



SCS
Swiss Chemical
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Community News

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SWISS CHEMICAL SOCIETY NEWS

SCS Award Program 2023: Call for Nominations



As one of our four strategic pillars, SCS awards excellence in science and chemistry respectively and is proud of its renowned award program that goes back to 1936 with the ceremony of the first Werner Prizes to Dr. T. Postenak, Genève, and Prof. G. Schwarzenbach, Zurich. The call for nominations for the SCS Awards 2023 is open until September 30, 2022.

ber 30, 2022.

Please visit our Website for further details and hand in nominations electronically to info@scg.ch

Werner Prize

CHF 10'000 and medal in bronze. Awarded to a promising young scientist for outstanding independent chemical research.

Sandmeyer Award

CHF 10'000 for individuals or CHF 20'000 for groups. Awarded to a person or to a group for outstanding work in industrial or applied chemistry.

SCS Industrial Science Awards

This program includes awards on three career levels with cash checks of CHF 7'000, 10'000 and 15'000. It honors active industrial scientists working in Switzerland for their outstanding contributions in industrial R&D.

Green & Sustainable Chemistry Award

CHF 10'000. Honors outstanding scientific discoveries that lay the foundation for environmentally friendly approaches and products. It is supported by Syngenta as founding partner and SusChem Switzerland as hosting institution.

Grammaticakis-Neumann Award

CHF 5'000. The Prize is awarded to a promising young scientist for outstanding accomplishments in the field of experimental or theoretical photochemistry.

Balmer Prize

CHF 2'000 for individuals and CHF 2'000 for the school's chemistry department or CHF 3'000 for a group and CHF 1'000 for the school's chemistry department. Awarded to a teacher working in Switzerland at high school (gymnasium) level for innovation in chemistry teaching.

Dr. Max Lüthi Award

CHF 1'000 and medal in bronze. Presented for an outstanding diploma thesis in Chemistry conducted at a Swiss University of Applied Sciences.

Simon-Widmer Award

CHF 5'000. Honors distinguished scientists for their contribution to analytical science and the education of analytical scientists.

METAS Award

CHF 5'000. Honors outstanding contribution to the field of metrology in chemistry and/or biology.

Cancer Drug Discovery Research Award

CHF 10'000 in total for 2–4 winners. The award (supported by RGCC International) honors outstanding scientific achievements of MSc, PhD students or Postdocs from Switzerland that are working in the field of cancer drug discovery research.

DMCCB PhD Prize

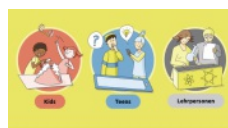
Certificate and cash check of CHF 1'500. The prize is for exceptional PhD theses in the field of Medicinal Chemistry and/or Chemical Biology completed at a Swiss University or ETH/EPF.

DIAC Fellow

CHF 1'000 and lecture tour in Switzerland. The distinction is granted to distinguished scientists from Industry for significant contributions and innovations over many years in the field of industrial chemistry and chemical process technology in Switzerland.

Website: scg.ch/awards

SimplyScience Foundation joined SCS as a new institutional member



**SIMPLY
SCIENCE**

We are happy and proud to report, that the SymplyScience Foundation joined the SCS as a new institutional member. For many years, SymplyScience collaborate with the SCS and now we formalized the partnership. The foundation completes the portfolio of the SCS Division Chemical Education with a wide range of offerings for kids, teens and teachers.

About SimplyScience

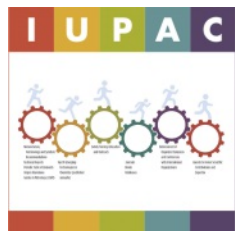
The SimplyScience Foundation promotes scientific and technical knowledge among children and young people and provides them with information about possible training and career opportunities. Existing commitments by industry, schools, universities and other associations and foundations are integrated in the activities and cross-linked.

The SimplyScience.ch website went online in October 2008. It is an initiative of scienceindustries, the Swiss chemical, pharmaceutical and life sciences industry association with around 250 member companies (www.scienceindustries.ch). In October 2010, the project was formally transferred to the SimplyScience Foundation

SimplyScience.ch is also supported by the Swiss Federal Department of Economic Affairs, Education and Research (EAER)

and is part of the initiative “Promoting young talent in science, mathematics and technology NMT.
More information: simplescience.ch

IUPAC: An Organizational Structure for the Future

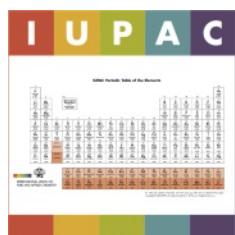


On 4 June 2022, the National Adhering Organizations (NAOs) of IUPAC will make a critically important decision that will have a great impact on IUPAC's role in the chemistry enterprise in the coming years. A new organizational structure has been proposed that is intended to position the Union favorably for its unique role in the rapidly

evolving world of 21st century science. Deliberations by the IUPAC Bureau and Executive Committee, in collaboration with the NAOs, have led to a series of proposed changes to the IUPAC Statutes, Bylaws and Standing Orders.

Source: iupac.org

Time to Review Your Periodic Table



Following the reviews of atomic-weight determinations and other cognate data in 2015, 2017, 2019 and 2021, the IUPAC Commission on Isotopic Abundances and Atomic Weights (CIAAW) has released the “Standard Atomic Weights of the Elements 2021” (Pure and Applied Chemistry, 4 May 2022; <https://doi.org/10.1515/pac-2019-0603>). As it is

customary, the Report summarizes definitions of general terms and reviews the main reasons that limit our knowledge about the atomic weights of the elements: the nuclide masses (for F, P, Na, as an example), isotope ratio measurements (Zn, Yb, Mo), or variations of isotopic composition among natural materials (H, C, O). The Table of Standard Atomic Weights (TSAW) is at the center of this IUPAC Technical Report. The number of significant digits reported in the Standard Atomic Weights exceeds in many cases the needs of users and, in some cases, a single atomic-weight value is needed for further calculations. These are called abridged standard atomic weights.

IUPAC also provides an updated Periodic Table (released 4 May 2022) which contains these latest revisions listing the abridged atomic weights along with their \pm values. In this Periodic Table, and for all radioactive elements that lack isotopes with a characteristic isotopic abundance in natural terrestrial samples, the mass number of the nuclide with the longest confirmed half-life is listed between square brackets.

With this release of the TSAW, IUPAC celebrates the World Metrology Day 2022 (May 20), themed this year “Metrology in the Digital Era.” In recent years, CIAAW has made all its updates available online first, and has strived to serve researchers both in classical and digital research environment through its website ciaaw.org.

The Report “Standard Atomic Weights of the Elements 2021” is available ahead of print since 4 May 2022. All updates for standard atomic weights can also be found on-line at the website of the IUPAC Commission on Isotopic Abundances and Atomic Weights (www.ciaaw.org).

Source: iupac.ch

A New Era begins for the SATW



There were many reasons to celebrate at SATW's 41st General Meeting on May 3, 2022. The event was therefore held in the renowned Zentrum Paul Klee in Bern. Not only did the organization celebrate its 40th anniversary. It also welcomed the new members present to its network in a festive act. The highlight of the event, however, took

place towards the end: the co-presidents a.i. Peter Seitz and Christofer Hierold officially handed over the presidency to their successor Benoît Dubuis.

In the morning, the statutory part of the General Assembly was dealt with. Without any dissenting votes, the members and delegates of the member societies accepted all changes in the statutes and in the election regulations. There were also no objections to the proposals for election business and the proposed persons for the Election Commission and the Scientific Advisory Board were unanimously accepted: Christofer Hierold was re-elected as President of the Election Commission and Franco Gervasoni was elected as a new member. The Scientific Advisory Board is strengthened with Max Erick Busse-Grawitz as a new member and can continue to count on the commitment of Walter Ammann, Agathe Koller-Hodac as well as Urs Mäder.

Highlights included the presentation of the Annual Report 2021 and thus a selection of activities that SATW successfully implemented in 2021: The launch of the Digital Self-Determination Network, the second implementation of the mentoring program for girls as part of Swiss TecLadies, the Technology Outlook and its communication campaign, the launch of the Food 4.0 initiative, the nationwide implementation of TecDays at schools, the study and consultation response in the area of cybersecurity, and last but not least, the innovation strength analysis.

Special topics, however, were the new cooperation with the Swiss Academies of Arts and Sciences and the international activities, which are to be further expanded in the coming years. The motion put forward and adopted for this purpose points in the right direction: Corresponding members and ordinary individual members will in future have equal status, so that they can all support SATW in building up the international network. The 40th anniversary was also given a stage: SATW has compiled an overview of the most important milestones for this purpose. Beatrice Huber presented the brochure together with Alexandre Luyet and recalled the beginnings of the organization as well as the most active protagonists during that time.

More Information: satw.ch

EFMC Photo Contest 2022: MedChemBio Realness



Do you feel up to the challenge to show what Medicinal Chemistry and Chemical Biology mean to you!?

“MedChemBio Realness” is the topic of our 2022 photo competition. We invite researchers from any level (e.g. students to expert professionals) and affiliation (e.g. academia and industry), to submit a picture showing the reality of

Medicinal Chemistry/Chemical Biology, why it is important and what it represents in your everyday life.

The submitted pictures will be judged by a first round of online voting and the 20 best shots will be showcased at the EFMC-ISMC 2022 for attendees to vote live!

Submit your best picture, and win up to 50€! Two runners-up will also be acknowledged and will receive 25€ each.

Closing date: July 10, 2022

More Information: efmc.info/photo-competition

A Warm Welcome to Our New Members!



Period: 26.04.2022-31.05.2022

Yeerlan Adeli, Dübendorf - Pascal Aggeler, Oberengstringen - Simone Aleandri, Bern - Samira Amini, Zurich - Andrei Andreichenko, Lausanne - Maria-Cristina Ardelean, London (GB) - Mikhail Batov, Lausanne - Matthias Becker, Zurich - Amina Benchohra,

Geneva - Moritz Bensberg, Zurich - Lukas Benzenberg, Zurich - Siiri Bienz, Zurich - Andreas Brenig, Villigen - Romain Brisse, Bolligen - Matthias Bütikofer, Zurich - Zhenfeng Cai, Zurich - Wei Cai, Lausanne - Pinwen Cai, Basel - Marianna Carone, Bern - Po-Han Chang, Lausanne - Sourav Chatterjee, Zurich - Youri Cortat, Fribourg - Sebastiano Carlo D'Angelo, Zurich - Evert Dhaene, Basel - Chaochen Dong, Zurich - Ioana Doran, Zurich - Thomas Duhamel, Annemasse (FR) - Robin Feldmann, Zurich - Jérôme Fischer, Bern - Thomas Flüeler, Zurich - Eliane Garo, Reinach - Yuzhen Ge, Zurich - Clément Gensous, Loughborough (GB) - Georgios Giannakakis, Zurich - Julian Götz, Zurich - Colin Hansen, Schöffland - Fang-Che Hsueh, Lausanne - Valdrin Islami, Zurich - Yunfei Jiao, Basel - Gabriel Junquetti Mattos, Geneva - Martina Kalt, Zurich - Yuji Kamei, Lausanne - Richard Karl, Basel - Kasimir Kienbeck, Zurich - Veronika Klasovita, Zurich - Kovida Kovida, Bolligen - Remigiusz Krecijasz, Bolligen - Constantin Krüger, Lausanne - Naresh Kumar, Bassersdorf - Benedikt Lauper, Dübendorf - Minju Lee, Lausanne - Paul Leidinger, Villigen - Shang-kun Li, Zurich - Lu Liu, Villigen - Tarek Manasfi, Dübendorf - Athanasios Markos, Zurich - Christine Marty, Lausanne - Paula Daniela Mestizo Melo, Zurich - Roya Moghaddasi Fereidani, Lausanne - Thomas Moragues, Zurich - Seyyed Jabbar Mousavi, Zurich - Nathan Mowry, Lausanne - Dusan Mrdjenovic, Zurich - Alexander Lund Nielsen, Lausanne - Inna Nybom, Zurich - Tomohiro Ogawa, Basel - Prerna Paliwal, Basel - Mariano Parra, Zurich - Björn Pfund, Basel - Laura Marie Poller, Zurich - Yahya Rabbani, Lausanne - Bojana Rankovic, Lausanne - Simon Alexander Rath, Zurich - Johannes Raths, Dübendorf - Emma Gabrielle Louise Robert, Lausanne - Juan Rojas, London (GB) - Fernando Romero, Birsfelden - Thomas Rossolini, Lausanne - Ramon Röthlisberger, Basel - Sayyed Hashem Sajjadi, Lausanne - Alan Scheidegger, Chavannes-Renens - Lukas Schreder, Olten - Miloš Selakovic, Dübendorf - Laurent Severy, Zurich - Saurabh Shukla, Zurich - Luise Sokoliuk, Weil am Rhein (D) - Vincenz-Maria Steiner, Bronschhofen - Manu Suvarna, Zurich - Despoina Svingou, Doettingen - Sarah Teiworte, Bern - Kateryna Tolmachova, Zurich - Jutta Toscano, Basel - Pietro Vahramian, Basel - Hanxuan Wang, Morges - Valerie Waser, Basel - Ri Wu, Zurich - Yaotian Wu, Geneva - Chengcheng Yan, Lausanne - Anne Zarda, Lausanne - Kaishuai Zhang, Bern - Kunyang Zhang, Dübendorf.

HONORS, AWARDS, APPOINTMENTS

First DIAC Fellowship awarded to Dr. Denis Gribkov, Syngenta



SCS and DIAC are happy to announce the assignment of the first DIAC Fellowship to **Dr. Denis Gribkov**, Syngenta Crop Protection AG.

Denis Gribkov has a long reaching track record of sustained technical achievement and innovation, having greatly shaped manufacturing routes and processes such as SolatenoI™ (Sandmeyer-Prize), SPIROPIDION™ technology, PLINAZOLIN™ technology and many others, often providing breakthrough solutions. His contributions lead to significant bottom line cost reductions and improved sustainability of chemical processes.

DIAC Fellow Lectures 2022

Dr. Denis Gribkov, Syngenta Crop Protection AG.

«Route scouting, route design, and process development at Syngenta»

> 26. Oct 2022, 16.30h, University of Bern, Department of Chemistry, Biochemistry and Pharmazie, Freiestrasse 3, 3012 Bern

> 28. Oct 2022, 09.00h, Novartis Pharma AG, Raum P22, Novartis Campus, Fabrikstrasse 16, 4002 Basel

DIAC Fellowship

The nomination as DIAC Fellow is granted to distinguished scientists from Industry for significant contributions and innovations over many years in the field of industrial chemistry and chemical process technology in Switzerland. The yearly award is sponsored by the Division of Industrial & Applied Chemistry (DIAC) of the Swiss Chemical Society and consists of a prize sum of CHF 1'000 as well an invitation to give lectures at Swiss academic and industrial institutions.

Submit your nominations for the DIAC Fellowship 2023 to info@scg.ch by September 30, 2022. The dossier should include a nomination letter (self-nominations are not accepted), the CV and a list of the most important publications of the candidate.

The Prix Schläfli 2022 in the field of Chemistry is awarded to Philipp Schwaller, EPFL Lausanne



Using language models to facilitate chemical syntheses, improve the understanding of large earthquakes, decipher the fundamentals of cell biological processes, produce single photons for protected data transfers – the Swiss Academy of Sciences (SCNAT) is awarding the Prix Schläfli 2022 to the four most important insights of young researchers

at Swiss universities. Luca Dal Zilio (Geosciences), Anna-Katharina Pfitzner (Biology), Philippe Schwaller (Chemistry) und Natasha Tomm (Physics) receive the prize for findings in their dissertations. The Prix Schläfli was first awarded as early as 1866.

Prix Schläfli 2022 in Chemistry

How do you use artificial intelligence to simulate chemical processes? Philippe Schwaller has developed a program that has been named the best of its kind by an independent research group.

Enthusiastic, passionate, analytical – and yes, a bit nerdy. In terms of his appearance and gestures, the young man sitting in

the Grosse Schanze Park in Bern on this sunny afternoon and using his hands to try and explain his research comes across a bit like the character Q from the latest James Bond films. Someone who clearly enjoys his work and has been able to turn what he loves into a career. Or, to put it another way, to bring a sense of playfulness to the field of science.

Even as a secondary school pupil, the Freiburg native was interested in everything to do with engineering and natural sciences – no wonder, then, that he decided to study something that unites the two: materials sciences is essentially a combination of chemistry, physics and engineering sciences. During his year studying abroad in Manchester, the EPFL student used computer models to simulate materials, thus pursuing his interest in computer science, programming and machine learning. His skills in these fields are mainly self-taught “with online courses”.

More Info: scnat.ch/awards/schlaefli

University of Porto Awards Michael Grätzel, EPFL Lausanne, honoris causa



U.PORTO

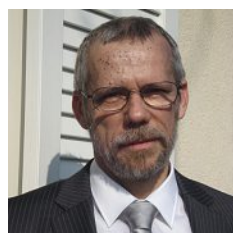
One of the most important researchers in chemistry of our time, **Prof. Michael Grätzel**, EPFL Lausanne, will receive an honorary doctorate from the University of Porto on 20 May 2022. Grätzel has been collaborating regularly with the Faculty of Engineering (FEUP) of the University of Porto, working in highly prestigious European research

projects and supporting PhD students.

Since 2008, Grätzel has maintained a close collaboration with professor and researcher Adélio Mendes with the Department of Chemical Engineering at FEUP. Together, they co-authored the first patent for laser-assisted glass sealing of dye-sensitized solar cells (“Grätzel cells”), a pioneering technology that was sold for €5 million to the Australian sustainable energy company Dyesol (now GreatCell Solar).

More Information: actu.epfl.ch

Double Honors for Gabor Laurenczy, EPFL Lausanne



Prof. Gabor Laurenczy at EPFL's School of Basic Sciences has been elected as an External Member of the Hungarian Academy of Sciences and has won the 2021 Rudolf Fabinyi Memorial Prize from the Hungarian Chemical Society.

The Hungarian Academy of Sciences (MTA) was founded in 1825 and today is the most important and prestigious

learned society of Hungary. It operates a research network with over 3000 full-time research personnel, carrying out “nation-wide missions related to the implementation, promotion and representation of science.” The MTA is made up of over seventeen thousand public members and eight hundred academics, two hundred of which are external (non-domestic) members.

The MTA has now elected Professor Gabor Laurenczy among its External Members. Laurenczy is Professor Emeritus with EPFL's School of Basic Sciences, where he directed the Group of Catalysis for Energy and Environment. His research focused on chemical reactions in gaseous and liquid phases, and he spent many years in charge of European projects developing innovative methods and techniques for chemical transformations, as well using high pressure to optimize chemical and biochemical processes.



UNIVERSITÉ
DE GENÈVE

FACULTÉ DES SCIENCES

The Faculty of Science at the University of Geneva, Switzerland, has an opening for a position as

Assistant Professor (tenure track) in Analytical Chemistry

The Department of Inorganic and Analytical Chemistry of the Faculty of Science at the University of Geneva seeks outstanding candidates for tenure track assistant professor in analytical chemistry to further strengthen its vibrant scientific environment.

All areas of analytical chemistry will be considered although research that complements the existing themes of aquatic sensors, bioanalytical mass spectrometry, bioelectrocatalysis and coordination and metallosupramolecular chemistry within the Department would be preferred.

The successful candidate will lead a visible and independent research group at an internationally competitive level that will be externally funded and teach at the BSc and MSc level.

Teaching in French at the BSc level is expected after a transition time of two years.

QUALIFICATIONS AND EXPERIENCE REQUIRED

PhD in chemistry or equivalent and an excellent track record of research and publications.

Candidates must be able to demonstrate academic excellence and the impact of their work at national and international levels.

In a continuing effort to enrich its academic environment and provide equal educational and employment opportunities, the University of Geneva actively encourages applications from women in higher education and is committed to a diverse academic community.

COMMITMENT START DATE

July 1st, 2023, or to be agreed

CONTACT

Applications should be submitted exclusively online (QR code below or the website).

Apply now before 31st July 2022 (23:59 Geneva time).

APPLICATIONS SENT BY EMAIL SHALL NOT BE ACCEPTED.

COMPLIMENTARY INFORMATION

Complementary information may be obtained at the following e-mail address: scienceopenings@unige.ch



jobs.unige.ch

In 2008, he and his co-workers published a seminal paper on the discovery of a homogeneous water-soluble ruthenium catalyst for the selective dehydrogenation of formic acid to hydrogen and carbon dioxide. A series of publications followed, elaborating on the mechanism followed, describing other catalysts, and the reverse reaction.

More Information: actu.epfl.ch

JOURNAL NEWS

Helvetica, Volume 105, Issue 5, May 2022



Research Articles

9-epi-Artemisinin – How a Single Stereo Center Affects Chemical Reactivity under Reductive Conditions

Daniel Kweku Anokwah, Pascal Furet, Regis Denay, Dorina Kotoni, Dominique Bixel, Thomas Allmendinger

Ni-Catalyzed Regioselective Cyclotrimerization of Internal Esteryl Alkynes towards Polysubstituted Benzene Rings

Chao Hou, Yan Ma, Yongqi Zhang, Huiling Xu, Yuanqi Wu, Jinbo Zhao, Yuchao Wang, Yu Liu

Website: onlinelibrary.wiley.com/journal/15222675

INDUSTRIAL NEWS

Source: www.chemanager-online.com

Bachem and Lilly Partner on Oligonucleotide APIs

April 27, 2022: Bachem, a Swiss specialist in the development manufacture and manufacture of peptides and oligonucleotides, has entered into a strategic collaboration with major drugmaker Eli Lilly. Under the terms of the agreement, Bachem will develop and manufacture APIs based on Lilly's novel oligonucleotide technology. As well as engineering infrastructure and expertise, Bachem will also provide R&D and production personnel at its facilities in Bubendorf, Switzerland to provide GMP-grade material for Lilly's oligonucleotide-based investigational medicines. Lilly has committed to placing manufacturing projects with Bachem over the next seven years, with annual orders potentially reaching about 100 million Swiss francs, depending on Bachem reaching certain milestones and definite volumes ordered by Lilly. Commenting on the collaboration, Bachem CEO Thomas Meier said: "We are excited about the prospects that our strategic collaboration with Lilly has for innovating how oligonucleotides are manufactured. Investigational medicines based on synthetically accessible oligonucleotides hold great promise for patients suffering from a variety of diseases and we are proud to collaborate with Lilly in unlocking the potential of this new modality." He added: "Our aim with this collaboration is to jointly develop tailored engineering and equipment solutions for oligonucleotides, thus improving quality and reducing manufacturing cost and time to market." Bachem explained that interest and market demand for oligonucleotide therapeutics has grown since their emergence as a new drug modality two decades ago. Initially focusing on rare diseases, oligonucleotide therapeutics are moving into more common chronic indications such as asthma, diabetes, chronic renal failure, as well as cardiovascular and liver diseases. Consequently, the company has expanded its manufacturing capacity and expertise in large-scale APIs.

Clariant Concludes Accounting Probe, Names new CFO

April 28, 2022: Swiss specialty chemicals producer Clariant has wrapped up an internal investigation into accounting irregularities in its 2020 financial results, unveiled minor adjustments to that year's originally stated figures and published preliminary earnings figures for 2021, which it had held back pending completion of the probe. Presenting the restated numbers on Apr. 27, the company also announced it plans to replace its chief financial officer, CFO Stephan Lynen. In a statement, Lynen said his stepping down will allow Clariant "a fresh start." The earnings adjustments, which CEO Conrad Keijzer said had no impact on sales, cash and cash equivalents previously reported for 2020 and 2021, boosted the original result by 50 basis points. The update showed a continuing operations EBITDA margin of 15.5% versus the earlier 15%. The concurrent figure for 2021 was 16.2%, which the CEO said was in line with guidance confirmed in February 2022. The investigation, triggered by a whistleblower's action, broke shortly before Conrad Keijzer, appointed as CEO at the end of 2020, planned to present financial results for 2021. Immediately following Clariant's announcement of the investigation, its share price in Zurich fell by as much as 20%. In light of this week's update, however, analysts at Baader said the mainly minor adjustments indicate that the company's accounting issues "were not material" and the underlying business is developing well, though its damaged reputation might depress its share price for some time. The Swiss stock exchange SIX meanwhile has approved the chemical producer's request to extend publication of its Integrated Report 2021 until Jun 15, 2022. The rules stipulate that the annual shareholders

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meeting must be scheduled for Jun. 30, 2022, when the company will also publish figures for the 2022 first quarter. Clariant said it expects the figures for the first three months of this year to show “compelling growth” as a result of strong global demand driven by higher volumes and pricing, despite current macroeconomic uncertainty. “In line with the investigation’s findings, the Muttentz-headquartered group said it has started to implement “necessary remedial action,” including immediately addressing internal controls over financial reporting (ICOFR), booking procedures, trainings and individual suspensions. Other measures are currently being “defined and developed.” Future Clariant CFO Bill Collins, an American national, has worked for some time in Europe, most recently serving as North American CEO as well as CFO of French energy group ENGIE, from 2018. His European career also includes stints at AkzoNobel, Eaton Corporation and Schneider Electric. The appointment “brings further diversity to Clariant’s leadership team,” said Keijzer.

Germany’s Merck to Expand Wuxi Production Site

May 4, 2022: Germany’s Merck has signed an agreement with the Administrative Management Committee of Wuxi National High-Tech Industrial Development Zone to “significantly expand” the company’s first Asia-Pacific Mobius Single-Use manufacturing center in China. Merck said it will invest around €100 million at the site over six years. Plans include increasing biopharma single-use assemblies and custom design capabilities. This will allow the Darmstadt-based company to at the same time extend its geographic footprint and strengthen its supply chain in China and the Asia Pacific. Some 1,000 new jobs will be created when operations start in 2024. Bolstering its presence in China is part of the pharmaceuticals, chemicals and life sciences player’s plan to increase its total capital spending by more than 50% between 2021 and 2025, versus the 2016 to 2020 period. More than 70% of the investment is earmarked for its “Big 3” growth engines, which include the Process Solutions business unit and the newly formed Life Science Services business unit of the Life Science business segment. “For more than two decades, Merck’s Life Science business segment, with the support of the Chinese government and the Wuxi authority, has served customers across academia, biopharma and diagnostics,” said Matthias Heinzl, CEO Life Science. Expanding local capabilities for the single-use assemblies is key to supporting the ongoing development and manufacture of Covid-19 vaccines and therapeutics and other lifesaving and life-enhancing treatments,” he added. Over the next five years, Marc Jaffre, managing director Life Science business sector, said Merck expects strong growth in the bioprocessing market, with Asia growing in the mid-teens and China above 20% per annum on average. This will be fueled by increasing demand for single-use products in advanced biopharmaceutical manufacturing such as monoclonal antibodies (mAbs), vaccines, and new therapies, he said. Since 2020, Merck has announced expansion projects for several of its European and US sites as part of a multi-year program to increase the industrial capacity and capabilities of its life science business. Over the next five years, the company will invest in Germany, China, France, Switzerland, Ireland and the US. All of the projects include “clear targets” for energy efficiency, water consumption, and waste treatment to toward the goal of becoming carbon-neutral by 2040.

Arxada and Novoset to Collaborate on Novel Composites

May 6, 2022: Arxada, the recent specialty chemicals spinoff from Swiss CDMO Lonza, has signed an exclusive license agreement with Novoset covering production and sale of a next generation hydrocarbon-based resin system for telecommunications infrastructure and advanced semiconductor packaging. Under the terms of the deal, the Basel-based company will develop,

manufacture and commercialize the resin system developed by Novoset, a process driven system solution thermoset polymer producer domiciled in the US state of New Jersey. The collaboration will expand Arxada’s existing capabilities for telecommunications to include 5G and other applications. The technology will be developed by Arxada’s Composite Materials unit, part of its Specialty Products Solutions (SPS) business. Along with the 5G telecommunications sector, the new resin system is to be supplied to several markets and will complement the company’s Primaset range of high-performance thermoset resins for the two application sectors. Building on the market success of its existing products for 3G and 4G electronic applications. Arxada said is currently developing the products at its facility in Visp, Switzerland, and plans to begin sending samples to customers in the current second quarter. Antje Gerber, president of Specialty Products Solutions, said the collaboration with Novoset aligns with the former Lonza unit’s strategy of designing and developing solutions for products of the future. The addition of this new hydrocarbon resin system to Arxada’s Composite Materials portfolio will further enhance its Primaset range while leveraging its existing development and innovation capabilities, she said. Novoset CEO Sajal Das, added that the agreement will enable the US firm to leverage Arxada’s process development and production capabilities and its broad commercial infrastructure to realize the full potential of the new technology. In addition, he said, a new class of catalyst technology has been developed for the products, which are suitable for both for conventional and advanced composite manufacturing methods. The collaboration is the fourth between Novoset and Arxada since 2011.

Cytiva Opens Swiss Cell and Gene Therapy Center

May 19, 2022: Cytiva, the former biopharma activities of General Electric and now part of Danaher, will open a new manufacturing facility in Grens, Switzerland, on May 31. Operations at the existing site in Eysins will continue through 2023, while full production transfers to the Grens site. The site will quadruple capacity for manufacturing Sefia, Sepax, and Xuri consumable products with two new ISO class 7 cleanrooms, ensuring that increased future demand can be met. It will also serve as a Center of Excellence for Cytiva’s cell and gene therapy business and will be a base for European customer training programs. “Our new facility in Grens will enable us to meet global demand for our products, while working with our customers to meet their immediate training and development needs. This facility brings us another step closer to our vision where access to life-changing therapies transforms human health,” commented Catarina Flyborg, vice president, cell and gene therapy. In March, Cytiva announced the opening of a new facility in Cardiff, Wales, for making single-use products used in the development and production of biopharmaceuticals, such as Covid-19 vaccines. A first ISO 7 class cleanroom in Cardiff is already completed, with another five due to be finished later this year. When complete, the site will help increase the company’s global manufacturing capacity for single-use products by 20%. Cytiva said the expansion will help the needs of the UK’s rapidly growing life sciences sector. According to the company, \$6 billion was raised last year in public and private financing by UK biotech companies, a 60% jump on 2020.

Germany’s Merck Invests €440 million in Ireland

May 24, 2022: The Life Science segment of Germany’s Merck is investing around €440 million to increase membrane and filtration manufacturing capabilities in Ireland’s County Cork. The plans call for adding capacity at an existing plant in Carrigtwohill and building a new plant in Blarney Business Park. Merck said the expansion of the Carrigtwohill facility to the tune of €290 million will create new capacity for immersion

casting of membranes. At Blarney, the Darmstadt group will spend nearly €150 million on a new filtration manufacturing plant. The dual project, which will add altogether more than 370 permanent jobs to the Irish workforce by the end of 2027 is the Life Science segment's biggest ever at a regional site, said Merck CEO Belén Garijo. Both businesses supply customers producing traditional as well as novel treatments and therapeutics. The membranes also serve the Process Solutions business, which is one of Merck's "Big 3" growth drivers, marketing products and services for the entire pharmaceutical manufacturing value chain. No start-up date for either of the two new projects has been announced. In 2021, Merck budgeted €36 million for a second lateral flow membrane manufacturing line at Carrigtwohill. This makes products commonly used in rapid diagnostic testing for rare diseases such as dengue fever, malaria and Ebola as well as the rapid antigen tests used to detect Covid-19. As a step toward boosting group sales to around €25 million by 2025, Merck plans to widen total capital spending "significantly" over the next five years. The Life Science segment plans to continue to invest in products and technology key to novel therapies and vaccine. The group as a whole is continuously expanding output of products for water consumption, waste management and energy efficiency toward meeting its goal of climate neutrality by 2040. Target countries for capital spending projects include Germany, China, France, Switzerland, Ireland and the US.

Clariant and Lummus Win China PDH Project

May 30, 2022: Swiss specialty chemicals producer Clariant and its process partner, US engineering technology giant Lummus, have been tapped by Fujian Meide to supply the Catofin technology and catalysts for a new propane dehydrogenation plant (PDH) the subsidiary of Zhongjing Petrochemicals will operate in Fuzhou, China. The Chinese company already has one PDH unit at its complex and has selected the Catofin process and catalysts for the project's second phase. With capacity for 900,000 t/y of propylene, the new unit set to go on stream in 2023 will count as one of the world's largest facilities. The process combines Lummus's advanced technology with Clariant's tailor-made catalysts and Heat Generating Material (HGM) to convert propane to propylene with what the partners assert is "exceptional reliability." Since its commercial launch in 2017, Catofin has been selected for 34 new projects worldwide, producing more than 24 million of new propylene capacity annually. More than half of the plants are in China. The contract award underscores the need for catalyst and technology innovations that allow for larger PDH units with higher returns on investment, Clariant said. "No other PDH technology has been commercially proven at this scale to date," it added. According to Stefan Heuser, senior vice president and general manager at Clariant Catalysts, the combination of HGM with the new Lummus process technology reduces energy consumption of the process by a third, making it a low-carbon route to propylene production. Specialized in energy, petrochemicals, logistics and packaging, Zhongjing Petrochemicals Group is the largest producer of biaxially oriented polypropylene (BOPP) films in China, with an annual capacity for 1 million of BOPP and 4 million t of PP.

Lonza and Israel Biotech Fund Collaborate

May 30, 2022: Lonza and Israel Biotech Fund (IBF) have signed a framework agreement, under which the Swiss CDMO will provide advice and support for Israeli biotech companies. IBF is dedicated to investing in and developing Israel's biotech sector. Under the agreement, Lonza will advise IBF in its due diligence review of candidate biotech targets and provide tailored advice and services to IBF's portfolio companies. Lonza said the move will accelerate development timelines while also mitigating the risk of developing and manufacturing molecules ranging from

monoclonal antibodies and complex proteins to antibody-drug conjugates. Pnina Weitz, global head of venture capital business development and relationship management at Lonza, commented: "IBF's network will allow Lonza to benefit from these connections and offer services and expertise across multiple modalities. Lonza's customized and scalable solutions in the development and manufacture of both biologics and small molecules will allow these companies to leverage our global network and experience and focus on what they do best – developing innovative and transformative treatments." Ido Zairi, co-founder and managing partner of IBF, added that the unique business model offered by the collaboration will see its portfolio companies benefit from a streamlined development and manufacturing process, allowing them to focus on R&D and pre-clinical studies. According to the companies, the number of biotech start-ups established every year in Israel has averaged 150 in the past decade. At the end of 2020, there were more than 1,750 life science companies, many of which are start-ups and small biotech firms. In separate news, Lonza is investing in extra inhalation capabilities at its site in Tampa, Florida, USA, which specializes in the development, clinical and commercial manufacturing of small molecule-based therapies targeting respiratory diseases and disorders, such as cancer, asthma and chronic obstructive pulmonary disease. The project will establish additional capacity for dry powder inhaler product development services, as well as increased capabilities for analytics and containment of highly potent APIs. The new facilities are expected to start operating in June 2022. With a rising global incidence of respiratory illnesses and disorders, Lonza said the need for improved localized delivery is expected to grow.



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