findings.

Plenary Lectures

The opening plenary lecture was delivered by **Julia Laskin**, a leading figure in biomolecular mass spectrometry and Past President of the American Society for Mass Spectrometry (ASMS). She presented advanced imaging mass spectrometry approaches based on liquid extraction ionization techniques, highlighting applications in biomedical research, clinical diagnostics, environmental analysis, and forensics.

Following this, **Elyssia Gallagher** discussed fundamental insights into electrospray ionization mechanisms and how protein charging, and gas-phase transition influence structural stability. Her work, integrating native MS, ion mobility,



A group photo of School participants was taken outside the Dorint Resort in Beatenberg on October 22, 2025. SGMS Board member Sonja Klee holds the traditional SGMS cowbell, gifted to SGMS by the Dorint Resort management in 2022 to mark 20 years of partnership and friendship.

and molecular dynamics simulations, improves our understanding of the correlation between native MS and biological function.

Emma Schymanski (University of Luxembourg), widely recognized particularly in Switzerland for her postdoctoral work at Eawag and her leadership in open chemical data initiatives, delivered the third plenary lecture. She presented state-of-the-art tools and collaborative frameworks for advancing open, community-driven approaches to high-resolution mass spectrometry data interpretation, with applications in environmental analysis, metabolomics, and exposomics.

The final plenary lecture was given by **Gérard Hopfgartner** (University of Geneva), who reflected on a distinguished academic career advancing innovative mass spectrometric strategies, with and without chromatography, to improve molecular identification and quantification in complex biological systems. Despite his recent retirement, he continues to contribute actively to the field, emphasizing that many analytical challenges remain open for future generations of mass spectrometrists.

Regular Talks and Poster Session

Beyond the plenary lectures, the program featured scientific contributions from Swiss and international research institutions and industry. Presenters included **Flaela Kalemí** and **Rim Chiba** (University of Geneva), **Timon Käser** (ETH Zürich), **Michael Scholz** (University of Zürich), **Valentina Simonetti** (University of Padova, Italy), **Anna Feerick** (University of California, USA), **Philipp Weller** (Technical University of Applied Sciences Mannheim, Germany), and **Emilie Muller** (Novartis).

The extended poster session provided a dynamic platform for scientific discussion, with many contributions from PhD students presenting ongoing research. A committee of SGMS Board members evaluated both oral and poster presentations and selected the SGMS Best Student Presentation Award winners for 2025: **Michael Scholz** (University of Zürich, oral presentation) and **Arjun Mani Mallika** (University of Geneva, poster presentation).

Arjun's research focuses on expanding sequence coverage for oligonucleotide therapeutics through advanced ion activation and dissociation techniques. Michael's talk demonstrated how high-resolution mass spectrometry, together with machine learning, can reveal metabolic markers of sleep status from oral fluid samples – with potential applications in fields such as forensic roadside testing. The Board congratulates the awardees and extends its appreciation to all contributors for their scientific excellence.

Networking and Acknowledgements

Beyond the scientific sessions, the meeting fostered valuable networking through informal discussions, culminating in the traditional Gala Dinner and Muh Bar gathering.

Organizing an event of this calibre requires substantial effort and support, and the SGMS Board gratefully acknowledges the continued and expanding contributions of its sponsors. Their partnership enables accessible registration fees, the invitation of distinguished speakers and expert faculty, and the recognition of emerging scientific talent through awards.

The SGMS Board, comprising **Nadine Bohni** (Zürich Cantonal Laboratory, Digital Communication), **Elisabeth Janssen** (Eawag, Vice-President), **Susanne Kern** (Zurich University of Applied Sciences - ZHAW, Awards), **Sonja Klee** (TOFWERK AG, Education), **Richard Knochenmuss** (RKRResearch GmbH, Secretary), **Jean-Christophe Prost** (Inselspital - University Hospital of Bern, Treasurer), **Bertran Rubi** (Lonza AG, Event Organization), and **Yury Tsybin** (Spectroswiss Sàrl, President), remains committed to advancing the mass spectrometry field and the Swiss scientific community.

43rd SGMS Meeting and Awards

The SGMS Board reminds all members and the wider mass spectrometry community of the society's awards. The SGMS Student Travel Awards support PhD students from Swiss academic institutions by contributing to the costs of active participation in scientific conferences, workshops, or schools. Eligible work must clearly involve mass spectrometry.

The SGMS Award is the highest distinction granted by the society. It recognizes outstanding research in mass spectrometry performed by an academic or industrial scientist under the age of 45 working in Switzerland, or by a Swiss scientist working abroad. Further information on SGMS awards, the history of the society, events, and job opportunities can be found at www.sgms.ch.

The SGMS Board is already preparing for the 43rd annual SGMS meeting, which will return to Beatenberg on October 29–30, 2026. It will follow the well-established two-day format and be preceded by the 7th SGMS School (October 28–29), with its theme to be announced. SGMS looks forward to welcoming both returning and new participants to celebrate and advance the continued progress of mass spectrometry.

26th International Mass Spectrometry Conference

As discussed at the General Assembly, SGMS is serving as a co-organizer of the upcoming 26th International Mass Spectrometry Conference (IMSC). The event will take place in Lyon, France, from August 22–28, 2026, and is expected to bring together more than 1,500 participants from around the world. The conference is jointly organized by the French Society for Mass Spectrometry, the German Society for Mass Spectrometry, and SGMS.

Representing SGMS on the organizing committee are **Laurent Bigler** (University of Zürich), **Valérie Gabelica** (University of Geneva), and **Yury Tsybin** (Spectroswiss), while SGMS members including **Clarissa Vögel** (University of Zürich), **Pablo Sinues** (University of Basel), and **Nicola Zamboni** (ETH Zürich) are contributing to the scientific program development. Their involvement highlights the strong engagement of the Swiss mass spectrometry community in shaping this major international event.

The IMSC scientific agenda is structured around five themes: (i) fundamentals, instrumentation, and data analysis; (ii) life sciences, health, food, and pharmaceuticals; (iii) chemistry and materials science; (iv) environment, resources, and energy; and (v) grand challenges and future opportunities.

Short courses will precede the conference to provide focused, in-depth training. Strong support has already been confirmed from numerous companies, with further sponsorship and exhibition opportunities open. The event promises a vibrant innovation atmosphere with industrial technology showcases throughout the program.

SGMS members and colleagues from the wider mass spectrometry community are warmly encouraged to keep IMSC 2026 in their calendars and to take part in this landmark meeting. More information is available at www.imsc26.com.

Photograph was taken and provided by the coauthors.

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- [1] N. Bohni, E. Janssen, S. Kern, S. Klee, R. Knochenmuss, J.-C. Prost, B. Rubi, Y. Tsybin, *CHIMIA* **2023**, *77*, 885, <https://doi.org/10.2533/chimia.2023.885>.
- [2] N. Bohni, E. Janssen, S. Kern, S. Klee, R. Knochenmuss, J.-C. Prost, B. Rubi, Y. Tsybin, *CHIMIA* **2024**, *78*, 892, <https://doi.org/10.2533/chimia.2024.892>.