SCS
Swiss Chemical
Society

Community News

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SWISS CHEMICAL SOCIETY NEWS

SCS Awards 2020: 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 the age of 1936 with the ceremony of the first Werner Prizes to Dr. T. Posternak, Genève, and Prof. G. Schwarzenbach, Zürich.

The society hereby calls for nominations for the 2020 SCS Awards. Nominations have to be submitted electronically to info@scg.ch. The deadline for all documents to reach the Swiss Chemical Society is September 30, 2019.
For specific award information and a list of required documents please visit our website *scg.ch/awards*

Paracelsus Prize
CHF 20'000 and medal in gold
The Paracelsus Prize is awarded to an internationally outstanding scientist for his or her lifetime achievements in chemical research. It is awarded every two years.

Werner Prize
CHF 10'000 and medal in bronze
The Werner Prize is awarded to promising young Swiss scientists or young foreign scientists working in Switzerland for outstanding research in the field of chemistry. Selection of the winners is not restricted to candidates working at a university. On the deadline for submission of nominations, the candidate must be under 40 years old (i.e. 40th birthday after the deadline) and may not be a tenured professor or hold a managerial position in industry. The prize is awarded annually.

METAS Award
CHF 5'000
METAS honors with this award a promising scientist working in Switzerland for an outstanding contribution to the field of metrology in chemistry and/or biology. The price is announced nationally and is restricted to persons who are, at the time of the submission deadline, affiliated with Swiss academic or research institutions.

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 and medal in bronze

The Balmer Prize is awarded for innovation in chemistry teaching to a teacher working in Switzerland or to a team of teachers working at the same school at the high school level.

The innovation must consist of an original didactic approach, experimental method or teaching practice and be readily applicable to everyday teaching at the high school level. The costs for materials must be modest.

Dr. Max Lüthi Award
CHF 1'000 and medal in bronze
The Dr. Max Lüthi Award is presented for outstanding degree theses completed in the chemistry department of a Swiss University of Applied Sciences. Nominations must be submitted by the respective chemistry department heads. The prize is awarded annually.

Sandmeyer Award
CHF 10'000 for individuals or CHF 20'000 for groups
The Sandmeyer Award is presented to a team or an individual for outstanding work in the field of industrial or applied chemistry. The work must have been carried out in Switzerland or abroad by a team including Swiss nationals. The award may be presented to an individual – Swiss or foreign national – if the work was carried out in Switzerland. The award may be presented to an individual for work carried out abroad if the person is Swiss. Tenured professors will not be considered for the award as individuals. In the case of foreign teams, the Swiss member must have made a substantial contribution to the work. There is no age restriction. The prize is awarded annually.

SCS Industrial Science Awards
In 2013 the Swiss Chemical Society implemented this award program with support from the Swiss Industry Science Fund in order to honor researchers working in industry in the field of chemistry. The program targets scientists from companies of any size working in the field of chemistry or chemical related sciences. There are three awards with different criteria in terms of the experience and level of research attained by the candidates. The awards are presented to active researchers working in Switzerland and are given to individuals exclusively.

Industrial Science Award
to honor successful investigators with outstanding achievements.
Certificate and cash check of CHF 7'000
The prize is given on an annual basis.

Senior Industrial Science Award
to honor very successful and established investigators with outstanding achievements over many years.
Certificate and cash check of CHF 10'000
The prize is given on an annual basis.

Distinguished Industrial Science Award
to honor senior scientists for their lifetime achievements in chemical research.
Certificate and cash check of CHF 15'000
Rewarded on decision by the board

More information are available on our website:
scg.ch/awards

Competition: Submit your proposal for a new look for CHIMIA

CHIMIA, the membership journal of the Swiss Chemical Society, needs a new look!

We are redesigning the cover of CHIMIA and an integral part of that design will be a background image that reflects the chemistry content of the journal.

Therefore, we are calling on all talented creative chemists to design a chemistry-based image that is original, exciting, colourful, subtle or elegant. The choice is up to you!

The winning design will be used for all CHIMIA covers from 2020 onwards and the winning artist will receive a prize of 500.- CHF.

Please submit your design by 15.07.2019 to info@scg.ch.

E14th European Young Chemists' Network Delegate Assembly

The 14th Delegate Assembly (DA) of the European Young Chemists' Network (EYCN) took place in Bremen on March 17–20, 2019 and it was organized in collaboration with the German Young Chemists' Network (GDCh-JCF). The Swiss Young Chemists' Association (SYCA) was represented by two Delegates, namely Dr. Jovana V. Milc and Amin Hodaei (EPFL).

During the DA, EYCN Delegates and former Board members presented their activities. Moreover, a number of special guests contributed to the event. The German Chemical Society (GDCh) CEO, Prof. Wolfram Koch, welcomed the EYCN delegates and attendees. The President of European Chemical Society (EuChemS), Pilar Goya Laza, together with the Science Communication and Policy Officer, Alex Schiphorst, talked about the role and actions of EuChemS. Furthermore, American Chemical Society (ACS) was represented by Jackie O'Neil and Juan Carlos Aponte-Santini (ACS-YCC), whereas other insightful contributions were provided by Bibiana Campos-Seijo (Editor-in-Chief of C&EN), Catherine Rawlins (Conference Presence Chair of IYCN), Christian Bürger (CEO of chembid GmbH), Anni Siltanen (ECEG, the Finnish Chemical Industry), as well as Matthias Kleff (Evonik Industries, long-term partner of the EYCN).

The 14th DA also involved the elections of the new Board of EYCN. The SYCA Delegate, Dr. Jovana V. Milić (EPFL), was elected Team Leader of the Networks team, formerly led by Dr. Victor Mougel (currently Professor at ETH Zurich). The team is dedicated to increasing the impact of EYCN through its activities and international partnerships with academia, industry, and governmental bodies, while connecting and supporting young chemists. Moreover, Amin Hodaei (EPFL) joined the Global Communications team as a participating Delegate. Over the next two years, the EYCN will continue with the activities and public outreach, promoting the interactions of the young chemists across Europe. The next DA will take place in February 2020 in Sitges, Spain, and it will be organized by the Catalan Chemical Society. The participation of the Swiss Delegates will hopefully promote closer collaboration between the two associations.

For more information about EYCN, please refer to their website *www.eycn.eu*

Chemistry Demonstration Day 2019: A day spent discussing teaching practices

EPFL held a special Education Day on Friday, 17 May 2019, as part of events commemorating its 50th anniversary. The day included a ceremony to announce the winners of the LEARN Awards – prizes given out by EPFL to recognize innovative high-school teaching initiatives.

"Dare to know." Kant's words were the inspiration behind the keynote address given by Pierre Vandergheynst, EPFL's Vice President for Education, at Education Day on Friday, 17 May. The event was held at the Swiss Tech Convention Center, where over 300 people – mostly education professionals – took a close look at the discipline and, more specifically, at how to teach science more effectively and how to help students manage the transition from high school to college. "We were delighted to see so many high-school teachers from across Switzerland attending our event," says Sabrina Rami Shojaei, head of EPFL's Education Outreach Department (SPE), which organized the conference.

The first speaker – Eric Mazur, a physics professor at Harvard University – addressed the important challenge of capturing students' attention and, above all, making sure they learn the material. As an expert in the topic, Mazur gave the audience a demonstration of his peer instruction method by turning a metal plate with a hole in it into a subject of debate for the entire room. The trick is to ask a lot of questions and get people involved in the learning process. "You don't learn by watching. You learn by doing," says Mazur – whom EPFL President Martin Vetterli called "the rock star of education."

Putting students in researchers' shoes

Education Day also marked the first year of the LEARN Awards, handed out by SPE in association with EPFL's new LEARN Center. The goal is to recognize initiatives at the high-school level that take a new approach to education. This year's first-place winner was Sébastien Morard, a teacher at St. Michel high school in Fribourg. His idea was to put seven students in his elective geography class into the shoes of geography researchers. How? By asking them to analyze green transportation methods at all Fribourg high schools. "They managed the entire project, from collecting data to making suggestions for improvements," says Morard, who had spent ten years working as a geographer. And his effort paid off, as reflected in the students' enthusiastic feedback. "Teaching through the use of student projects requires ten times more preparation time. And you have to be ready to take risks, because things don't always go the way you plan," he says. Morard will receive CHF 20,000 with his LEARN Award, which he will use to expand his approach to larger groups of second-year students and to purchase scientific instruments that students can use to measure environmental impacts. "For instance, sensors to measure CO_2 concentrations or water purity," he says.

Third place went to ***Thibault Rossel***, a chemistry teacher at the French high school in Biel/Bienne, who also challenges students to think like researchers in order to stimulate their curiosity. "My students are tasked with creating colorimetric biosensors for detecting potentially hazardous substances. This year we worked on sensors for detecting glyphosate, since there aren't many already out there. It's a genuine research project; I work side by side with my students and I don't know ahead of time what we will discover," says Rossel, who holds a PhD in bioorganic chemistry. With the CHF 10,000 he received, Rossel plans to purchase an automatic pipetting station so that students can practice using the latest technology and develop their computational thinking

skills. He also plans to distribute the research kit he created so other teachers can follow his approach.

A scientific escape game

Second place went to ***Solothurn cantonal high school***, where the administrators decided to rethink the school's teaching methods after observing that many of its graduates struggled upon entering university. The school therefore undertook a large-scale change program designed to give students more autonomy in the learning process. "We wanted to lighten the course load so that students can better concentrate on the core subjects, and to give students more freedom and encourage them to be more independent. We also changed our evaluation process, introduced more regular exams and adopted new skills assessment methods," says Stefan Zumbrunn, the school's principal. The biggest challenge in the program was getting all the school's 200 teachers and 1,800 students on board. "We want our school to be up to date with the latest teaching practices. Fortunately we have a dynamic culture, and we got a lot of positive feedback on our initiative," says Dieter Müller, the school's co-rector. The CHF 15,000 prize money will go towards further expanding the program.

The public award (with a CHF 5,000 prize) went to ***Gabriel Palacios***, a physics teacher at Hofwil high school in Bern. In 2013 he and his colleagues built a scientific escape game by reconverting an old cellar in Bern. The game – which took eight months to construct – walks students through several different scientific phenomena, piquing their curiosity and enticing them to learn more. Palacios found that after playing the game, students inundated him with questions about the different things they experienced in the cellar, giving him the perfect opportunity to explain physics-related concepts. He still employs the game today and his idea is now used in over 180 escape games worldwide, including 38 in Switzerland. Over a hundred of his former students have helped develop the games – further illustrating the power of getting students involved in the learning process. After all, as Mazur noted, "we are all born as scientists." Who dare to know.

Author: Laureline Duvillard
Source: Mediacom

A Warm Welcome to Our New Members!

Period: 30.04.–27.05.2019

Marcel Aebli, Dübendorf - Miren Agote-Arán, Ennetbaden - Rémi Andres, Lussy-sur-Morges - Mario Arcari, Zurich - Priyanka Bansal, Saint Sulpice - Marina Bantzi, Fribourg - Jonathan Barnes, Erlenbach - Raphaël Beltran, Renens - Cesare Berton, Prilly - Manuel Besmer, Zurich - Mathias Bonmarin, Zurich - Dario Bragagnolo, Bern - Claudio Cappelletti, Fribourg - Bo-Jung Chen, Lausanne - Yangyang Cheng, Geneva - Jasper Clarysse, Zurich - Shubhajit Das, Lausanne - Brener Rodrigo De Carvalho Vale, Lausanne - Edward Ditler, Zurich - Irina Diukova, Lausanne - Matus Diveky, Zurich - Charleen Don, Baden - Moritz Durtschi, Zurich - Carmen Esposito, Zurich - André Fischer, Niedergösgen - Jenny Folini, Riehen - Michelle Frei, Untersiggenthal - Sven Freimann, Winikon - Mingxue Fu, Geneva - Ina Fureraj, Geneva - Matthieu Génévriez, Zurich - Nikolay Golubev, Morges - Jorge Gonzalez, Zurich - Cristina E. Gonzalez Espinoza, Vernier - Vladimir Gorbachev, Olten - Daniel Görl, Denges - Cristian Gozálvez Martínez, Allschwil - Tatyana Grayfer, Zurich - Philipp Grossenbacher, Uttigen - Stefan Gugler, Zurich - Shu-Min Guo, Basel - Joanna Hajduk, Zurich - Zahra Halvorsen, Zurich - Ruocheng Han, Zurich - Xiaoyu Hao, Geneva - Cedric Hervieu, Zurich - Lukas Hoff, Zurich - Ottmar Hueter, Lörrach (DE) - theo Jaffrelot Inizan, Lausanne - Harikrishnan Jayaprakash, Zurich - Celine Journot, Lausanne - Anita Justin, Sion - Jérôme Kaeslin, Lenzburg - Martina Kalt, Lenzburg - Maksym Karamash, Fribourg - Vikram Karve, Sion - Simon Klingler, Zurich - Gerhard König, Zurich - Denis Kuznetsov, Bruttisellen - Jiayi Lan, Dietikon - Aragorn Laverny, Chavanne-pres-renens - Alexandre Leclair, Renens - Wei-Tse Lee, Ecublens - Chenxi Li, Zurich - Yunchang Liang, Renens - Stephanie Linker, Zurich - Wenxing Liu, Genève - Cristina Lupo, Zurich - Jimmy Maillard, Lausanne - Juraj Malincík, Basel - Anna Malinowska, Zurich - Tarek Manasfi, Dübendorf - Giacomo Manfroni, Basel - Bruno Marco Dufort, Zurich - Kamyar Mehrabi, Zurich - Eduard Miloglyadov, Zurich - Takeru Miyakoshi, Basel - Tagwa Mohammed, Zurich - Rahul Mondal, Zurich - Gareth Moore, Bern - Martin Mösching, Biel - Manouchehr Nadjafi, Zurich - Germain Nicolas, Saint-Louis (FR) - Timo Niepel, Adliswil - Mohammad Ismael Nouraddini Halvae, Zurich - Fionn O›Hara, Basel - Julien Orts, Zurich - Kristers Ozols, Renens - Yashashwa Pandey, Ruschlikon - Sara Pannilunghi, Geneva - Cristian Pezzato, Lausanne - Francesca Piazzolla, Carouge - Adam Pruška, Kloten - Stefano Rendine, Wegenstetten - Guglielmo Risi, Basel - Maneka Roger, Villigen - Nina Röthlisberger, Uetendorf - Przemyslaw Rzepka, Zurich - Ilia Sadykov, Villigen - Khaydarali Sayfidinov, Fribourg - Lukas Schneider, Zurich - Simon Schnell, Zurich - Anne Schuhmacher, Zurich - Justine Schwarte, Fribourg - Rajalakshmi Senthil Ar-

umugam, Zurich - Wen Shao, Geneva - Amrita Singh-Morgan, Zurich - Amrita Singh-Morgan, Zurich - Jihad Sissaoui, Genève - Philip Skaanderup, Allschwil - Ekaterina Slyshkina, Zurich - Vitalii Smal, Lausanne - Daniel Sun, Sion - Silvia Tanteri, Lausanne - Gaël Tran, Saint Julien en Genevois (FR) - Po-Jen Tseng, Lausanne - Christophe Vaillant, Vulliens - Jaicy Vallapurackal, Basel - Gerard van Koten, Basel - Harmina Vejayan, Lausanne - Dide Verhoeven, Bern - Pragya Verma, Geneva - Vera Diana von Burg, Zurich - Julian Wennmacher, Windisch - Gunther Wichmann, Binz - Xiaowen Wu, Zurich - Shuliang Yang, Lausanne - Anna Zabilska, Brugg - Hui Zhou, Adliswil - Ping Zhou, Bern - Jie Zhu, Zurich - Patric Zimmermann, Villigen.

HONORS, AWARDS, APPOINTMENTS

Prof. Xile Hu, EPFL Lausanne, wins RSC Homogeneous Catalysis Award

Prof. Xile Hu, EPFL Lausanne, has won the award for original contributions to base metal catalysis, particularly in C–C and C–N coupling of alkyl electrophiles and in functionalization of alkenes and alkynes.

Receiving the award, Prof. Hu said: "I am thrilled to receive the RSC Homogeneous Catalysis award this year. This award is a recognition of the teamwork of many talented co-workers with whom I am privileged to work."

In winning the award, Professor Hu also receives £2,000 and a medal.

Currently the most efficient catalysts are made of precious and scarce metals. Professor Hu is working to develop catalysts made of non-precious, Earth-abundant metals, paving the way for sustainable chemical production.

The Royal Society of Chemistry's Awards and Prizes are awarded in recognition of originality and impact of research, or for each winner's contribution to the chemical sciences industry or education. They also acknowledge the importance of teamwork across the chemical sciences, as well as the abilities of individuals to develop successful collaborations.
More information is available at: *rsc.li/prizes-awards*
Source: *actu.epfl.ch/news*

Prof. Nicolai Cramer, EPFL Lausanne, wins RSC Merck, Sharp & Dohme Award

Prof. Nicolai Cramer, EPFL Lausanne, has won the award for the development of chiral cyclopentadienyl ligands and Pd(0)-catalysed asymmetric C(sp^3)–H activations.

Receiving the award, Professor Cramer said: "I am really excited and feel deeply honored by the Merck, Sharp and Dohme award. For me, this is a very rewarding event as it acknowledges ideas and concepts on the development of particular chiral ligands that my group is pursuing for years. I was – and am still – blessed with an amazing group of talented students and coworkers that bring their dedication and contributions to bring the ideas to life."

In winning the award, Professor Cramer also receives £2,000 and a medal.

The work has developed catalysts, molecules that are little, powerful helpers to convert carbon-hydrogen bonds into things with lots of useful properties. The technology is used to upgrade cheap, abundant and widely accessible precursorsthat are rich in hydrogen bonds into sought-after and value-added intermediates that can be used for instance for the production of pharmaceuticals.
More information is available at: *rsc.li/prizes-awards*
Source: *actu.epfl.ch/news*

Prof. Majed Chergui, EPFL Lausanne, wins RSC Liversidge Award

Prof. Majed Chergui, EPFL Lausanne, has won the award for pioneering picosecond and femtosecond X-ray spectroscopy of molecular species in solutions.

Receiving the award, Professor Chergui said: "I am very honored to receive the Royal Society of Chemistry Liversidge Award. This award acknowledges the insights delivered by ultrafast X-ray spectroscopic methods into the dynamics of chemical bonds in a large variety of systems: proteins, molecules and materials. This area of research, on which my group worked for the past 20 years, has reached a turning point with new instrumentation being developed world-wide, I look forward to sharing some highlights from my group's research during the lecture tour."

In winning the award, Professor Chergui also receives £2,000 and a medal.

At the end of the 19th century, a falling cat was filmed landing on its paws for the first time, helping understand the motions cats make during the fall. Professor Chergui has worked on doing this with molecules which requires methods that can "see" atoms on the tiny time scales on which they move. Professor Chergui's achievement has been to combine the high spatial resolution of X-rays, with the high temporal resolution needed to visualize movement of molecules, proteins and solids in "real-time".
More information is available at: *rsc.li/prizes-awards*
Source: *actu.epfl.ch/news*

Prof. Cristina Nevado, University of Zurich, honored with the Organometallic Chemistry Award of the RSC

Prof. Cristina Nevado, University of Zurich, has won the prestigious 2019 Organometallic Chemistry Award for the development of catalytic cross-coupling and radical reactions, including fundamental mechanistic studies and applications in the synthesis of complex molecules.

The price was established in 1970 and includes beside £2,000 a medal and a certificate. The winner is invited to a complete UK lecture tour and was chosen by the Organometallic Chemistry Award sub-committee.

The selection of winners is based on the overall quality of relevant contributions made by nominees and not simply on quantitative measures. Originality and impact of research as well as the quality of publications and the innovation are significant criteria for this prize.
Source: *www.chem.uzh.ch*

Murielle Delley, ETH Zurich, is awarded the Prix Schläfli 2019 in Chemistry

The Academy of Natural Sciences (SCNAT) annually awards the Prix Schläfli to the four best dissertations by young researchers at Swiss universities. ***Murielle Delley*** (Chemistry), Matteo Fadel (Physics), Rebekka Wild (Biology) and Julie Zähringer (Geosciences) receive the prize for discoveries made during their dissertation work.

In her dissertation titled "Molecular-Level Understanding of Structure and Reactivity of Isolated Chromium Sites on Oxide Surfaces", Murielle Delley, former doctoral student at Christophe Copéret's research group, investigated how certain catalysts, which are for example used in polyethylene production, function.
Source: *www.chem.uzh.ch*

The EU has recognised Michela Puddu, co-founder of ETH spin-off Haelixa, as a successful female innovator

The European Commission has named former ETH doctoral student ***Michela Puddu***, co-founder and CEO of the ETH spin-off Haelixa, as one of the winners of its 2019 Prize for Women Innovators. She received the Rising Innovator 2019 award for her pioneering business idea. Puddu launched her spin-off Haelixa to apply and market a technology that she co-developed for her doctoral thesis in the group led by Wendelin Stark, Professor at the Institute of Chemical and Bioengineering at ETH Zurich. The technology is based on tracer materials composed of DNA that can be mixed with any fluid and item, providing it with a unique fingerprint. The DNA solution can, for example, make products traceable and detect counterfeits. The many application include labelling for products in the fair-trade or organic farming sectors. Haelixa's offices and laboratories are located in the ieLab at ETH Zurich.

Awarded annually and financed under the EU's Horizon 2020 research and innovation programme, the EU Prize for Women Innovators is awarded to women who have founded or a successful company based on their innovative ideas. The Rising Innovator category of the award is endowed with a prize of 50,000 Euros. "Women are underrepresented in terms of creating innovative enterprises – only 31 percent of entrepreneurs in the EU are women," writes the EU Commission in a press release. The aim of this award is to recognise successful women, motivate other women to start their own companies and raise public awareness of female entrepreneurship.
Source: chab.ethz.ch

Four new Chemistry Professors Appointed by the ETH Board

On the recommendation of ETH President Joël Mesot, the ETH Board appointed several new ETH professors and conferred the title of ETH professor on two researchers during its meeting on May 22–23, 2019. All the newly appointed professors consciously connect their subject expertise with other disciplines. Four of them will belong to the Department of Chemistry and Applied Biosciences (D-CHAB), two of whom have already belonged to D-CHAB as associate professors.

Prof. Alexander Barnes (*1981), currently Associate Professor at Washington University, St. Louis, USA, has been appointed as Full Professor of Solid State NMR Spectroscopy in the Department of Chemistry and Applied Biosciences. Alexander Barnes' work focuses on solid state nuclear magnetic resonance (NMR) spectroscopy. NMR is a versatile method which enables both the chemical composition of small molecules and the 3D structure and dynamics of proteins to be determined at atomic resolution. Alexander Barnes is particularly interested in boosting the weak NMR signal through dynamic nuclear polarisation. His appointment offers great potential for cooperation between a wide variety of departments and subject areas at ETH Zurich.

Dr. Klaus Eyer (*1985), currently a Group Leader at ESPCI and Research Associate at the Institut Pasteur, both in Paris, France, has been appointed as Assistant Professor of Functional Immune Repertoire Analysis in the Department of Chemistry and Applied Biosciences. His achievements have already resulted in the award of a Branco Weiss Fellowship, as well as an ERC Starting Grant in 2018. His research focuses on the development, characterization and integration of bioanalytical methods for the functional analysis of individual cells. The main emphasis is on quantifying the humoral immune response. By appointing Klaus Eyer, ETH Zurich is strengthening the development of new procedures, vaccines and diagnostic approaches, especially in the area of personalized medicine.

Prof. Roger Schibli (*1968), currently Associate Professor at ETH Zurich and Laboratory Head at the PSI, has been appointed as Full Professor of Radiopharmacy in the Department of Chemistry and Applied Biosciences. Roger Schibli is one of the world's leading researchers in the field of radiopharmaceutical chemistry and is regarded as a specialist in the development of radiodiagnostics and radiotherapeutics. The main focus of his research at ETH Zurich is on developing new chemical and enzymatic strategies for the functionalisation of biomolecules for subsequent labelling with diagnostic and therapeutic radionuclides. At the PSI's Center for Radiopharmaceutical Sciences, Roger Schibli's group is developing new radiotracers based on small molecules, particularly folates and nucleosides.

Prof. Jeroen van Bokhoven (*1971), currently Associate Professor at ETH Zurich and Laboratory Head at the PSI, has been appointed as Full Professor of Heterogeneous Catalysis in the Department of Chemistry and Applied Biosciences. Through his research, Jeroen van Bokhoven strives to achieve a fundamental understanding of the functions of heterogeneous catalysts, on the basis of which he seeks to develop new heterogeneous catalysts. His interests focus on the oxidation activity of carrier-supported precious metal catalysts and the nature of active sites in zeolite catalysts. The appointment of Jeroen van Bokhoven as Full Professor will strengthen the links between ETH Zurich and the PSI, where he and his

laboratory carry out research and instrument development on a number of beamlines of the Swiss Synchrotron Light Source, as well as supporting user operation.
The D-CHAB congratulates all new incoming professors and the promoted professors.
Source: chab.ethz.ch

JOURNAL NEWS

ChemCatChem and ChemElectroChem celebrate birthdays

This year ChemCatChem celebrates a decade of publishing in catalysis and it's ChemElectroChem's 5th Anniversary. ChemPubSoc Europe led the way with the establishment of these two journals; it created an over-arching catalysis journal and ignited a revival in electrochemistry. To commemorate the occasion, the journals have published first issues packed with research and review articles – many of which are authored by Board members. These are free to read in 2019. Read about the efforts of both journals to support society publishing, women in chemistry, and more.

ChemPubSoc Europe's Feedback on Plan S

In 2018, some European funding organizations formed cOAlition S and released "Plan S", followed by an implementation directive. Like many societies, the 16 European chemical societies comprising ChemPubSoc Europe have submitted feedback to cOAlition S regarding the implementation guidance.
Wiley and Projekt DEAL, a consortium of more than 700 German libraries and research institutes, have established a landmark agreement for Germany to pilot new publishing models. ChemPubSoc Europe is proud to be part of this innovative and transformative action toward open science. For more information, visit: *bit.ly/DEALAuthor*

Helvetica, Volume 102, Issue 5, May 2019

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Controlled Growth of Porphyrin Wires at a Solid-Liquid Interface
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David F. Hahn, Jovana V. Milic, Philippe H. Hünenberger

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

INDUSTRIAL NEWS

Source: *www.chemanager-online.com*

Givaudan Buys AMSilk's Cosmetics Business

May 1, 2019: Swiss flavors, fragrances and active cosmetic ingredients manufacturer Givaudan has agreed to buy the cosmetics business of Germany's AMSilk. The acquisition fits with Givaudan's aim – part of its 2020 strategy – to become a major player in the fast-growing active cosmetic ingredients market. Headquartered near Munich, AMSilk is an industrial supplier of synthetic silk biopolymers, which can be used in a broad range of applications across categories such as haircare and skincare. AMSilk has filed 10 patents for the use of biopolymers in cosmetic applications. "The acquisition of the cosmetics business of AMSilk fits very well our long term strategy for Active Beauty," said. Maurizio Volpi, president of Givaudan's Fragrance division. "It offers an expanded portfolio of natural and bio-sourced products supported by a strong research and development biotechnology platform to drive future development and innovation in the active cosmetic ingredients space." Laurent Bourdeau, head of Givaudan's Active Beauty business, added that AMSilk's unique technology will allow it to enlarge its product portfolio by developing bespoke polypeptides, also aligning with the company's ambition to meet growing consumer demand for 'clean beauty' products. Givaudan has not revealed financial details of the deal although said it would fund the purchase from its existing resources.

Clariant and Wuxi Win China Formaldehyde Projects

May 9, 2019: Clariant and Chinese engineering partner Wuxi Xiyuan have won contracts to supply their joint formaldehyde technology for two new plants in China. The deals, said Clariant, take the number of customers choosing the technology to six in a short period of time. Shandong Yushiju Chemical, one of China's largest producers of phenol formaldehyde resins, will build a 150,000 t/y plant, while Shandong Sunny Wealth New Materials, a leading Chinese antioxidant producer, will build a 130,000 t/y plant. Both facilities are scheduled to start operating in 2019. "To successfully meet the continuously growing demand for phenol formaldehyde resins in China, we aim to strengthen and streamline our operations to stay at the head of our field. We are convinced that we can achieve this with the progressive technology and catalysts provided by Clariant and Wuxi Xiyuan," said Jiatao Zhang, chief operations officer of Shandong Yushiju Chemical. According to Clariant, the rapidly rising demand for the technology is because of its significantly higher efficiency and selectivity compared to the traditional silver-based method of producing formaldehyde. The technology is based on Clariant's Famax 200 DS next-generation iron-molybdenum catalyst. The Swiss company said the hollow and cylindrical shape of the catalyst reduces pressure drop over the catalyst bed by 10–15% compared to conventional catalysts while the special design gives producers the flexibility to reduce energy consumption when operating at the same capacity, or to increase capacity at the same energy costs. The catalyst's advanced chemical composition also improves low temperature activity and allows operation at reduced cooling medium temperatures. These characteristics, said Clariant, combined with higher reaction selectivity, further increase formaldehyde yields and the drastic reduction in by-product formation also gives a higher quality. Wuxi Xiyuan has recently installed the technology in three plants in China and India. A fourth plant, located in Jiangsu province, China, is expected to start up during the current second quarter with a capacity of about 240,000 t/y formaldehyde. After collaborating for many years, Clariant and Wuxi Xiyuan formed a strategic partnership in 2017 to advance formaldehyde production in China.

Digitalization in Chemical Distribution – a Reality Check!?

Over the last few years there has been a lot of talk about digitalization, also in chemical distribution. Particularly the developers and financial backers of dedicated online e-commerce platforms and marketplaces have promoted their ideas and concepts wherever they found an audience of chemical producers and chemical distributors willing to listen to their point-of-view about the ultimate fate of intermediaries from the real world.

Within the chemical distribution community this has led to a lot of discussions about how best to tackle the topic of "digitalization". What needs to be done in order to survive in an increasingly competitive environment and how to cope with the threat of a possible disruption caused by new and innovative digital developments, either initiated by suppliers, other distributors or disruptors from outside the industry itself, are questions that await practical answers.

Collecting Robust Data

As nobody is really sure about the best way forward and also to address the lack of data available on what initiatives companies really take in this context, DistriConsult in cooperation with CEO and value creator Phil Allen at Customer Value Management (CVM€) conducted a survey amongst more than 200 chemical distribution companies in Europe. The web-based survey, which was open during the month of March 2019, was answered by 57 respondents, equivalent to a response rate of more than 25%. Answers came from all kinds of chemicals distribution companies, ranging in scope and size from privately held enterprises with a few million euros in sales to listed multinationals with hundreds of millions and even billions of euros in sales. Also, the geographic spread was quite broad Overall our sample was quite likely a bit skewed towards specialty chemicals, as a lot more distributors are active there than in industrial chemicals where a few large groups tend to play a more prominent role. The individuals who answered the questionnaire were typically owners, CEOs, COOs, IT directors or business unit heads. The survey yielded some interesting results, the most salient parts of which are summarized here. We also conducted qualitative interviews with a select number of producers to elicit their views and approaches to digitalization within their own companies and with their distributors.

Relevance and Drivers of Digitalization

Digitalization is clearly a relevant topic for the companies covered in the survey. On a five-point scale ranging from -2 (not relevant at all), over -1 (not relevant) to 0 (neutral) on to +1 (relevant) and +2 (very relevant) the compound score was +1.27. Digitalization is certainly a relevant topic to the respondents in our sample.

Drivers behind the digitalization efforts are in essence twofold: market penetration and growth and internal efficiencies (cf. fig. 1). Two thirds (66.7%) of respondents said they want "to generate new business opportunities and grow sales". Second and third were "to enhance operational efficiency" (63.2%) and "to simplify structures and to reduce cost" (61.4%). Other drivers were "to enable value pricing/enhance value creation" (29.8%), "to gain a deeper understanding of customer/market needs (e.g. "data mining")" (28.1%), and "to increase internal transparency" (24.6%). All other answer options provided, including "to pre-empt principals" gained only significantly lower scores, at or below 15%. The overall objectives of digitalization are mixed. Some are outward-looking, market and growth related. Others are inward-looking and hence cost/performance related.

Getting the Basics Right

When asked what has been done so far and/or what projects were in the pipeline, it became clear that the current focus for

many companies is on laying a proper groundwork for digitalization. Re-engineering internal processes (63.2%), a re-design of the company website to enhance find-ability and search-ability (61.4%) and an upgrade of the Customer Relationship Management (CRM) system (57.9%) were the three most frequently mentioned initiatives. Joining an e-commerce platform (or marketplace) was mentioned by 17.4% of the respondents, yielding position no. 9 amongst the 14 answer options. The total number of answers given would suggest that the average number of sub-projects is around 4.3 per responding company (multiple answers to this question allowed).

To Join or Not to Join, that's the Question

When we specifically asked a question about online platforms/marketplaces, it turned out that proponents and detractors are almost evenly split. 46.4% of respondents saw "joining a platform/marketplace and doing business on it as a viable way forward" for their company. 53.6% thought that for their company it was not. The "yes" answers gave "addition to the existing marketing approach" (28.5%) and "addition to existing procurement/purchasing approach" (30.8%) as the main reasons for their positive view. Only one in five respondents saw this step as a "question of survival" or had the opinion that "all (distribution) business will go that way in the future". Of the respondents that did not consider platforms/marketplaces worth joining, 60% said it was simply "not part of my company's strategy". Some said a lack of resources prevented them from doing more in this direction. Those that had joined a platform (10 out of 57) said they wanted to sell products on it (90%). The second driver was the desire to buy products (60%), followed by advertising/promotion (40%) and the intention to use it for market research (30%) (multiple answers to this question allowed). Distributors are well aware of the platforms/marketplaces and other digital offerings that exist in the chemical industry space like specialist search engines or meta crawlers. The most "known" website was 1688.com (operated by Alibaba), followed by GoBuyChem, Pinpools, Kemgo, Kemix (so far only a project) and Kemiex. Many respondents were also familiar with the search engine ChemBid and material selection platform SpecialChem. Actual business has been done on 1688.com, GoBuyChem, Kemiex and Pinpools (cf. fig. 2). Companies that have registered on a platform/marketplace have done this on average with 6 providers. This would suggest it is relatively quick and easy to take such a step. Generating actual business seems to be a bit more of a challenge or may take more time. 40% of the registered companies had not yet done any business on a platform, 40% less than 9 transactions and 20% between 10 and 49 transactions so far. The average time that had elapsed between registration and the first transaction was almost 6 weeks on average.

Interaction with Suppliers

Distributors are unlikely to digitalize their business in a sort of commercial vacuum. So, we asked about the relationship with their principals when it comes to digitalization. Almost half of the respondents described this as "we are learning and following" (45.1%). Some are jointly working on developing a "digital channel" (10%). And 17.6% think they are ahead of (many of) their principals, when it comes to digitalization.

Activities and Views of Chemical Producers

In parallel to the web-based survey of distributors, our cooperation partner CVM€ conducted several structured interviews with a select group of chemicals and/or polymers producers regarding their views on digitalization. To the companies interviewed, digitalization is a highly relevant topic. These companies have identified as the main driver the opportunity to grow [direct] sales, improve the customer experience with the development of new business models, and also to achieve internal operational effectiveness improvements. In that sense the answers were very similar to the findings for distributors. The updating and improvement of the CRM system is seen as a fast way to address internal issues. Website re-design and advanced analytics (using data from a web-interface, tracking leads etc.), and also the implementation of "web-shops" (including on-line payment) are high on the priority list. Another focus area is an easy-to-attain enhanced "social media" visibility. Joining a platform was mentioned as a viable option "in general" by most of the interviewees. But there were also some reservations mentioned, also in the sense of "we are not there yet". Only if a direct addition to existing business can be expected, does it become an attractive proposition. Suppliers are "observing and studying" this possibility, but limited standardization and a lack of track record have hampered a decision for some of them so far. If there would be a low-cost opportunity to have an own platform (e.g. through a global initiative on a larger scale), this would be the favored approach. The suppliers interviewed typically expect to have an extensive and effective dialogue with their distributors regarding new channels and approaches through digital means. While they recognize that distributors will have to determine their own strategies, ideally these should be in-line with the suppliers' approach in terms of customer interactions that have an impact on the relationship between supplier and distributor. The attitude was that those distributors, who can keep the pace and are in-line with expectations, will have enhanced opportunities. Besides all the initiatives on digitalization there still is a need for the "personal touch" in certain sales interfaces, as technical and face-to-face discussions for many products are considered to be very important for mutual value creation, even in today's digital world. One of the biggest challenges to producers appears to be the logistics part of the sales transaction, where distribution will continue play a key role for the foreseeable future. Any alternative or additional channel needs to have equal or better performance or enable a new and better customer experience.

What to Make of it?

When it comes to digitalization, distributors currently are mostly active in laying the groundwork within their own organizations. Re-engineering processes and upgrading the IT infrastructure, in part or sometimes in total, are key project activities here. Developments outside of their companies, such as platforms, marketplaces and search engines are closely monitored and analyzed. Various distributors have taken the step to register on platforms/marketplaces and, of these, some have already done business on them. Overall the rate of adoption seems to be slower than some pundits expected and developers of digital solutions and platforms would like to see. Also, the distributors that have taken the effort to register their companies and products might be rather disappointed. Maybe it's just a question of elapsed time before this takes off. However, it could also be that specialty chemicals after all take more technical expertise (and time) to sell indeed. Hence it might be more difficult to market such products through a "digital channel". Also, the number of sales transactions for each product/customer combination is often low for a typical distributor anyway. Hence economies of scale are more difficult to obtain than in a B2C setting, where most of the success stories in digitalization are rooted. So far, the end-to-end 'digital distribution model' still seems to be more of a theoretical option, yet to be proven reliably in practice. On the other hand, the slow pick-up could also be a sign that companies are afraid of cannibalizing their existing business model and making (commercial) infrastructure investments obsolete. The incumbents have just not been consequent enough in their efforts to-date. However, the good news is that initiatives regarding digitalization today are less costly than they were in the past. Initial

subscriptions are free or carry only a low fee, and IT infrastructure can often be bought in 'as a service' on very short notice. It is no longer required to make extensive investments in hardware like servers or data storage. In that sense, experimentation is possible and the associated risks can be managed even by small and medium size firms. So, stay tuned, it continues to be interesting.

Takeda Sells Shire Eye Drug Xiidra to Novartis

May 13, 2019: To lighten its debt burden of more than $30 billion resulting from last year's acquisition of Shire, Japanese pharma giant Takeda is selling Shire's dry-eye drug Xiidra to Switzerland's Novartis. The deal is set to close in the second half of this year, with 400 Takeda employees working on the Xiidra franchise – mainly in the US and Canada – transferring to the Swiss drugmaker's payroll. Novartis, which wants to strengthen its eye medicine portfolio following the spinoff of Alcon, said Xiidra "fits strategically" with its ophthalmic portfolio. Terms of the deal call for it to pay $3.4 billion upfront and commit to potential milestone payments of up to $1.9 billion. The Xiidra sale is the first for Takeda since its $62 billion Shire takeover. The Japanese company hopes to shed products worth around $10 billion in annual sales to pare down debt. Analysts expect it to sell its European over-the-counter business, its entire Latin American operation, Shire's hypoparathyroidism drug Natpara and a Shire inflammatory bowel disease candidate. With annual revenue of about $400 million, Xiidra is "well positioned for blockbuster potential," Novartis said. The Swiss drugmaker's ophthalmology medicine franchise, spearheaded by the age-related macular degeneration treatment Lucentis, which it shares with Roche, has sales of $4.56 billion. Novartis has its own developmental dry eye therapy, a recombinant form of human lubricin in-licensed from Lubris in 2017. Under the name ECF843, the drug is in phase 2 trials with a planned first regulatory submission in 2022. With the takeover of Encore Vision in late 2016, the company acquired a topical treatment for presbyopia knowns as UNR884. Takeda also plans to sell its TachoSil surgical patch to Johnson & Johnson subsidiary Ethicon for about $400 million. The patch has sales of around $155 million. Takeda will continue to make the product at Linz, Austria, and supply J&J under a long-term agreement.

Codexis Signs License Deal with Novartis

May 17, 2019: US protein engineering company Codexis has signed a platform agreement with Novartis, granting the Swiss pharmaceutical producer a non-exclusive license to its proprietary CodeEvolver protein technology. Novartis will use the license to develop novel performance enzymes for use in drug manufacture

Upon completion of the technology transfer, the CodeEvolver protein engineering platform will be located at an undisclosed Novartis site. Terms of the agreement foresee Novartis making an upfront payment, milestone payments upon the satisfactory completion of technology transfer and payments for improvements to the platform technology. Redwood, California-based Codexis also will be eligible to receive payments for active pharmaceutical ingredients (APIs) produced with enzymes developed by Novartis using the CodeEvolver technology. Additionally, it will receive certain rights for future purchases of enzymes developed and sourced by the drugmaker, using the technology. John Nicols, Codexis' president and CEO said Novartis has been a "highly customer for nearly a decade, and we've been very pleased to see the accelerating and widening of our R&D collaborations together especially over the past several years." Novartis, said Nichols, will be the latest leading pharmaceutical company to validate the very wide applicability of enzymatic catalysis across its extensive small molecule drug pipeline.

Novartis may Settle US Lawsuit for $1 billion

May 21, 2019: Novartis may be close to a billion-dollar settlement with the US government to resolve a whistleblower lawsuit accusing the Swiss pharmaceuticals giant of bribing doctors to boost prescriptions of its drugs. The investigation was initially launched eight years ago with the 2011 lawsuit. The US government intervened in 2013, alleging violations of the False Claims Act. Specifically, the allegations were said to include kickbacks to doctors for prescribing two hypertension drugs, Lotrel and Valturna, along with the diabetes drug Starlix. The whistleblowers claimed the scheme involved "sham events" such as $10,000 dinners and fishing trips. Reports said the actions may have defrauded the government of millions of dollars in Medicare and Medicaid billing over the course of nearly a decade. In early April 2019, a US district judge reportedly admitted some 79,000 corporate events as admissible as evidence in a trial expected to start in May, though a Novartis spokesperson asserted that the events were not opportunities to bribe doctors but rather part of the company's educational program to inform physicians about the company's drugs. According to the trade journal Stat, Novartis, which has consistently denied the charges, had requested the lawsuit be suspended due to lack of evidence; however, a judge ordered it to go ahead. A first hearing, due to take place at the beginning of this this week, did not happen, which the journal's sources said indicates that an out-of court-settlement with the government has been or will be reached. Separately, four Greek government officials were cleared in April of charges they participated in a scheme in which political figures accepted bribes from Novartis over drug pricing. The case was dismissed after a company internal probe in March turned up no evidence of "inappropriate payments."