

# Conference Report

## The 41<sup>st</sup> Swiss Group for Mass Spectrometry Meeting

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Swiss Group for Mass Spectrometry (SGMS) Board

The 41<sup>st</sup> annual meeting of the Swiss Group for Mass Spectrometry (SGMS) and the 5<sup>th</sup> SGMS School were held from October 23–25, 2024, at the scenic Dorint Resort Blüemlisalp in Beatenberg, Switzerland. They showcased the society's dedication to fostering knowledge-sharing, collaboration, and education within the mass spectrometry community in Switzerland and beyond.<sup>[1]</sup>

The 2024 SGMS events were attended by a diverse group of 140 participants from academia, regulatory, and industry. Among the attendees were five past and present SGMS presidents, a testament to the society's rich legacy and enduring professional friendship.



The five SGMS Presidents at the 41<sup>st</sup> SGMS meeting imaged outside the Dorint Resort Blüemlisalp in Beatenberg, Switzerland, on October 24, 2024. From right to left: Laurent Fay (Nestlé, SGMS President in 1997–2002), Andreas Stampfli (Roche, 2003–2008), Marc Suter (Eawag, 2009–2014), Bertran Rubi (Novartis and ETHZ, 2015–2022), and Yury Tsybin (Spectroswiss, 2023–present). The SGMS cowbell was presented by the Dorint Resort management to SGMS in 2022 for 20 years of partnership and friendship.

### The 5<sup>th</sup> SGMS School on Mass Spectrometry

The 5<sup>th</sup> SGMS School, which preceded the main conference, focused on ‘Gas chromatography mass spectrometry (GC-MS) technology: from fundamentals to future’. This year's school was organized by the two SGMS Board members and GC-MS experts: **Susanne Kern** (Zürich University of Applied Sciences, Wädenswil) and **Sonja Klee** (Tofwerk AG, Thun). They were helped by an accomplished invited faculty from academia and industry, from Switzerland and abroad: **Maurus Biedermann** (Kantonales Labor Zürich, Switzerland), **Scott Campbell** (SpectralWorks, UK), **Thomas Frey** (Heinz Peter Management, Switzerland), **Alexander Mistretta** (Zürich University of Applied Sciences, Switzerland),

**John Moncur** (SpectralWorks, UK), **Sebastiano Panto** (LECO, Germany), and **Philipp Weller** (Mannheim University of Applied Sciences, Germany). The School covered both fundamental and applied topics, with a particular attention paid to the practical aspects of GC-MS operation for routine and advanced applications, and included data analysis software hands-on workshops.

Overall, the one-and-a-half-day School was very well attended by participants from both academia and industry, primarily from Switzerland, but also with several participants from different EU countries. The strong interest to the education resources in mass spectrometry reflects a particular importance of this technique in the Swiss analytical sciences landscape. The SGMS Schools exemplify our society's ongoing commitment to filling gaps in Swiss academic curricula and supporting the development of young professionals. On this note, the Board welcomes suggestions for future topics.

### The 41<sup>st</sup> SGMS Meeting

The 41<sup>st</sup> SGMS meeting featured a comprehensive scientific program, including four plenary lectures, nine regular talks, a lively poster session with 18 presentations, and engaging flash talks presented by SGMS sponsors. A special thanks goes out to the invited plenary speakers, who travelled from across Switzerland and as far as Utrecht and Mannheim to share their expertise and latest research with attendees.



The plenary invited speakers of the 41<sup>st</sup> SGMS meeting (from left to right): Irene Chetschik (Zürich University of Applied Sciences, Switzerland), Albert Heck (Utrecht University, The Netherlands), Anton Kaufmann (Kantonales Labor Zürich, Switzerland), and Philipp Weller (Mannheim University of Applied Sciences, Germany).

The first plenary session opened with an engaging talk by **Albert Heck**, a leader in biomolecular mass spectrometry, who discussed cutting-edge methods for analyzing large (150 kDa) and very large (>1 MDa) molecules, including monoclonal antibodies and adeno-associated viruses. Heck's insights illustrated the potential of mass spectrometry to probe complex biological structures and processes, advancing fields like drug development and virology.

Following Albert, **Irene Chetschik** from Zürich University of Applied Sciences presented her work in flavor chemistry, specifically her exploration of the chemical sensory properties of cocoa and chocolate products. Her findings have significant implications for the quality assessment of cocoa and chocolate, informing the development of products that meet consumer expectations for flavor and supporting sustainable, fair practices within the cocoa industry. This engaging presentation on food chemistry set the stage for the next plenary speaker, **Philipp Weller** from Mannheim University of Applied Sciences, who introduced the concept of ‘fermentomics’. Through examples from food and fermentation processes, Philipp demonstrated how benchtop volatilomics ap-

proaches can characterize complex mixtures of volatile compounds, allowing for real-time monitoring and quality control.

The final plenary lecture was delivered by **Anton Kaufmann** from Kantonales Labor Zürich, who reflected on his distinguished career as an industrial and government chemist. As he just entered retirement, Anton shared stories from his professional journey, highlighting both achievements and challenges faced when pursuing applied research alongside the demanding routine of sample analysis and reporting. His lecture touched on memorable projects, such as the use of mass spectrometry in wine analysis and the complexities of introducing new technology in regulated environments. Anton's talk resonated with attendees as he detailed the joy of scientific discovery and the lessons learned from his work in advancing analytical chemistry.

In addition to the plenary sessions, the meeting's regular talks featured contributions from the Swiss institutions and industry representatives. Speakers included **Kim Greis** and **Lukas Benzenberg** (both from ETHZ), **Mihai-Ovidiu Degeratu**, **Corina Meyer**, and **Johannes Boog** (all from Eawag), **Oscar Mendo Diaz** and **Alina Begley** (both from Empa), **Hector Gallart-Ayala** (University of Lausanne), and **Arnd Ingendoh** (Bruker, Germany).

The poster session provided further opportunities for scientific exchange, with half of the posters presented by PhD students showcasing their ongoing research. An expert committee composed of SGMS Board members carefully evaluated the poster and oral presentations, ultimately awarding the SGMS Best Student Presentation Awards to **Anita Lopes Souto** and **Corina Meyer**, both from Eawag. Anita's award-winning poster presented her Master Thesis research on using liquid chromatography-high resolution tandem mass spectrometry to elucidate ozonation transformation pathways of cyanobacterial toxins. Corina's exceptional talk focused on her PhD work of wastewater analysis to reveal human and environmental exposure to synthetic antioxidants. Both awardees received certificates and cash prizes. The Board congratulates the winners and their mentors and extends gratitude to all presenters for their impressive contributions to the meeting's scientific success.

Outside the lecture and poster halls, networking and social activities enhanced the meeting experience, culminating in the traditional Muh Bar gathering, a cherished SGMS tradition.

Organizing an event of this scale requires considerable resources, and SGMS is grateful for the support of its sponsors, whose continued partnership enables the society to offer accessible registration fees, invite esteemed speakers and expert faculty, and recognize the achievements of promising young scientists with the awards. Thank you!

The SGMS Board, comprising Nadine Bohni (Kantonales Labor Zürich, Digital Communication), Elisabeth Janssen (Eawag, Vice-President), Susanne Kern (Zürich University of Applied Sciences, Awards), Sonja Klee (Tofwerk AG, Education), Richard Knochenmuss (RKResearch GmbH, Secretary), Jean-Christophe Prost (Inselspital - University Hospital of Bern, Treasurer), Bertran Rubi (Lonza AG, Event Organization), and Yury Tsybin (Spectroswiss Sàrl, President), actively supports these efforts and remains dedicated to advancing the field of mass spectrometry.

### The 2025 SGMS Meeting and Awards

The SGMS Board reminds all the members and other mass spectrometrists about the society awards: the SGMS Student Travel Grants and the SGMS Award. Details on the awards and submission processes, along with information about SGMS's history, upcoming meetings, and job opportunities, can be found on the SGMS website: [www.sgms.ch](http://www.sgms.ch). Welcome!

The SGMS Student Travel Grants support PhD students from Swiss academic institutions by contributing towards the cost of actively participating at a conference, workshop, or a school. The work presented must have significant and clear mass spec-



The SGMS Best Student Presentation Award winners for the year 2024: (left) Anita Lopes Souto from Eawag (poster) and (right) Corina Meyer from Eawag (talk). The certificates and cash prizes were presented by the SGMS President, Yury Tsybin.

trometry-related content (including applications of mass spectrometry).

The SGMS Award is the highest SGMS recognition. It is awarded to a promising scientist working in Switzerland or a promising Swiss scientist working abroad for outstanding independent research in the field of mass spectrometry. At the time of the award nomination deadline, the candidate should be younger than 45. The SGMS Award was established in 2014 and, since then, four awards have been given: Yury Tsybin (2014, EPFL), Paola Picotti (2016, ETHZ), Bernd Bodenmiller (2018, University of Zürich), and Pablo Sinues (2020, University of Basel). SGMS Board encourages members and non-members to nominate deserving colleagues or themselves for the 2025 SGMS Award and to share information about the award with their networks.

The SGMS Board is already planning for the 42<sup>nd</sup> annual SGMS meeting, scheduled to return to Beatenberg in October 2025. The event will again be held in the Dorint Resort Blüemlisalp, maintaining the well-loved two-day format, and will be preceded by the 6<sup>th</sup> SGMS School, with a theme to be announced. We look forward to seeing both familiar and new faces at next year's meeting in Beatenberg, ready to share and celebrate the ongoing advancements in mass spectrometry!

### The 2026 IMSC Meeting in Lyon, France

The International Mass Spectrometry Conference (IMSC), the largest mass spectrometry conference held outside of the United States and Canada, occurs biannually under the auspices of the International Mass Spectrometry Foundation (IMSF). The highly successful 2014 IMSC took place in Geneva, expertly co-organized by then-SGMS President Marc Suter from Eawag and Renato Zenobi from ETHZ.

In 2026, the 26<sup>th</sup> IMSC will be held in Lyon, France, from August 22–28. The conference is co-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 Zurich), Valérie Gabelica (University of Geneva), and Yury Tsybin (Spectroswiss).

The scientific program will be structured around five main themes, each exploring diverse topics in mass spectrometry: (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. Preceding the main conference, several short courses will offer targeted, in-depth training.

Save the dates for what promises to be an inspiring and comprehensive meeting, conveniently located in Lyon. For the updates, please visit the conference website at [www.ims26.com](http://www.ims26.com).

Photographs were taken and provided by the co-authors.

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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>.