SCS Swiss Chemical Society

Community News

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SWISS CHEMICAL SOCIETY NEWS

Eawag has been singled out for the Chemical Landmark distinction 2024

The Swiss Academy of Sciences has honoured the water research institute in Dübendorf as a significant historic site for chemistry. Eawag, the Swiss Federal Institute of Aquatic Science and Technology, revolutionised chemistry under its director, Werner Stumm, through its launching of environmental chemistry. It has contributed significantly to a better understanding of complex processes in nature and to clean bodies of water in Switzerland. Read more about Eawag and its contribution toward chemistry and the society in the Chemical Landmark article of the Platform Chemistry of SCNAT.

Chemical Landmarks

The Platform Chemistry established the program «Chemical Landmarks» to identify and manifest the scientific and technological heritage by awarding sites which have played a significant role in the history of chemistry in Switzerland.
Switzerland in particular owes a major part of its wealth to chemistry with its discoveries and successes in research and the ensuing chemical industry. The goal of the program is to recognise historical sites where distinguished chemists or important chemical breakthroughswere made and to emphasize and foster public interest in the chemical sciences. Annually, one historic site is selected and awarded during an official ceremonial act.

Picture: Patrick Schärli, president of the municipal council of Dübendorf, Philippe Moreillon, president of SCNAT, and Martin Ackermann, director of Eawag, at the unveiling of the plaque.
Website Chemical Landmarks: *https://chem.scnat.ch/en/chemical_landmarks*

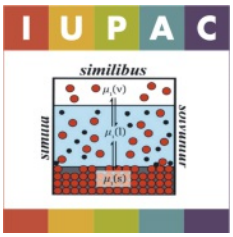
Top ten emerging technologies in chemistry: Call for proposals for 2024

The International Union of Pure and Applied Chemistry has released its call for proposals to identify the top ten emerging technologies in chemistry with the results to be announced in 2024.

This initiative began in 2018 in recognition of IUPAC's Centenary in 2019, and while it was created to kick-off IUPAC's anniversary year in a very visible way, the end goal was to showcase the value of Chemistry (and chemists!) and to inform the general public as to how the chemical sciences contribute to the well-being of Society and the sustainability of Planet Earth. A feature article presenting details on each of the selected 2023 technologies was published in the October 2023 issue of IUPAC magazine Chemistry International as well as in the De Gruyter Conversations, Science & Technology blog post (posted 18 Dec 2023).

The call for the 2024 proposals is now open. Anyone can submit one or more proposals – this call for proposals is open to the global science community as well as to the general public. Deadline is March 31, 2024.
For more information, contact Fabienne Meyers, IUPAC Associate Director and Editor, Chemistry International (fabienne@iupac.org)
Source: *https://iupac.org*

2024 Franzosini Prize and Balarew Award – Call for Nominations

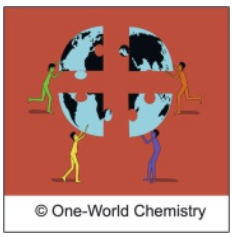


IUPAC calls for nominations for the Franzosini Prize and the Balarew Award award, that are given in the field of critical evaluation of data in solubility and related chemical equilibria. While the Franzosini Prize targets senior scientists with outstanding and sustained contributions, the Balarew Award honors young scientists working in the field.

Application can only be made by a sponsor(s). Each nomination form should be completed online and accompanied by a letter of support providing a brief statement of the nominee's achievements, supporting their nomination, including a list of recent publications.

Winners of both prizes will be announced during the International Symposium on Solubility and Related Equilibrium Processes (ISSP), in Novi Sad, Serbia, 9-13 September 2024. Each winner will give a research presentation during the ISSP and a brief description of their work will be published in Chemistry International and on the IUPAC website.
Source: *https://iupac.org/what-we-do/awards/franzosini-award/*

One World Chemistry – IOCD Call for Volunteers



The International Organization for Chemical Sciences in Development (IOCD) is committed to working in partnership with others to ensure that chemistry fulfils its potential of contributing to sustainability for people and for the physical and biological systems of the planet. A new orientation, 'One-World' Chemistry has been proposed, which recognises the interconnectedness of human, animal and planetary health and embraces the need for chemistry to adopt systems thinking and crossdisciplinary working to tackle the planetary challenges.

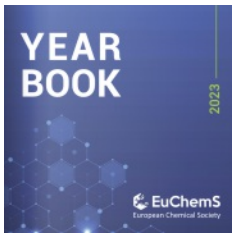
IOCD is currently seeking volunteers for a range of roles – both in relation to its activities to deliver its mission to promote the chemical sciences for sustainable development, and in re-

lation to its internal governance, organization and management work and external relations.
Source: *http://iocd.org*

Project Update on IRISS: "Preliminary reports & executive summaries"

IRISS offers the following "Preliminary reports & executive summaries"
– Mapping of Safe-by-Design Methods and Criteria
– Sustainable-by-Design methods and criteria mapping
– Safe by design methods and criteria mapping
– Lifecycle analysis mapping
– Design for circular economy
– Mapping of skills
– Baseline analysis of SSbD criteria per value chain
– Skills, knowledge and education needs and gaps
The IRISS-Project recently released a couple of very interesting content on https://iriss-ssbd.eu/iriss/about-iriss/reports
Source: *https://iriss-ssbd.eu*

EuChemS releases 2023 Yearbook



The 2023 EuChemS Yearbook was released in February. It contains all the activities of EuChemS over the course of the last year. EuChemS was involved in numerous scientific and science-policy related undertakings in 2023. The yearbook provides descriptions of policy related advisory groups and events of EuChemS – including, but not limited to stakeholder group participations and policy workshops -, as well as its efforts to strengthen the European chemistry community. It also lists EuChemS Science Communication initiatives and data, as well as information on the constitution of the 2023 Executive board, Divisions, Member Societies and secretariat.
Source: *https://euchems.eu*

A Warm Welcome to Our New Members!

Period: 30.01.2024–26.02.2024
Melike Akoglu, Commack (US) - Giulia Baldoni, Bern - Elia Boschi, Zurich - Liam K. Burt, Bern - Martina Letizia Contente, Busto Garolfo (Milan) - Raphael Feser, Crassier - Tobias Haab, 8052 - Gillian Harvey, Luzern - Julien Hazemann, Allschwil - Alexander Klein, Pratteln - Bastian Klein, Zurich - Jasmin Kocher, Bern - Elisa Liberatore, Allschwil - Henry Lindner, Zurich - Anna Liutkova, Baden - Davide Masiello, Villigen - Mira Mayerl, Basel - Giacomo Morselli, Basel - Andreas Muehlmann, Villigen - Ann-Sophie Paschke , Zurich - Martina Aliz Pogany, Basel - Maryam Salehi, Basel - Angel Eduardo Santorelli Villamizar, Basel - Dan Stefanita, Zurich - Zoltán Szabó, Basel - Kang Lek Clarence Tan, Bern - Dorothee Wagner, Basel - Grace Yoon, Flushing (US).

HONORS, AWARDS, APPOINTMENTS

NGCB Award 2024 for Prof. Javier Pérez-Ramírez, ETH Zurich

Prof. Javier Pérez-Ramírez, ETH Zurich in Switzerland, will receive the prestigious 2024 Award for Excellence in Natural Gas Conversion. As an inspirational figure in catalysis, Prof. Pérez-Ramírez has made groundbreaking advances in reshaping the landscape of catalytic materials and processes to address critical energy, resource, and environmental challenges. Throughout his career, the awardee has made landmark accomplishments spanning numerous chemistries and materials classes. This award recognizes his exceptional contributions to advancing the recycling of carbon dioxide for sustainable methanol production at a practical scale. It sheds light on his innovative accomplishments, emphasizing his visionary leadership and the far-reaching impact of his work.
Source: *https://ngcs13.com*

Prof. Eric Bakker, University of Geneva, receives the Reilley Award 2024

Prof. Eric Bakker, University of Geneva is being awarded the Reilly Award 2024 for his outstanding achievements in Analytical Chemistry. Since 1984, starting with Prof. Allen Bard, the Charles N. Reilly Award celebrated every year exceptional Chemists in the field of Analytical Chemistry.

Prof. Eric Bakker will receive the Reilly Award 2024 during a ceremony organized at the Pittcon 2024 Conference in San Diego on February 25.
Source: *https://unige.ch*

Prof. Christian Bochet, University of Fribourg, received the Jaubert Award 2024

The School of Chemistry and Biochemistry of the University of Geneva awarded *Prof. Christian Bochet* from the University of Fribourg with the Jaubert Prize 2024. The prize is given for significant contributions and works for the betterment of humankind to alumni of the University of Geneva. The award ceremony and the related lecture took place at the Geneva Chemistry and Biochemistry Days 2024 on January 18-19, 2024.
Source: *https://unige.ch*

Best Poster Award Winners at the DMCCB Basel Symposium 2024

As part of the 2024 edition of the DMCCB Basel Symposium 2024 that took place at the Biozentrum in Basel on February 12, 2024, the SCS also offered a poster session and honored the best contributions with the Best Poster Award. Dr. Christoph Sager from leadXpro and chair of the symposium,

handed over the certificates to the winners;
Pinwen Cai, Univerisity of Basel
«Selecting DNA encoded small molecules that direct protein ubiquitination»

David Kreutter, University of Bern
«Chemoenzymatic Multistep Retrosynthesis with Transformer Loops»
More information: *https://dmccb24.scg.ch*

JOURNAL NEWS

Helvetica, Volume 107, Issue 2, February 2024

Reviews
Functionalization of Cubane Formation of C–C and C–Heteroatom Bonds
Tomohiro Yasukawa, Katja S. Håheim, Janine Cossy

Radicals and Carbohydrates: A Grand Alliance
Béatrice Quiclet-Sire, Samir Z. Zard

Synthetic Procedures
Alternative Routes to 4,6-*O*-Benzylidene β-Thioglycosides
Daniela Imperio, Filippo Valloni, Luigi Panza

Research Articles
Twofold Alkenylation of Thiophenes with *N*-Vinylcarbazole via Iron-Catalyzed Regioselective C–H/C–H Coupling
Takahiro Doba, Rui Shang, Eiichi Nakamura

Hydroalkylation of 1,1-Diarylalkenes Mediated by Magnesium Hydride in Ethereal Solvents
Nattawadee Chaisan, Eugene Yew Kun Tan, Shunsuke Chiba

Novel Rearrangements of Guaiane Sesquiterpenes
Paul L. Türtscher, Gerhard Brunner, Andreas Goeke

Playing with Protic Additives to Improve the Outcome of Rhodium-Catalyzed Hydroarylation of Fullerene C_{60} with Arylboronic Acids
Merve Ergun Dönmez, Måns Eriksson, Gustav Hulu, Michael Nordström, Helena Grennberg

Synthesis and Cell-Based Evaluation of Umifenovir Analogues as Anti-SARS-CoV-2 Agents
Hiroaki Tanaka, Seiya Miyagi, Tomoko Morita, Hiroaki Ishii, Natsuki Mori, Kaho Oishi, Takemasa Sakaguchi, Toyonobu Usuki

Selective Recognition of Aromatic Amino Acids by a Molecular Cleft in Water
Joël F. Keller, Michal Valášek, Marcel Mayor

Synthesis and Photophysical Evaluation of 3,3'-Nitrogen Bis-Substituted *fac*-[$Re(CO)_3$(Diimine)Br] Complexes
Joshua Csucker, Nathalie Decrausaz, Sarah Isabella Jäggi, Olivier Blacque, Bernhard Spingler, Roger Alberto

Website: *https://onlinelibrary.wiley.com/journal/15222675*

INDUSTRIAL NEWS

Source: *www.chemanager-online.com*

Lonza and Oxford Nanopore to Collaborate on mRNA Analysis

January 30, 2024: Swiss contract development and manufacturing organization (CDMO) Lonza will collaborate with Oxford Nanopore Technologies, a UK-based company delivering a new generation of nanopore-based molecular sensing technology. The collaboration aims to cGMP validate and commercialize a first-of-its-kind novel test to accurately determine multiple critical quality attributes of mRNA products by directly sequencing both the DNA template and the messenger RNA (mRNA). Messenger RNA is an emerging class of biotherapeutics, offering new and unique opportunities for prevention and treatment of various infectious diseases, cancers, autoimmune and genetic disorders. Products based on mRNA can be designed, manufactured, and brought to market in very short timelines, as demonstrated by the production of Covid-19 vaccines. However, Lonza said, a significant amount of time and resources are required for analytical testing, including indirect mRNA sequencing. The collaboration aims to address this pressing industry and regulatory need for a cGMP-grade common testing method to simplify and streamline mRNA manufacturing. Oxford Nanopore's technology is said to be the first and only approach that can directly sequence the native RNA molecule. The collaboration between the two companies will focus on adapting this technology to apply to mRNA production analysis and quality control (QC). According to Lonza, the nanopore-based sequencing method allows several quality attributes in mRNA products to be measured simultaneously, on the same manufacturing site, using one technology platform. Once commercialized, the nanopore-based test could substantially reduce analytical testing time. As part of the collaboration, Oxford Nanopore will tech transfer workflows developed in house to Lonza for GMP validation, using its GridION device to generate real-time data and reporting. Following successful validation, Lonza intends to include the sequencing technology in its analytical development workflow offering, and support Oxford Nanopore in achieving stringent quality requirements for QC compliance. Lonza will pre-validate several critical quality attributes of mRNA products for the novel test at its analytical development laboratory in Geleen, the Netherlands, and technology transfer to QC laboratories on the same site for cGMP-compliant method validation. Torsten Schmidt, head of Lonza's mRNA business, commented: "While the mRNA market is fast-expanding, as a relatively new modality it still relies on the use of traditional analytical technologies. Faster and more effective mRNA analytics could simplify the regulatory review process and accelerate the development path." "mRNA technologies have already delivered a profound impact in recent years, and the industry is growing into many novel areas, including personalized cancer vaccines. With Lonza, we are excited to develop an enabling technology by developing the first GMP-grade test to analyze multiple critical quality attributes of mRNA products," added Gordon Sanghera, CEO of Oxford Nanopore.

Siegfried Announces Changes in Senior Management Team

February 5, 2024: Siegfried has appointed Marianne Späne, currently chief business officer Drug Products, as chief business officer with responsibility for both the Drug Substances and Drug Products divisions of the Swiss contract manufacturing and development organization (CDMO), effective Feb. 1, 2024. Christian Dowdeswell, who previously led the Drug Substance business, has decided to leave Siegfried. Siegfried also announced

the following personnel changes: Klaus Stingl, currently head of the company's Zofingen site, has been appointed as global head of Business Development and Sales Drug Substances, effective Feb. 1, 2024. Martin Kessler, formerly chief transformation officer at Rentschler, will become CEO of Dinamiqs, a Siegfried subsidiary, as of Mar. 1, 2024, while the current CEO Eduard Ayuso will become chief technology officer. Manja Boerman, formerly president Cell, Gene and Protein Therapy at Catalent, is to join as a new independent board member of Dinamiqs. In his new role, Stingl becomes member of Siegfried's extended executive committee. He joined the company in 2016. Prior to Siegfried, Stingl held several senior positions at Evonik. He holds a Ph.D. in organic chemistry from University of Oldenburg, Germany.

Bertrand Piccard Unveils Climate Impulse

Syensqo Technological Partner for Climate Action

February 7, 2024: Swiss explorer Bertrand Piccard has revealed his latest project: an emission-free airplane powered by green hydrogen. The aircraft aims to achieve a non-stop flight around the Earth, showcasing practical solutions for a cleaner and more efficient world. Partnering with Syensqo, this technological and environmental adventure will push the boundaries of innovation. The airplane is being developed in France by engineer and navigator Raphaël Dinelli. Climate Impulse plans to complete in 2028 the first non-stop round-the-world flight in a green hydrogen-powered airplane. After 2 years of research, development, and design supported by Airbus, Daher, Capgemini, and with the participation of Ariane Group, the construction of the aircraft has begun and will last two years under the direction of Raphaël Dinelli. Following another two years of testing, this unique aircraft will attempt to fly non-stop all around the Equator with pilots Bertrand Piccard and Raphaël Dinelli. Beside the production of green hydrogen from renewable energies, and its use through fuel cells to feed electric motors, the major challenge lies in maintaining liquid hydrogen at -253°C during an estimated nine days of flight. This will require revolutionary innovations in the creation of adapted thermal tanks, opening new horizons in aviation technology. The collaboration with Syensqo will enable Climate Impulse to develop these cutting-edge systems. "More than flying around the world with a hydrogen airplane, Climate Impulse will explore new ways of thinking and acting to promote a better quality of life," says Bertrand Piccard. "Efficient solutions will unite people from citizens and environmental activists to political and business leaders, shifting the narrative from sacrifice and fear to enthusiasm and action". The latest adventure of Bertrand Piccard was Solar Impulse, the unprecedented round-the-world flight in a solar-powered airplane. Solar Impulse was a symbol based on the intuition that renewable energies and cleantech solutions could achieve environmental objectives considered to be impossible. Since then, more than 1500 efficient solutions have been identified and labeled by the Solar Impulse Foundation, certifying their environmental benefit and economic viability. Syensqo (formerly part of Solvay) was the first and main technological partner to team up with Bertrand Piccard nearly 20 years ago with the Solar Impulse flight. "We are thrilled to be part of this ultimate flight, a non-stop zero emission round the world fueled by green hydrogen. Our 13,200 Syensqo' employees are proud to be part of this human, environmental and scientific adventure, showcasing the power of their sustainable innovations that will drive carbon neutrality for our customers and advance humanity," says Ilham Kadri, CEO at Syensqo.

DSM-Firmenich to Carve out Its Animal Nutrition & Health Business

February 15, 2024: DSM-Firmenich, a sector giant in nutrition, health, and beauty, has initiated a process to spin off and separate its Animal Nutrition & Health (ANH) business. ANH is being driven by different dynamics to the rest of the company and this became more apparent with the "unprecedented challenges in the vitamins market," the company said. Therefore, DSM-Firmenich believes that the full potential of the ANH business could be best realized through a different ownership structure for which all potential separation options will be considered. The company assumes that it will be able to separate the business in the course of 2025. A separation would enable DSM-Firmenich to strengthen its position in nutrition, health, and beauty by focusing on Perfumery & Beauty (P&B); Taste, Texture & Health (TTH); and Health, Nutrition & Care (HNC), the company explained. In addition, the separation of the ANH business will reduce the company's exposure to future vitamin earnings volatility, DSM-Firmenich said. ANH is headquartered at Kaiseraugst, Switzerland, and in 2023 it reported more than €3 billion in revenues. It has approximately 6,000 employees and is a leader in animal proteins, the company said. Dimitri de Vreeze, CEO of DSM-Firmenich, commented: "This is a difficult moment, but we strongly believe that a separation would be better for both businesses and their employees, and ultimately generate better value for all our stakeholders." As part of the vitamin transformation program announced in June 2023, DSM-Firmenich said that it continues to make significant progress on its cost reduction plan including plant closures, route-to-market simplification, and optimized service levels. The company remains confident in realizing a contribution of €100 million in adjusted EBITDA in 2024 and the full benefit of €200 million in 2025. DSM-Firmenich was formed from the merger of the Swiss company Firmenich and the Dutch company DSM. The merger was announced in June 2022 and completed in April 2023.