



SCS
Swiss Chemical
Society

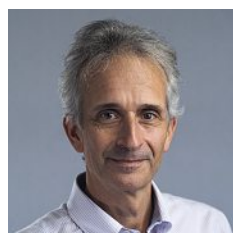
Community News

www.scg.ch

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SWISS CHEMICAL SOCIETY NEWS

President's Word 2024



Dear members of the Swiss Chemical Society,

I wish all of you and your relatives an excellent New Year 2024 that will fulfill your most optimistic expectations in happiness, success and health!

Unfortunately, the growing global instability that last year brought us, has not improved, quite on the contrary. It is not

the specific mandate of the SCS to solve political problems, but we can still all find a common ground over religious, political, or historical disagreements through Science and Chemistry. While a better understanding of the transformation of matter will probably not solve most of the current problems the world is facing, it will certainly help bringing people together and forming strong and beneficial communities. And this is precisely the main goal of the SCS. I encourage all of you to read (again) on the Society website its vision and mission statements, which have been reformulated a few months ago.

Another important event last year was the public availability of generative AI tools such as ChatGPT. Its use for trivial and time-consuming tasks is certainly a great help. But for us scientists, there is also a great danger. We should all keep in mind that the algorithms feed themselves on published data. Data that has been so far generated by humans, with a (hopefully) critical evaluation of their validity. If AI tools are now blindly used to produce data and publications, which is a growing trend, we will gradually create a recursive picture of reality that will drift away from reality. Science is the observation and understanding of the world as it is, and reporting on it cannot allow lax treatment of facts and ambiguous formulations.

As always, the list of activities organized by the SCS is very exciting and dense, with a collection of symposia, seminars, summer schools, mentoring events, and of course, our flagship events: the SCS Fall Meeting (September 5, in Fribourg) and the Swiss Chemistry Science Night (September 20, in Berne).

I look forward to seeing all of you very soon, at the latest at our General Assembly (June 7, in Basel) and I wish you again a very nice year 2024.

Prof. Christian Bochet, SCS President
University of Fribourg
christian.bochet@unifr.ch

Invitation to the SCS General Assembly 2024



The Board of Directors invites all members of the Swiss Chemical Society and the delegates of its associated societies to join the 34th General Assembly.

SCS General Assembly 2024
June 7, 2024, 13.30–14.00 (lunch break of the SCS Spring Meeting 2024). Biozentrum, University of Basel

Agenda GA 2024 (provisional)

1. Welcome and approval of the agenda
2. Election of the vote counters
3. Minutes of the 33rd General Assembly from April 14, 2023, (published in *CHIMIA* 5/2023, A357)
4. Annual Report 2023 (published in *CHIMIA* 1-2/2024)
5. Financial statement 2023 incl. audit report (a summary of the financial statement 2023 and the asset allocation per network and funds is available for members on the website after the formal audit (login required))
6. Discharge the Board
7. Elections for the ExB and the BoD. Election of the auditors
8. News and strategic projects
9. Outlook 2024/2025
10. Varia

Motions to the assembly can be submitted until May 15, 2024 to info@scg.ch

Dr. Gordon Honeyman started as the new Technical Editor of CHIMIA



On November 1st, Gordon Honeyman started the role as Technical Editor of *CHIMIA*. He has taken over the mandate from Gillian Harvey, who worked for *CHIMIA* for more than 23 years and retired at the end of January.

Dr. Honeyman, originally from Glasgow, Scotland and now living in Bern, since 2019, is 45 years old. He received his MSc in Chemistry and PhD from the University of Strathclyde, Glasgow. Then moving into industry to work for CIBA and then to a smaller pharmaceutical drug delivery company and then finally onto a start-up involved in revolutionary materials for contact lenses, where he was the senior polymer scientist and project manager. Since moving to Switzerland Gordon has worked as a laboratory manager at the University of Bern and is the COO and co-founder of inSEIT AG based in Bern.

Chemistry Travel Award 2024: Call for Applications



The Platform Chemistry of the Swiss Academy of Sciences (SCNAT) and the Swiss Chemical Society (SCS) announce the 2024 Chemistry Travel Award.

The award includes a contribution of CHF 1'000 towards the cost of an active participation (poster or oral presentation) at an international conference between 15 May 2024 and 14 May 2025

in any field of the chemical sciences. Up to 45 doctoral students from Swiss research institutions will be awarded. Selection will be based primarily on scientific accomplishments and on the submitted conference abstract.

All the information about the conditions of participation and the application forms are under chem.scnat.ch/travel_award

Deadline for application is March 31, 2024.

Source: <https://scnat.ch>

youngSCS visit to Dottikon



One of the main goals of the young Swiss Chemical Society (youngSCS) network is to facilitate the access of the participants to the chemical industry, primarily through organization of the company visits with the industrial partners. As a part of such activities, on 21st of November, 2023, youngSCS participants visited the site of Dottikon

Exclusive Synthesis AG (DOTTIKON ES) located in Dottikon, AG. DOTTIKON ES is a premiere manufacturer of high-quality chemical compounds, such as performance chemicals and active pharmaceutical ingredients (APIs) specializing in development and scaling of chemical processes that may involve hazardous reactions.

The visit was split into the morning and afternoon sessions and was inaugurated by the foreword of the company's CEO, Dr. Markus Blocher on the history, organization and the outlook of DOTTIKON ES and its niche within the chemical industry. This was followed by a case study on process development, scale-up and production by the head of R&D, Dr. Christian Herber, which provided insights on challenges presented by scaling up chemical processes.

The afternoon part of the program consisted of three hand-on workshops focusing on R&D, quality management and production. In the R&D part, participants had an opportunity to delve into the world of scale-up of chemical reactions and witness how scale-ups are developed at the company's facilities. Quality management workshop primarily focused on challenges of controlling the quality of products in the strict environment of Good Manufacturing Practice (GMP) and how these challenges are addressed technically by the quality control specialists. This was followed by a visit of the production facilities, where the participants witnessed the implementation of chemical processes in plant scale with a discussion on the engineering and organization that is required for continuous manufacturing of APIs.

The program was concluded by a networking apero, where participants were able to gain connections with the representatives of Dottikon Exclusive Synthesis AG in an informal setting.

Overall, this visit shows ever-developing links between youngSCS and the Swiss chemical industry, which are only expected to strengthen in the coming years. In this regard, the readers of this report may be interested in the upcoming industry visits organized by youngSCS. Stay tuned!

Acknowledgements

We would like to thank the representatives and staff of Dottikon Exclusive Synthesis AG for the warm reception and an excellent tour of the facilities. In particular, we thank Dr. Markus Blocher and Dr. Christian Herber for insightful discussions, Mrs. Tanja Spuhler for smooth communication and organization, as well as all other staff who provided insights into the operations of DOTTIKON ES. Finally, we would like to thank all of the participants for active and enriching participation in the visit.

Anton Kudashev, Marie-Désirée Schlemper-Scheidt

Global Women's Breakfast: «Catalysing Diversity in Science»



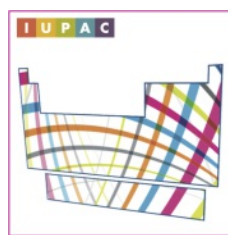
Join us on February 27, 2024 at Haute école d'ingénierie et d'architecture de Fribourg (HEIA) for the IUPAC Global Women's Breakfast (#GWB2024). Held in conjunction with the U.N. Day of Women and Girls in Science, the goal of the GWB series is to establish an active network of people of all genders to overcome the barriers to gender equality

in science. Over the last five years, more than 1500 GWB events have been held in 100 countries.

The theme of #GWB2024 is "Catalyzing Diversity in Science". Groups from all types of science organizations from high schools, to science societies, universities, companies, governments and non-governmental organizations are invited to host events. Event leaders are encouraged to reach out and collaborate with organizations in different sectors and to include scientists from multiple disciplines.

More information: <https://iupac.org>

International Teacher Survey on Green and Sustainable Chemistry (GSC) Practical Activities



The objective of this project is to improve understanding of the use of practical work in high school chemistry classes, in particular in relation to the integration of concepts of sustainability. This will be achieved by undertaking a multi-country survey of secondary school chemistry teachers on their utilisation of practical activities, with a focus

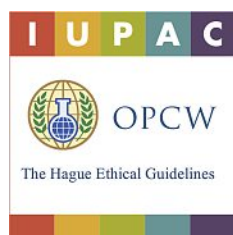
on green and sustainable chemistry (GSC) and circular economy (CE)-focused practical work.

The survey will be conducted online centrally but in the local language, facilitated by a task group member collaborating with and mentoring local chemistry education researchers and chemistry teacher educators from low- and middle-income countries (LMICs), ensuring the global representation of a project addressing an important issue (IUPAC Strategic Plan). Teachers completing the survey will be invited to be interviewed by the local researcher, to collect contemporary examples of GSC and CE-relevant practical activities. Dissemination will include a project website, regional meetings, research evidence for Masters/PhD research in chemistry education, and symposium presentations at ICCE 2024 and other relevant conferences.

The survey can be accessed here: <https://bit.ly/gschemsurvey>

More information: <https://iupac.org>

Teaching ethics and core values in chemistry education: Call for papers



A special issue devoted to education and outreach activities concerning ethical issues in chemistry is planned for Chemistry Teacher International. We are looking for good practices in the teaching and learning about ethics related specifically to the use of chemical knowledge, and the use of chemically produced compounds. This may be related to the use and production of chemical weapons, but also to the use of chemical knowledge related to the production of illicit drugs and undesired consequences of the production and/or use of materials and agrochemicals.

See details of the call for papers. Submission by March 1, 2024
Source: <https://iupac.org>

Call for nominations for the Prize Program 2024 of the Swiss Physical Society (SPS)



The SPS Prizes, each endowed with CHF 5'000, will be awarded again in 2024.

The work submitted must have been carried out either in Switzerland or by Swiss nationals abroad. The work will be judged on the basis of its significance, quality and originality.

Deadline for submission: April 1, 2024.

The prizes will be presented at the SPS Annual Meeting 2024 in Zürich.

The Program includes the following prizes:

- SPS Prize donated by the company ABB Switzerland AG for an outstanding research work in all fields of physics.
- SPS Prize donated by the company IBM Research GmbH for an outstanding research work in the field of condensed matter
- SPS Prize donated by the Swiss Federal Institute of Metrology METAS for an outstanding research work related to metrology
- SPS Prize donated by COMSOL Multiphysics GmbH for an outstanding research work in the field of computational physics
- SPS Prize sponsored by Hitachi Energy Switzerland AG for outstanding research work in the field of energy technology.

With these prizes, the SPS would like to recognize young physicists in the early stages of their career, in any case before they reach a permanent academic position or before they have been working in a start-up company or in industry for more than three years, for outstanding scientific work.

More information: <https://sps.ch/en/awards>

Prof. Yves Flückiger, new President of the Swiss Academies of Arts and Sciences a⁺ as of January 2024



In January, after more than three years at the helm of the Swiss Academies of Arts and Sciences, Prof. Marcel Tanner is handing over the presidency to Prof. Yves Flückiger, Rector of the University of Geneva. "Through the implementation of the organisational development and the joint multi-annual planning, the

Academies gained in profile and recognition," says Marcel Tanner. "Now is the time to pass on the baton." As Marcel Tanner's successor, the Assembly of Delegates of the Swiss Academies of Arts and Sciences elected Yves Flückiger on the proposal of the Executive Board. Yves Flückiger has been Rector of the University of Geneva since July 2015. He holds degrees in economics and sociology and a doctorate in economics. In 1992, after research stays in the USA (Harvard), England (Oxford) and Australia (Deakin University in Victoria), he was appointed professor at the University of Geneva. Among other functions, he directed the Observatoire universitaire de l'emploi, which monitors labour market developments, and he was responsible for the Leading House in Economics of Education. From February 2020 to January 2023, he served as president of swissuniversities. "The handover of the baton ensures that the academies benefit from outstanding, integrative leadership personalities today and in the long term," Marianne Bonvin, Director of the Swiss Academies of Arts and Sciences, is pleased to say. "Both are best acquainted with scientific as well as societal challenges."

Source: <https://akademien-schweiz.ch>

Prof. Angela Agostiano begins EuChemS Presidency



On January 1, 2024, after one year in the position of President-Elect, Prof. Angela Agostiano formally began her Presidency of the European Chemical Society. Angela Agostiano was elected in 2022, at EuChemS' General Assembly in Lisbon. After one year in the position of EuChemS President-Elect, she is following Prof. Floris Rutjes as President of the

European Chemical Society (EuChemS), as the term of Floris Rutjes ended on December 31, 2023. He will carry on with his activities as EuChemS Vice-President.

Angela Agostiano began her term as EuChemS President after gathering significant leadership experience as the first woman president of the Italian Chemical Society (SCI), between 2017–2019. During this time, she worked hard to increase SCI's European and global reach by addressing societal and policy issues through chemistry, such as drafting official positions on chemical weapons. In addition, she continuously emphasizes the importance of gender equality in science, as the Chair of the EuChemS Task Group on Inclusion and Diversity, amongst others. As the President of EuChemS, she will no doubt continue her involvement in the matters of fostering an inclusive and European chemistry community. One of her first activities in her new role will be the EuChemS Global Women's Breakfast event "Catalysing Diversity – How to Tackle Our Current Biases" on February 27.

Alongside her, new Executive Board Members – Alexandra R. Alburnia, Karsten Danielmeyer, Péter Szalay and Aura Tintaru also began their terms with the beginning of 2024.

Source: euchems.eu

Call for Nominations: EuChemS Young Chemists' Award 2024



Nominations for the EuChemS Young Chemist Awards opened on January 15. The aim of the EuChemS Young Chemists' Award (EYCA) is to showcase and recognize the excellent research being carried out by young scientists working in the chemical sciences. In particular

the award is intended to honor and encourage younger chemists whose current research displays a high level of excellence and distinction. It seeks to recognize and reward younger chemists of exceptional ability who show promise for substantial future achievements in chemistry-related research fields.

Selected nominees will be invited to the 9th EuChemS Chemistry Congress, to be held in Dublin, on July 7-11, to present their entries in the second round, after which, the winners will be presented at the congress.

More information: euchems.eu

Special Birthday Celebrations in 2024



Several of our senior SCS members will celebrate special birthdays in 2024. This gives us the opportunity to warmly congratulate them and wish them many more years with us!

95 years

Ernst Peterli, Bottmingen
Charles W. Jefford, Bogis-Bossey

90 years

Reinhart Keese, Spiegel b. Bern
Angelo Storni, Rheinfelden
Urs Burckhardt, Basel
Hansueli Brechbühler, Basel
Franz Müller, Hergiswil
H. Luzius Senti, Givrins

85 years

Paul Müller, Eysins
Georges Haas, MuttENZ
François L'Eplattenier, Hofstetten
Roland Heckendorn, Arlesheim
Wilhelm Pickenhagen, Versoix
Jean-Marie Lehn,
Frank Seela, Osnabrück (DE)
Peter Schwaninger, Schaffhausen
Ulrich Graf, Bottmingen
Ulrich Huber, Erlenbach

80 years

Michael Grätzel, St. Sulpice
Michel Geoffroy, Perly
Jean-Marie Adam, Rosenau (FR)
Klaus Müller, Basel
Hanspeter Huber, Basel
Peter Rüedi, Gockhausen
Jörg Widmer, Bern
Herbert Hohl, Wil
Amos B. Smith III, Philadelphia (US)
Georg Karlaganis, Münchenbuchsee
Hans-Rudolf Dettwiler, Glis
Peter Baumeister, Flüh
Hans Fierz, Allschwil
Werner Umland, Muralto

75 years

Theo Berclaz, Genève
Michael Allan, Wünnewil
Beda E. Fischer, Therwil
Hans Stünzi, Regensdorf
Bernhard Schwyn, Würenlos
Werner Gans, Berlin (DE)

Ernst Kupfer, Zürich
Kurt Dietliker, Allschwil
Silvio Decurtins,
Ruedi Gyga, Bottmingen

70 years

Roger Meuwly, Cournillens
Dominique Plancherel, Bex
Jan Gunzinger, St. Maximin (FR)
Charles-André Barras, Baltschieder
Guido Bold, Gipf-Oberfrick
Alfons Pascual, Basel
Thomas Weller, Oberwil
Reto Naef, Rheinfelden
Rolf Huber, Arlesheim
René Oskar Kühne, Zürich
Cornelius Nussbaumer, Oberillnau
Thomas Netscher, Bad Krozingen (DE)
Roland Jakob-Rötne, Inzlingen (DE)
Werner Luginbühl-Brand, Wabern
Walter Jucker, Rheinfelden
Bernhard Erb, Gipf-Oberfrick
Monika Mergler, Liestal
Christian Jenny, Basel
Gábor Laurenczy, Lonay
Heinz Fretz, Gunten
Werner Neidhart, Basel
Beat H. Meier, Staufen
Ruedi Aebersold, Zürich
Peter Nesvadba, Marly
Tamis Darbre, Ittigen



Ernst Peterli



Charles W. Jefford



Urs Burkhardt



Reinhart Keese



Luzius Senti



Franz Müller



Angelo Storni



Ulrich Huber



Paul Müller



Werner Urand



Klaus Müller



Herbert Hohl



Hans Rudolf Dettwiler



Hans Fierz



Georg Karlaganis



Werner Gans



Théo Berclaz



Ruedi Gygax



Michael Allan



Kurt Dietliker



Werner Luginbühl



Thomas Netscher



Ruedi Aebersold



René Kühne



Gabor Laurenczy



Cornelius Nussbaumer

A Warm Welcome to Our New Members!

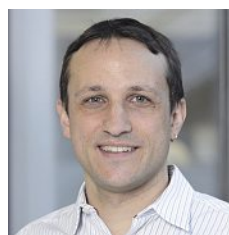


Period: 21.11.2023–29.01.2024

Ivan Abramovic, Baar – Anna Sophia Albertini, Aarau – Marvin Alberts, Adliswil – Matheus Andrade Meirelles, Bern – Rémi Andres, Basel – Fatemeh Azizian, Bern – Sanghyun Bae, Zurich – Charikleia Batsika, Bern – Gian Marco Beshara, Zurich – Maryna Bodnarchuk, Zurich – Glenn Bojanov, Bern – Seseg Bolotova, Basel – Valentina Borlandelli, Basel – Lea Bouche, Basel – Yung-Tai Chiang, Zurich – Chiara Disraeli, Basel – Maël Djaïd, Fribourg – Robin Dürr, Zurich – Jose Fernandez, Zurich – Yongping Gan, Zurich – Yves Grandjean, Bern – Jacob Holmes, Lausanne – Xiaoling Hu, Bern – Bettina Hürlimann, Zurich – Christian Invernizzi, Correzana (IT) – Mathilde Jacq, Zurich – Il Son Khan, Zurich – Helen Klingl, Basel – Emmy Kopf, Grenzach-Wyhlen (DE) – Ngoc Minh Huong Le, Zurich – Mingliang Liu, – Mirela Malekovic, Basel – Manuel Meinhardt, Aarau – Arturo Mendoza, Buchillon – Chloé Morin-Payé, Fribourg – Golam Moula, Zurich – Barbara Müller, Basel – Murad Najafov, Fribourg – Minqi Pan, Basel – Diana Piankova, Zurich – Anina Portmann, Dübendorf – Austia Puckett, Bern – Luka Raguž, Schaffhausen – Dominik Richert, Zurich – Lukas Rost, Zurich – Aleksandar Ruzicic, Küsnacht – Herve Siendt, Ranspach-le-Haut (FR) – Alona Slastennikova, Zurich – Lars Suesse, Bad Säckingen (DE) – Puyang Tian, Zurich – Modest von Korff, Dornach – Yuchen Wang, Zurich – Yu Wang, Zurich – Matthias Wirth, Seebach – Katrin Floriane Wuerzer, Zurich – Ziyang Zhang, Zurich.

HONORS, AWARDS, APPOINTMENTS

DIAC Fellowship 2024 awarded to Florian Kleinbeck, Novartis, Basel



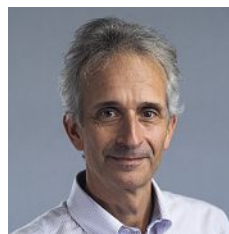
The SCS Division of Industrial & Applied Chemistry (DIAC) awards the DIAC Fellowship 2024 to *Dr. Florian Kleinbeck*, Novartis, Basel, for his tremendous impact on process chemistry and outstanding contributions in delivering innovative and breakthrough solutions in route design, (bio)catalysis, and process development for more

important Novartis compounds such as Piqray, Entresto or Leqvio.

Dr. Florian Kleinbeck will receive the certificate at the DIAC Annual Meeting at Syngenta in Stein on April 24, 2024.

The three lectures are planned at University of Fribourg, University of Basel and dsm-firmenich in Kaiseraugst.

Prof. Christian Bochet, University of Fribourg is honored with the Jaubert Prize 2024



The University of Geneva honors *Prof. Christian Bochet* from University of Fribourg, Department of Chemistry with the Jaubert Prize 2024. The prize is given every two years to alumni of the University of Geneva, for 'significant contributions and works for the betterment of humankind'. The award ceremony and Prof. Bochet's talk will

take place during the Geneva Chemistry and Biochemistry Days 2024 on January 19, 2024 at the grand auditoire de Physique.

More information: unige.ch

Prof. Charlotte Aumeier, University of Geneva awarded with the Friedrich Miescher Award 2024



Prof. Charlotte Aumeier, department of Biochemistry, University of Geneva has been awarded the Friedrich Miescher Award 2024 for her outstanding achievements in biochemistry. The award lecture titled “Motor proteins modulating Microtubule Shaft Dynamics” and award ceremony took place during the LS² Annual Meeting 2024

at the University of Lausanne (Amphimax) on February 15, 2024. Prof. Charlotte Aumeier is an Assistant Professor of Biochemistry at the University of Geneva. She received her PhD at the University of Bonn, Germany, studying the cytoskeleton of diatoms. Charlotte joined the University of Grenoble Alpes (France) to work on microtubules. In 2018, she started her individual research at the University of Geneva, where her group investigates the dynamics and regulatory mechanisms of microtubule networks through various methodologies.

More information: unige.ch

JOURNAL NEWS

Helvetica, Volume 107, Issue 1, January 2024



Reviews

Strategies for Direct, Transition Metal-Free Addition of Nitrogen Synthons to Alkenes

Brett N. Hemric, Thalia A. Garcia, Adriana E. Barni

Research Articles

Development of Photoredox-Assisted

Direct α -Alkylation Reactions of Ketones with Arylalkenes Using a Catalytic Amount of LiO^tBu as a Brønsted Base

Tsubasa Hirata, Tomoya Hisada, Yoshihiro Ogasawara, Shū Kobayashi, Yasuhiro Yamashita

Tailoring the Hybridization Density of DNA Biosensors through Tunable Surface Functionalization

Perrine Robin, Lucas Mayoraz, Pauline Skigin, Mounir Mensi, Sandrine Gerber-Lemaire

Improved Synthesis of Chiral 1,4,7-Triazacyclononane Derivatives and Their Application in Ni-Catalyzed Csp³–Csp³ Kumada Cross-Coupling

Chi-Herng Hu, Ju Byeong Chae, Liviu M. Mirica

Probing the Nature of Surface Hydrides by Deuterium Quadrupolar Parameters: A Case Study on Silica-Supported Zirconium Hydrides

Scott R. Docherty, Philipp Schärz, Domenico Gioffrè, Alexander V. Yakimov, Christophe Copéret

Synthesis and Olfactory Properties of Lower-Ring Homologues of the Linear Alicyclic Musk *Romandolide*

Vladimír Dacho, Artem Nikipelov, Michaela Tóthová, Philip Kraft, Peter Szolcsányi

Scalable Preparation of 1-Aminoethyl Substituted Chromanes
Stefan Diethelm, Gunther Schmidt, Thierry Sifferlen, Amandine Boller, Laurent Cornu, Christine Schmitt

Scalable Preparation of 1-Aminoethyl Oxindoles From Simple Benzaldehydes

Cédric Bürki, Stefan Diethelm, Fabio D’Aiuto, Marco Künzli, Gaëlle Mathieu, Christine Schmitt

Website: <https://onlinelibrary.wiley.com/journal/15222675>

INDUSTRIAL NEWS

Source: www.chemanager-online.com

Clariant Closes Its Sunliquid Bioethanol Plant in Romania

Impact also on the Activities of the Biofuels & Derivatives Business Line in Germany

December 6, 2023: Swiss specialty chemicals company Clariant has decided to shut down its Sunliquid bioethanol production in Podari, Romania, and to downsize related activities of the business line Biofuels & Derivatives at the company’s German locations in Straubing, Planegg and Munich that supported the development and ramp-up of the plant. After developing the respective technology – that converts agricultural waste into second-generation bioethanol – Clariant had taken the decision in 2017 to establish its own commercial Sunliquid plant in Podari, which began producing bioethanol in the second quarter of 2022. In July 2023, Clariant started a strategic evaluation of the options for the plant after it became clear that the plant did not achieve the targeted operational parameters. Clariant stated that in view of the continuing losses, the profitability of the Podari plant cannot justify a further expansion of operations as this would require significant additional capital expenditure. Required capabilities to maintain the technology and to fulfill existing contractual obligations will be kept. “After a careful review of all the strategic options, we have decided to close the Podari operation. We will work closely with employee representatives in Romania and Germany and are committed to finding solutions that are most socially responsible. For a company that focuses as much on innovation as we do, it is imperative to take firm decisions when a project does not fulfill expectations and to execute even more rigorously on our sustainable growth strategy,” said Clariant’s CEO Conrad Keijzer.

Roche to Acquire Obesity Drug Maker Carmot

December 6, 2023: In a move to participate in the race for anti-obesity drugs, Swiss pharma giant Roche has agreed to acquire Carmot Therapeutics, a privately owned US company based in Berkeley, California. Carmot’s R&D portfolio includes clinical stage subcutaneous and oral incretins with the potential to treat obesity in patients with and without diabetes, as well as a number of preclinical programs. The existing clinical data for Carmot’s assets, especially the lead asset CT-388, suggests a best-in-class potential to achieve and maintain weight loss with differentiated efficacy. In addition, the assets offer an opportunity for combinations with its own compounds already in the pipeline, including those focused on other benefits, such as muscle mass maintenance, Roche said. Incretins are gut hormones that are secreted after food intake and play a role in modulating blood glucose by stimulating insulin secretion and suppressing appetite. The incre-

tin-based portfolio could also be expanded to other indications where incretins play a role including cardiovascular, retinal and neurodegenerative disease. Thomas Schinecker, CEO of Roche, said: "Obesity is a heterogeneous disease, which contributes to many other diseases that together comprise a significant health burden worldwide. By combining Carmot's portfolio with programs in our pharmaceuticals pipeline and our diagnostics expertise and portfolio of products across cardiovascular and metabolic diseases, we are aiming to improve the standard of care and positively impact patients' lives." "We are encouraged by the clinical data for the lead asset CT-388, which demonstrated substantial weight loss in Phase 1b. These data suggest the potential for a differentiated profile to treat obesity and its associated diseases," added Levi Garraway, Roche's chief medical officer and head of global product development. Under the terms of the agreement, Roche will pay Carmot's equity holders a purchase price of \$2.7 billion in cash at the closing of the deal. Additionally, Carmot's equity holders are entitled to receive payments of up to \$400 million depending on the achievement of certain milestones. Roche will obtain access to Carmot's current R&D portfolio including all clinical and pre-clinical assets, with Carmot and its employees joining Roche as part of the group's Pharmaceuticals division. Roche will also gain exclusive access to Carmot's innovative Chemotype Evolution discovery platform in metabolism to further strengthen Roche's R&D efforts and portfolio across cardiovascular and metabolic diseases. The closing of the transaction is expected to take place in the first quarter of 2024.

Accelerating Chemicals Innovation

Molecular Modeling and Artificial Intelligence for a More Efficient R&D

December 12, 2023: The Spanish computational chemistry start-up Nextmol (Bytelab Solutions), a spin-off from the Barcelona Supercomputing Centre, offers a software-as-a-service (SaaS) platform that accelerates research and innovation in sustainable specialty chemicals through "in silico" experiments using molecular modeling and artificial intelligence (AI). Its cloud-based lab enables molecules and formulations to be characterized directly on the computer, reducing the time and cost of chemical research and development by a factor of five. In an interview with CHEManager, Nextmol's CEO Monica de Mier and Scientific Director Stephan Mohr talk about their revolutionary technology for the specialty chemicals industry.

CHEManager: What was the starting point and motivation for founding Nextmol?

Monica de Mier: The motivation for founding Nextmol was to help the chemical industry in its green and digital transition. With our solutions, we enable a faster development of sustainable chemicals to meet Green Deal goals, comply with environmental regulatory frameworks, and fulfill current consumer demands. We also help in the digitalization of industry by democratizing the use of computational approaches to companies of all sizes through an easy-to-use platform in the cloud. The final purpose is to contribute to the development of safer and more sustainable chemicals for society. *What problem does Nextmol's technology specifically solve, or what previously untapped opportunities does it open up?*

Stephan Mohr: Nextmol's technology solves the problem of the long and costly R&D processes in the experimental laboratory. Chemical research is based on a trial-and-error approach that requires a large number of tests before arriving at the molecule with the desired properties. Nextmol's platform is a computational laboratory to characterize chemical molecules directly on the computer, without synthesizing them. Molecular modeling simu-

lations allow to investigate the behavior of molecular systems on an atomistic level, and to study the fundamental interactions that govern them. These simulations are complemented with data-driven approaches, in particular machine learning, which characterize the molecules solely based on their molecular structure and are therefore well suited to quickly analyze thousands of possible new candidate chemistries. Both techniques can be used to predict the performance of molecules and rank them, and are already being successfully used for the computational study and design of chemicals in many fields.

Who are your customers and in which markets do you find them?

M. de Mier: Our customers are specialty chemicals companies with R&D activities, from chemical majors to SMEs and CDMOs. The platform is best suited for polymer and surfactant chemistries, and allows to study numerous properties and phenomena such as the characterization of biobased polymers and polymer blends, additive migration, adsorption affinity at surfaces / interfaces, synergistic and antagonistic effects, or collective effects — like anti-agglomeration, dispersion, friction reduction — of formulations.

How has the response from the industry been so far?

S. Mohr: The chemical industry is aware of its sustainability and competitiveness challenges, and the transformations that need to be undertaken. For example, we see that the chemical industry unfortunately lags behind in the digitalization of the data they produce in the laboratory. It is urgent to start generating and storing molecular data in a format that can be later leveraged by data-driven approaches. Our platform is having a very good response from industry as it makes it possible to characterize a large amount of molecules and formulations at a much lower cost than in the experimental laboratory, automates the trial-and-error stage, and identifies the most promising molecules that have certain physico-chemical properties. In this way, our platform guides and complements the experimental work, making the innovation process much more efficient. We go hand in hand with our customers to ensure a successful integration of our platform in their R&D operations.

What will be the next key steps in the development of the company?

M. de Mier: The next steps are to launch new features of the platform, such as our polymer builder, predictive machine learning models for polymer properties, or high-throughput screening capabilities. We are rapidly increasing the complexity of the molecules, formulations, and applications that the platform can solve. Our goal is to be the trusted computational partner of all chemical companies developing polymers and surfactants.

Towards a Digital Chemical R&D

Nextmol's platform is a computational laboratory to characterize chemical molecules directly on the computer (i.e. without having to synthesize them) and thus obtain deep insights about the behavior and mode of action of the molecules. It makes it straightforward to reproduce conditions that are hard to reach experimentally (such as high pressures or temperatures). The platform offers the end-to-end computational characterization of molecules: from the creation of the molecule(s) to study, building of the system, using predefined workflows or creating new ones, running calculations, and analyzing the results. Its main features are summarized here:

Modeling and calculation of numerous physico-chemical processes and descriptors such as adsorption, agglomeration, surface tension, interfacial tension, glass transition temperature, radius of gyration, persistence length, solubility, and density, among others;

- Modeling based on molecular dynamics;
- Several force fields available;
- Construction of homopolymers and copolymers (block, random) of any size, ionic, branched, cross-linked;
- Wide range of thermodynamic conditions;
- Calculations run in the cloud with the latest GPU hardware;
- Computations can be conducted by non-expert users in computational chemistry;
- Catalog of ready-to-use molecules and workflows;
- Especially suited for polymer and surfactant chemistries.

High-throughput calculations generate large datasets of accurate and consistent results that can be used to train ML models for the fast prediction of properties. Nextmol offers access to ML models for the prediction of, for instance, glass transition temperature (T_g) and solubility parameters of polymers (including biopolymers). Its computational lab can characterize complex formulations of polymers and surfactants, composed of several million atoms. Furthermore, our technology allows to study a wide range of surface and interface phenomena, such as adsorption affinity at interfaces, formation of self-assembled surface films and micelles, collective effects of adsorbed molecules (dispersion, anti-agglomeration, detergency, *etc.*), competition for the surface, or synergistic / antagonistic effects.

Computational Chemistry

Nextmol is a deep tech startup dedicated to the development of advanced molecular modeling and artificial intelligence tools to accelerate R&D in the chemical industry. It is a spin-off company of the Barcelona Supercomputing Center, the national supercomputing facility in Spain.

Since its creation in 2019, Nextmol has done projects for several multinational companies, both in the form of services and via its software-as-a-service (SaaS) platform for molecular characterization, and has been granted numerous prestigious national and international grants and awards. Nextmol is an R&D-intensive company, with a total of 40 years of research experience and more than 60 peer-reviewed publications in high-impact journals among its team members. The company's scientific activity focuses on the development of algorithms and tools for the design of best-in-class and more sustainable chemicals for different applications, including oilfield chemicals, fuel additives, lubricants, detergents, or cosmetics. Nextmol's mission is to help the chemical industry in its green and digital transition by making the R&D processes much faster and more efficient.

Milestones

- 2017 – 2019
Industrial projects at the Barcelona Supercomputing Center
- 2019
Creation of Nextmol
- 2021
Developed capabilities for surfactants modeling
- 2022
South Summit award to Best Industry 5.0 start-up
- 2023
Carried out successful high-throughput screening of bio-based polymers
Software platform launched

Roadmap

- 2024
Advanced Polymer builder and predictive ML models for polymer properties
- 2025
Expansion to new geographies
- 2026
Safety and sustainability features

Biosynth Acquires VIO Chemicals

December 20, 2023: Swiss Biosynth, a supplier of raw materials to the life science industry, has acquired VIO Chemicals, a Zurich, Switzerland-based company with leading chemical R&D expertise and a global network of large-scale manufacturing partners. Financial details of the transaction have not been disclosed. The acquisition, Biosynth said, will expand its ability to secure its customers' supply chains by bringing greater flexibility in scales for complex chemical manufacturing, with expertise across carbohydrates, nucleosides, intermediates, and specialty excipients, among others. Urs Spitz, CEO and president of Biosynth, said: "VIO Chemicals has a long standing relationship with Biosynth and is an excellent addition to our flagship Complex Chemicals division. We know that our customers want to stay working with us as their needs develop, so being able to offer flexibility and scope for greater scales of production, into the many metric tons, is an important part of that." "Biosynth's passion for chemistry has always been something that we have shared," commented VIO Chemicals' CEO and founder, Dimitris Kalias. "We are both driven by both science and our customers' needs, and I am excited for VIO to be part of the research, development, and manufacturing services that support our shared customers across a wide range of scales," Kalias added.

EuroAPI Appoints Ludwig de Mot as Chief Transformation Officer

January 8, 2024: EuroAPI has appointed Ludwig de Mot as chief transformation officer and executive vice president (EVP). He will focus on accelerating the company's transformation, including the completion and execution of the strategic review initiated in the fourth quarter of 2023 that spans the entire spectrum of EuroAPI's organization, including the assessment of its current product portfolio, cost structure, and balance sheet, the company said in a statement. A graduate of KU Leuven University in Belgium, de Mot, a Belgian national, worked for SCA Packaging between 1996 and 2006. He then joined lime and mineral-based products and solutions producer Lhoist, where he held several executive positions until 2017. De Mot also served as CEO for various international companies undergoing transformation, including ArcelorMittal Mining in Canada, McBride in the UK, Swissport in Switzerland and, more recently, Tereos in France. Since May 2022, Ludwig de Mot has been the chair of the Board of ESCO Couplings and Transmissions in Belgium and is also a member of the board of directors of Canada's Graymont and VPK Packaging in Belgium.