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SWISS CHEMICAL SOCIETY NEWS

Call 2018 for the Prix Schläfli (since 1866)



The Prix Schläfli, one of the oldest science prizes in Switzerland (since 1866), is awarded by the Swiss Academy of Sciences (SCNAT) to young scientists for excellent articles resulting from PhDs in the following natural sciences disciplines:

- Biology
- Chemistry
- Geosciences with a focus on the theme 'A Habitable Planet'
- Pure or Applied Mathematics.

Eligible are young researchers who did their doctoral thesis at a Swiss University or Swiss nationals who did their PhD thesis abroad.

Candidates must have defended their doctoral thesis between 1 November 2014 and 31 October 2017. Nominations can be submitted by the supervisor of the candidate or by a SCNAT member society. A jury is established for each of the four disciplines in order to evaluate the nominations. Prize consists of CHF 5'000 and support for a conference participation in each of the scientific fields. The Award ceremony will be held at the SCNAT General Assembly on 25 May 2018 in Bern.

Nominations are submitted via an online form before 31 October 2017

Website: scnat.ch/prixschlaefli

PIs of tomorrow in Life Sciences: call for applications



We are very happy to announce the call for applications to the "PIs of tomorrow: The Future of Swiss Research" session at the next LS² Annual Meeting 2018, taking place in Lausanne, 12–13 February. This session offers postdocs interested in an academic career an opportunity to present a talk similar in format to a professorship application interview.

Selected participants will have the chance to get a slot for a 15-minute scientific presentation, which should be addressed to a broad audience and in which both the achievements accomplished and the proposed future scientific activities are to be explained. The talk will be followed by a 5-minute discussion on various aspects of the proposed activity, but also about career-oriented aspects of the presenter. A knowledgeable jury panel of professors will evaluate the presentations.

The best presentation will be awarded a prize. However, everyone is a winner, as all presenters in the session will receive feedback from the jury in a one-on-one session afterward.

To apply, please follow the guidelines in the application link below. Applications must be received by November 1st, 2017.

<http://tiny.cc/LS2PIOT>

RÖMPP celebrates its 70th anniversary, 15 years as an online resource, and its 100th update



Since the publication of its first edition 70 years ago, the renowned RÖMPP encyclopedia of chemistry has been a prime knowledge source covering the latest insights in chemistry and related sciences. High-quality content and up-to-date information have always been RÖMPP's key characteristics. Generations of chemical scientists have relied

on the encyclopedia for their groundbreaking work. For 15 years now, RÖMPP has been continued as online encyclopedia with currently 65,000 keywords. The latest update with new content will be the 100th in the history of the digital edition. The board of twelve editors and roughly 250 renowned authors from the fields of science and industry work to ensure that the resource stays continuously up to date and scientifically sound. Thieme Chemistry has celebrated the triple anniversary – 70 years of RÖMPP, 15 years online, and the 100th update – amongst other things, with the participants of the Swiss Chemical Society Fall Meeting, in Bern on August 21–22, 2017.

We thank all who visited our booth at the SCS Fall Meeting 2017 and took part in our RÖMPP anniversary celebrations and BOOM photo shooting!

Website: roempp.thieme.de

Special offer for SCS members to access Römpp

As part of the collaboration between Thieme and the SCS, we offer to our members access to Römpp at a reduced rate of 175 CHF/y for regular members and 75 CHF/y for student and PhD members. For more details please visit our website.

scg.ch/roempp

Prof. Roland Sigel: The new Dean of the Faculty of Science at University of Zurich



Roland Sigel, Professor for bioinorganic chemistry at the Department of Chemistry, is the new Dean of the Faculty of Science since August 1st, 2017.

Roland Sigel would like to put his focus on the co-operation over the different disciplines at the Faculty of Science. The researchers should try to even more benefit from the variety of disciplines

which are located at the Faculty of Sciences. The interdisciplinarity should be strengthened by research focus programs and by specific appointments of new professors and promotion of young researchers.

We wish Roland Sigel a successful start in his new position.

Source: chem.uzh.ch

A Warm Welcome to Our New Members!



Period: 11.07.2017 – 24.08.2017

Claudia Aloisi, Zurich - Stefan Altunbas, Ostermundigen - Simona Angerani, Geneve - Matthew Aronoff, Zurich - José Luis Bila, Bussigny - Mascha Dieckmann, Gipf-Oberfrick - Elisabeth Engelsberger, Zurich - Daniel Fishlock, Basel - Alessandro Fracassi,

Zurich - Changchun Fu, Zurich - Samuel Gallagher, Zurich - Susanne Geisen, Zurich - Alissa Göttinger, Lausanne - Gesine Gunkel-Grabole, Grenzach-Wyhlen (D) - Adrian Haiduc, Orbe - François Halloy, Zurich - Andreas Herdlitschka, Zurich - Sasa Karalic, Dietikon - Reena Kaushik, Bern - Korinne Liosi, Dübendorf - Ho Ting Luk, Zurich - Marius Lutz, Zurich - Céline Marmy, Léchelles - Maureen McKeague, Zurich - Baptiste Monney, Marly - Sara Nasirisovari, Fribourg - Svenja Neumann, Basel - Jade Nguyen, Zurich - Qui-Hien Nguyen, Lausanne - Vincent Pilloud, Fribourg - Felix Raps, Basel - Ankita Ray, Zurich - Vera Rosar, Bern - Jorge Sague, Bern - Fabienne Schwab, Astano - Cameron Scott, Geneva - Shana Sturla, Zurich - Stefan Manuel Weissen, Aarau - David Whitehead, Basel - Jun Xu, Zurich - Susanna Zamolo, Bern - Guido Zichittella, Zurich - Gabriele Zirpoli, Zurich - Denis Zufferey, Chippis.

HONORS AND AWARDS

SISF-SCS Industrial Investigator Awards to Researchers from Roche, DSM and Novartis

On the occasion of the SCS Fall Meeting VIP aperitif, Alain De Mesmaeker, SCS President awarded the SISF-SCS Industrial Investigator Awards 2017 to three scientists from industry for their outstanding research achievements. We like to take the opportunity to congratulate them again and thank also for their excellent award lectures that were part of the SCS Fall Meeting program.

The SISF-SCS Senior Industrial Science Award



was given to **Dr. Emmanuel Pinard**, F. Hoffmann-La Roche Ltd, Basel, for his very successful research on several therapeutic targets as enzymes (Bace1, COMT), ion channels (NMDA), GPCRs (Orexin, Vasopressin) and transporters (GlyT1) that address high unmet central nervous system disorders such as Parkinson's Disease, Stroke, Schizophrenia, Depression, Autism and Spinal Motor Atrophy.



and to **Dr. Thomas Netscher**, DSM Nutritional Products Ltd, Kaiseraugst, for his achievements in advancing synthetic methodology and total synthesis of natural products, specifically vitamins and isoprenoid derived compounds.

The SISF-SCS Industrial Science Award



was awarded to **Dr. Richard Sedrani**, Novartis Pharma AG, Basel, for his achievements in many important projects as research chemists, team leader, project leader and unit head that resulted in the discovery and development of the mTOR inhibitor Everolimus, which is the active ingredient of several successfully marketed drugs: Certican® / Zortress®; Afinitor®, Xience™.

Grammaticakis-Neumann Award 2017 to Prof. Robert Knowles, Princeton University, USA



The SCS awards the Grammaticakis-Neumann Prize 2017 to **Prof. Robert Knowles**, Princeton University, for expanding the methodology in organic synthesis by new processes founded upon visible light mediated Proton-Coupled Electron Transfer (PCET).

The award ceremony and the lecture took place at the SCS Fall Meeting in

Bern on August 21–22, 2017.

Wilhelm-Klemm-Preis der GDCh an Hansjörg Grützmacher, ETHZ



Prof. Hansjörg Grützmacher, ETH Zürich, erhält im Rahmen des Wissenschaftsforums Chemie 2017 (WiFo) am 12. September in Berlin den Wilhelm-Klemm-Preis. Die Gesellschaft Deutscher Chemiker (GDCh) honoriert damit seine herausragenden Leistungen im Bereich der anorganischen Chemie.

Grützmacher erhält die Auszeichnung für seine ausgesprochen originellen Arbeiten, mit denen er die anorganische Molekülchemie auf vielfältige Weise bereichert. In seiner Forschung spiegelt sich seine außergewöhnliche synthesechemische und konzeptionelle Kreativität wider. Neben hochreaktiven kleinen Molekülen der Hauptgruppenelementchemie, leistet er kreative Ansätze für die Metallorganische Katalyse und thematisiert aktuelle Innovationen bei Brennstoffzellen. Seit 1995 ist er Professor für anorganische Chemie an der ETH Zürich.

Weitere Informationen zum WiFo unter www.wifo2017.de.

Prof. Massimo Morbidelli, ETH Zurich, receives the Excellence in Process Development Research Award



For his research on integrated continuous production of therapeutic proteins, **Prof. Massimo Morbidelli** receives the Excellence in Process Development Research Award 2017 from the American Institute of Chemical Engineers.

Source: www.chab.ethz.ch/news-and-events

Prof. Konrad Hungerbühler, ETH Zurich, receives the Wöhler Award 2017 for Sustainable Chemistry



Prof. Konrad Hungerbühler is awarded the Wöhler Prize for Sustainable Chemistry at the Science Forum Chemistry in Berlin on September 13. The GDCh recognizes his outstanding contributions to the development and implementation of sustainable chemistry.

Source: www.chab.ethz.ch/news-and-events

Prof. Xile Hu from EPF Lausanne wins Tajima Prize



Prof. Xile Hu has won the “2017 Tajima Prize” from The International Society of Electrochemistry for his work in electrocatalysis.

The Tajima Prize of the International Society of Electrochemistry (ISE) is given annually to electrochemists under 40 years old on the basis of their published work. The prize consists of a certificate

and 1,000 CHF, and the winner is invited to give a 40-minute lecture at the Annual ISE Meeting of the following year, with ISE covering registration and banquet fees.

This year, the Prize has been awarded to Professor Xile Hu for his research on catalysts composed of Earth-abundant elements for chemical transformations of relevance to synthesis, energy, and sustainability. In particular, Professor Hu has developed remarkable electrocatalytic materials for water splitting, which can be potentially utilized for storing renewable energy such as solar and wind.

The award will be presented to Professor Hu at the 2018 Annual ISE Meeting in Bologna, Italy.

Source: actu.epfl.ch/news

Balmer Prize 2017 to Hansrudolf Dütsch



The Swiss Chemical Society awarded the Balmer Prize 2017 to **Dr. Hansrudolf Dütsch**, Zurich, for his exemplary engagement over many years in the field of further education of high school teachers and for his idea to develop and run a web shop for innovative and illustrative chemistry experiments.

The ceremony was part of the “Future of Chemical Education 2017” symposium in Bern on August 22, 2017.

Winners of the Best Presentation Awards at the SCS Fall Meeting 2017

In collaboration with Metrohm and DSM Nutritional Products, SCS offered again the very attractive and prestigious Fall Meeting Best Presentation Award program. It is probably the most highly remunerated award program in the field, and we are very proud and happy to cooperate with our sponsoring partners. We wish to express our sincere gratitude to Metrohm and DSM Nutritional Products Ltd for their generous support.

Winners of the Best Oral Presentation Awards 2017

Markus Steinke, representative of Metrohm, awarded a total of 13 winners at the end of the SCS Fall Meeting at University of Bern on August 21–22, 2017.

Analytical Sciences

Winner: Martin Gaugg, ETH Zurich

Runner up: Kristýna Kantnerová, EMPA/ETH Zurich

Catalysis Science & Engineering

Winner: Martina Ribar Hesticová, University of Basel

Runner up: Andrey Petrov, ETH Zurich

Computational Chemistry (@STC in Basel)

Winner: Jérôme F. Gonthier, UC Berkeley

Runner up: Lucas Foppa, ETH Zurich

Der RÖMPP lässt's knallen!

Seit 70 Jahren unterstützt der RÖMPP die Forschung in der Chemie sowie angrenzenden Wissenschaften und ist somit ein wichtiger Bestandteil von bisherigen wissenschaftlichen Errungenschaften.

Seitdem hat sich der RÖMPP thematisch weiterentwickelt, in dem weitere Fachgebiete in die Enzyklopädie aufgenommen wurden, und gleichzeitig mit dem digitalen Wandel Schritt gehalten.

Denn seit 15 Jahren ist das Wissen im RÖMPP online verfügbar und wurde zum 100. Mal – sowohl inhaltlich als auch technisch – auf den neuesten Stand gebracht.

Jetzt entdecken!
roempp.thieme.de



 Thieme

Inorganic & Coordination Chemistry

Winner: Marta Falcone, EPF Lausanne

Runner up: Fiorella Lucarini, University of Fribourg

Medicinal Chemistry & Chemical Biology

Winner: Jacques Saarbach, University of Geneva

Organic Chemistry

Winner: Andrés García-Domínguez, Univ. of Zurich

Runners up: Cyril Piemontesi, EPF Lausanne

Physical Chemistry

Winner: Katharina Keller, ETH Zurich

Runner up: Lisa Peterhans, University of Fribourg

Polymers, Colloids & Interfaces

Winner: Francesca Ruggeri, University of Zurich

Runner up: Frederik Neuhaus, University of Fribourg

**Winners of the Best Poster Presentation Awards 2017**

Dr. Roman Imhof, representative of DSM, awarded a total of 22 winners at the end of the SCS Fall Meeting at University of Bern on August 21–22, 2017.

Analytical Sciences

Winner: Lyndsey Hendriks, ETH Zurich

Runners up: Valentine Grimaudo, University of Bern

Marie Kopp, ETH Zurich

Catalysis Science & Engineering

Winner: Robbie Warringham, ETH Zurich

Runners up: Patrick Hemberger, Paul Scherrer Institute

Matthias Scharfe, ETH Zurich

Inorganic & Coordination Chemistry

Winner: Lorena De Luca, ETH Zurich

Runners up: Sabine Malzkuhn, University of Basel

Nicola Weder, University of Zurich

Medicinal Chemistry

Winner: Elinam Gayi, University of Geneva

Runner up: Maryline Dong, ETH Zurich

Chemical Biology

Winner: Alina Tirla, ETH Zurich

Runner up: Raphaël de Matos, EPF Lausanne

Organic Chemistry

Winner: Cornelius Gropp, ETH Zurich

Runners up: Daria Grosheva, EPF Lausanne

Le Liu, University of Geneva

Physical Chemistry

Winner: Halil Okur, EPF Lausanne

Runners up: Irina Ritsch, ETH Zurich

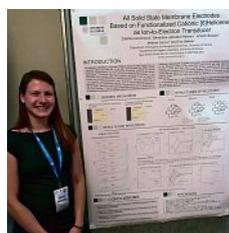
Gustavo Ciardi, University of Zurich

Polymers, Colloids & Interfaces

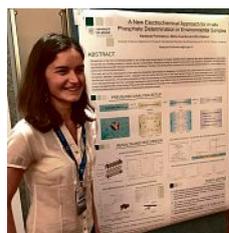
Winner: Sarah-Luise Abram, University of Fribourg

Runners up: Joelle Medinger, University of Fribourg

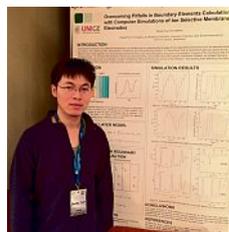
Jan-Georg Rosenboom, ETH Zurich

**Conference report for DAS travel award. Summary of the conference highlights**

Participants supported by DAS travel award: Zdenka Jarolimova, Dajing Yuan, Nadezda Pankratova, all University of Geneva (from top to bottom)

Mátrafüred 2017, Conference on Electrochemical Sensors

The Conference “Mátrafüred 2017” on Electrochemical Sensors is a continuation of the symposium series on ion-selective sensors and bioelectroanalysis organized regularly since 1972. The conference is organized every three years and we greatly appreciate the opportunity to have been part of it, for two of us it was the second time during our PhD research. It was a great opportunity, when having been working in the field of electrochemistry for three years or more, to meet the big scientists whose publications served as a bases of our scientific research.



This amazing event brought together scientists working in the fields of electrochemical sensors as well as optical sensors with special emphasis on interfacial phenomena, molecular recognition, bioanalysis, miniaturization and portability. It is one of those family-like conferences where people are eager to share knowledge and present the young scientists to the rest of the scientific community.

Unlike in some other conferences, where the topics are sometimes being too diverse and at times too far from the field of interest, this event is mainly focused on the field of electrochemistry. It allowed us to be more easily integrated into the discussions, to get some inspiration from the given talks and presentations and new ideas for our future work.

The scientific program included invited lecturers talking about various type of sensing based on molecularly imprinted polymers, aptamers, Clark-type sensors, silica films, polymeric films, electrochemiluminescent compounds, dyes, nanoporous composites. Different new types of solid contact materials were suggested for ion-selective electrodes. The results of important theoretical and practical studies of polymer-based electrochemical sensors were presented, such as synchrotron radiation-X-ray photoelectron spectroscopy, near edge X-ray absorption fine structure studies, Raman spectroscopy, potentiometric scanning electrochemical microscopy and others.

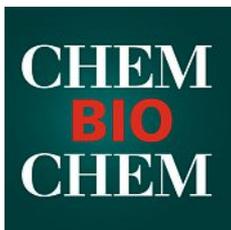
Many talks were dedicated to very practice-oriented research solutions for biomedical applications. Portable and disposable designs of sensors were suggested for performing measurements of analytes in environmental samples, biological fluids (blood, sweat, urine, saliva, and tears) and food products (milk), as well as new tools for diagnostics, e.g. non-invasive methods. New advances in microfluidic system design were widely represented in the poster session.

Recent achievements in theoretical approaches to the description of various electrochemical systems were highlighted in the talks as well as in the poster sessions. The poster sessions were held in the evenings and gave a rare opportunity to share the results of our work with very well-known scientists from our field as well as young researchers from many different countries. We would like to acknowledge the special attention given by the organizers to the poster sessions and high interest of the participant of this family-like event in the research of young scientists. The two hours of poster session every evening (we participated in the one the very first day) provided sufficient time for interesting discussions and allowed for getting valuable advices from specialists in the field. Moreover, the joined meals as well as multiple coffee breaks between the talks gave us the opportunity to get to talk to lecturers and presenters in a more informal atmosphere.

We highly appreciate the given opportunity and thank the DAS board for supporting our participation in this outstanding event!

JOURNAL NEWS

ChemBioChem Special Issue: Dedicated to Werner Reutter



Werner Reutter (1937–2016) was a scientist who both made fundamental discoveries in glycobiology and reached out to disciplines beyond his core field. Many of his former colleagues and students will remember his desire to exchange research ideas, which ultimately contributed to the birth of new research fields. Discover more in this Special Issue

dedicated to a visionary pioneer in molecular glycobiology, with Guest Editors Christian Hackenberger and Carolyn Bertozzi and contributions from A. Varki, T.K. Lindhorst, P.H. Seeberger, X. Chen and many more. Enjoy free access to selected papers until Sept. 30, 2017. More details on:

<http://onlinelibrary.wiley.com/doi/10.1002/cbic.v18.13/issuetoc>

INDUSTRIAL NEWS

Source: www.chemanager-online.com

JSR Life Sciences Acquires Selexis

July 6, 2017: JSR Life Sciences has acquired Swiss biotech Selexis for an undisclosed sum. The Geneva-headquartered company is the global leader in mammalian cell-line generation technologies and will boost JSR's ability to develop and produce more high-quality biologics at a faster rate. Selexis will be integrated within KBI Biopharma, a US-based contract development and

manufacturing organization (CDMO) that JSR acquired in 2015. "Combining KBI's robust analytical, process development and reliable high-quality manufacturing capabilities with our Selexis SUREtechnology platform puts us in a position to offer current and future partners the ability to take their R&D programs from transfection to investigational new drug applications in less than nine months," said Igor Fisch, CEO of Selexis. "By delivering the fastest timelines in the industry, our partners will benefit from substantial cost savings and patients will have access to critical drugs sooner." The two groups have a long history of collaboration, and KBI has performed development and/or manufacturing services using more than 15 different cell lines generated by Selexis since 2012. Last month, KBI announced that it had agreed to buy the assets of San Diego-based Alliance Protein Laboratories, a leading analytical services company that specializes in biophysical characterization of biopharmaceuticals. CDMO is also expanding its biopharmaceutical manufacturing capacities in Durham, North Carolina, and Boulder, Colorado, with completion due later this year.

Lonza Completes Capsugel Acquisition

July 11, 2017: Lonza has gained all regulatory approvals for its proposed acquisition of Capsugel – the biggest buy in its history – and expects to close the transaction imminently, the company said late last week. The two fine chemicals producers signed a definitive agreement at the end of last year. Swiss-based Lonza is paying US private equity investor KKR \$5.5 billion for all assets of the US company based at Morristown, New Jersey, which is regarded as one of the leading producers of capsules for delivery of drugs and food supplements. Additionally, it will refinance the acquired company's existing debt of \$2 billion. With around 3,600 employees at 13 facilities on three continents, Capsugel manufactures empty two-piece hard capsules as well as finished dosage forms for oral or inhalable drugs. Richard Ridinger, CEO of Lonza, said the acquisition, which he expects to be accretive to core earnings per share in the first full year after closing, meets the company's strategic and financial goals, accelerating its healthcare continuum strategy by giving it broader exposure to the fast-growing pharma and consumer healthcare markets. "This new integrated approach," he said, "will benefit our customers, who will gain from the simplicity and efficiency of working with one company that can provide world-leading support from APIs to excipients and dosage forms." In announcing the acquisition last year, Ridinger said management expects operating synergies of 30 million Swiss francs and tax synergies of some 15 million francs by year three. Lonza is financing the transaction in part through net proceeds from the successful placement in April of 5 million new shares priced at 173 Swiss francs with total gross proceeds of 865 million Swiss francs and the issuance of new shares with gross proceeds of 2.26 billion Swiss francs completed in May. Benefits expected to be realized through the deal include operating synergies of 30 million Swiss francs and tax synergies of some 15 million francs by year three. The bulk of the benefits, the Lonza CEO said, is expected to come from "top-line synergies" of 100 million francs per year in the mid-to-long term.

Gurit Takes PET License from Armacell

July 12, 2017: Swiss composites materials company Gurit has been granted a global license for Armacell's ArmaFORM PET foam core technology. The technology enables the manufacturing of extruded PET foam from 100% recycled (post-consumer) PET materials. The license runs until the expiry of Armacell's patent rights. Financial details were not disclosed. "The combination of the PET capacity and technology that we have acquired in Volpiano, Italy, at the end of 2016 paired with Gurit's existing production and the new licensing contract for the Armacell foam

technology represents a major step forward in our offering to our global customer base,” said Rudolf Hadorn, Gurit’s CEO. Gurit acquired BASF’s Italian PET business and intellectual property last December, boosting the Swiss group’s portfolio of structural core materials. In separate news, the Swiss company announced in June that it has renewed its distribution agreement with Maricell, an Italian producer of closed-cell PVC structural foam. Under the terms of the deal, Gurit will continue to distribute all Maricell’s PVC globally until Dec. 31, 2020, with options to further extend the agreement.

Dow Sells Brazilian Seed Assets to China’s CITIC

July 14, 2017: More details have emerged on Dow Chemical’s agreement to sell the Brazilian corn seed assets of its AgroSciences division to China’s CITIC Agri Fund for \$1.1 billion. The divestment is required by Brazil’s antitrust authority as a condition for clearing the US group’s proposed merger with compatriot DuPont. The deal includes seed processing plants and seed research centers, a copy of Dow AgroSciences’ Brazilian corn germplasm bank, the Morgan seed brand and a license for the use of the Dow Sementes brand for a certain (undisclosed) period of time. The assets being sold generated revenues of about £287 million in 2016. CITIC Agri Fund was established in June 2016 by CITIC Agriculture, a division of state-backed CITIC Ltd, together with Chinese seed firm Yuan Longping High-Tech Agriculture and two other listed agricultural companies. China is rapidly expanding its presence in the global seeds industry, as illustrated by ChemChina’s recent \$43 billion takeover of Swiss Syngenta. The Chinese group said last month that it is eager to pick up some of Bayer’s seeds assets, which the German firm will be forced to sell in order to gain international regulatory approval for its proposed \$66 billion acquisition of Monsanto. Dow reaffirmed that its merger with DuPont is expected to complete next month, with the intended spin-offs scheduled within 18 months of closure.

ChemChina’s Crosses 98% Syngenta Threshold

July 18, 2017: ChemChina has filed a petition with the appellate court in Basel, Switzerland, to cancel the remaining shares in Syngenta not already held by the company or any of its affiliates. The Chinese company said it now controls more than 98% of the Swiss agrochemicals producer’s capital, following the purchase of additional shares. As of May 24, at the end of the last extension period, ChemChina had acquired 92.2% of Syngenta and had begun delisting the share from the Swiss stock exchange SIX and the ADS certificates from the New York Stock Exchange. Holders of the remaining papers will receive the offer price of \$465 per share following completion of the court proceedings. At this time, Syngenta said it will apply for the delisting from the SIX to become effective.

Merck KGaA Refines Life Science Network

July 18, 2017: As it optimizes efficiency at its Life Science (laboratory chemicals) business Germany’s Merck KGaA plans to close four of the filling and distribution facilities by 2022 with the loss of around 200 jobs. However, plans also call for about €90 million to be spent across four sites in Germany, Switzerland and France. Under the changes announced on Jul. 12, the company will consolidate its manual filling and distribution activities of non-regulated laboratory chemicals from its German sites in Darmstadt, Steinheim and Hohenbrunn, and Buchs in Switzerland into a central distribution center in Schnelldorf, Germany. The €90 million investment will be used to develop a manual filling capability and increase capacity in Schnelldorf as well as to further develop capabilities in Darmstadt, Buchs and Molsheim in France. Merck said its existing site in Hamburg, Germany, will continue to operate as before. The operations in

Steinheim, Eppelheim, Hohenbrunn and Berlin will then be relocated and closed sequentially starting in 2019 and through to 2022. Udit Batra, member of Merck’s executive board and CEO, Life Science, said that centralizing the filling and distribution of small quantities will continue to enhance the group’s speed and responsiveness to customers’ requests. He added that this is an area that Sigma-Aldrich, which Merck acquired in November 2015, excelled in and positive results are already being seen from optimization efforts in North America. Christos Ross, executive vice president of integrated supply chain operations at Merck Life Science, explained that the company has recently been updating its network at sites throughout the US, such as St. Louis and Massachusetts, as well as in Ireland (Cork) and in China and Japan. He commented: “By continuously optimizing our site network, Merck can better serve our customers and focus investments that develop capacity and capability most effectively and efficiently across our manufacturing and distribution operations.” Since 2010, Merck’s Life Science business has consolidated 18 manufacturing sites to further simplify operations and establish centers of excellence.

Oxford BioMedica in Second CART Deal with Novartis

July 19, 2017: UK biopharma Oxford BioMedica has signed another major deal with Swiss drugmaker Novartis to supply lentiviral vectors used to create novel cell therapeutics, including CTL019 (tisagenlecleucel) and other undisclosed Chimeric Antigen Receptor T-cell (CART) products. The agreement builds on the collaboration announced between the two organizations in October 2014 and is in anticipation of the commercialization of CTL019 later this year. In March, Novartis announced that the US Food and Drug Administration (FDA) had granted priority review for CTL019 in B-cell acute lymphoblastic leukemia. Under the terms of this latest deal, Oxford BioMedica could potentially receive more than \$100 million from Novartis over the next three years. The sum includes an upfront payment of \$10 million, various performance incentives as well as bioprocessing and development services. In addition, the Oxford-based company will also receive undisclosed royalties on potential future sales of Novartis’ CART products. The supply agreement will initially run for three years but could be extended to five years if both parties agree. John Dawson, CEO of Oxford BioMedica, said the deal demonstrates the value of its LentiVector platform and will support the group’s continued growth over the next three years. CAR-T cell immunotherapy is a novel treatment that is manufactured for each individual patient using their own T cells. CTL019 was first developed by the University of Pennsylvania, which entered into a global collaboration with Novartis in 2012 to further research, develop and commercialize CAR-T cell therapies for the investigational treatment of cancers. Novartis holds the worldwide rights to CARs developed through the collaboration for all cancer indications.

Shire Takes Novimmune’s Blood Therapy Rights

July 26, 2017: Shire has obtained exclusive worldwide rights from Novimmune for a bi-specific antibody that is currently in pre-clinical development for treating patients with the blood disorders hemophilia A and hemophilia A with inhibitors. Financial terms were not disclosed. Under the terms of the deal, Ireland-based Shire will lead the program’s development to optimize and evaluate a fully human, bi-specific IgG antibody targeting Factor X (FX) and activated Factor IX (FIXa), which are designed to imitate the body’s natural mechanism of Factor VII-driven coagulation. Shire said its ultimate aim is to “deliver a treatment that improves upon the strong and long-term record of efficacy and safety that has been set by the Factor class.” “While further development and clinical trials are needed to fully eval-

uate this antibody, we are encouraged by the potential of the data that we have seen in early discovery and the promise it may hold for hemophilia A patients and patients with inhibitors,” said Fritz Scheiflinger, Shire’s head of global research. Shire has been steadily building its monoclonal antibody (MAB) research capability and now has programs in hereditary antioedema (HAE), diabetic macular edema, antibody-mediated autoimmune disease and anti-thrombotic therapy. Novimmune’s chairman and CEO, Ed Holdener, said the deal builds on an existing collaboration that was initiated in 2015 to assess Factor VIII-mimetic, bi-specific antibodies. The Swiss biopharma has been developing a platform for making fully human, bi-specific antibodies and has several in-house programs targeting tumor-associated antigens and the immune checkpoint protein CD47.

EU Confirms Raid on Ethylene Buyers

July 28, 2017: The European Commission (EC) has confirmed reports that its officials carried out unannounced inspections on the premises of companies active in ethylene purchasing in mid-May. The dawn raids targeted buyers of the feedstocks in several EU member states, it said. Swiss specialty chemicals producer Clariant told news agencies in response to questioning that it had been visited on May 16 and US chemical producer Celanese confirmed that some of its European units had been visited. The Commission said it has concerns that the ethylene buyers may have violated EU antitrust rules that prohibit cartels and restrictive business practices (Article 101 of the Treaty on the Functioning of the European Union), which would mean agreeing fixed prices. On their visits, the EU officials were accompanied by their counterparts from the relevant national competition authorities. Unannounced inspections “are a preliminary step into suspected anticompetitive practices,” the Brussels competition watchdog said. “The fact that the Commission carries out such inspections does not mean that the companies are guilty of anti-competitive behavior nor does it prejudice the outcome of the investigation itself.” Beyond the brief remarks, neither the EC nor the companies involved commented further on the raids. Similar action has been taken by the EU numerous times in the past when suspicions of price fixing either by buyers or sellers arose. In some cases, significant fines have been imposed. For breaching antitrust rules, the EU can fine companies as much as 10% of their global sales.

Clariant Could Divest 25% of Portfolio in Merger

July 28, 2017: Clariant may be willing to divest 25% of its portfolio, including its Pigments and Masterbatches businesses, following the planned \$20 billion merger with US family-owned chemical producer Huntsman. “We’ve always said that we could part from these items when the time is right,” the Swiss group’s CEO Harriolf Kottmann told journalists attending the semi-annual results presentation in Zurich on July 27. The masterbatch business is a legacy of now defunct German chemical producer Hoechst, which spun off some of its specialty chemicals assets into Clariant after the original merger of Swiss players Ciba and Sandoz in 1996. The pigments activities were a specialty of Ciba. Even before the latest transatlantic fusion plan was hatched, investors had been pushing Clariant to divest the plastics-related businesses. On Jul. 4, US hedge funds Corvex and 40 North announced they had acquired a combined 7.2% stake in the Swiss group through their joint acquisition vehicle White Tale Holdings and hoped to leverage the holding to torpedo the merger. In the meantime, White Tale has widened its stake to 10%. Both funds have been critical of the merger’s prospects. A spokesperson for White Tale said the combination lacks strategic rationale and undercuts Clariant’s strategy of becoming a pure-play specialty chemicals company. No demands have been placed openly on the table thus far. In Zurich, Kottmann sought to play down the de-

railment threat, insisting that Clariant’s 20 largest shareholders, with the exception of White Tale, do not oppose the proposed union. “We’ve spoken to our top 20 investors – who represent more than 50% of our share capital – multiple times,” Kottmann said in an interview with the news agency Reuters. “We didn’t experience a single investor who rejected the deal.” There is no “plan B” as an alternative to the combination with Huntsman, the CEO told Dow Jones Newswires. In a joint ad hoc statement on Jul. 27, Clariant and Huntsman said the merger is on track to close late this year or early next year, despite criticism from the activist side. They said the project team is “progressing very well” in terms of joint synergy implementation and is confident of meeting the synergy target of more than \$400m as well as the \$25m tax-saving target. Additionally, the potential partners said they have submitted key regulatory filings, including in the US, EU and China. In the US, and have also submitted a preliminary filing to the Committee on Foreign Investment in the United States (CFIUS), which will review the deal with an eye to US national security interests. The portfolio management principles and capital allocation plans of the new joint company are fully aligned, the statement continues, while stressing that “there is a clear joint understanding of the combined company’s future core segments, and the direct majority of investments will be directed to growth areas and growth regions.” Prospects for enhancing the current downstream presence are to focus on expanding formulation- and application-based segment niches as well as high-end composites, bespoke polyurethane (PU) systems and customer-oriented and co-developed products. The existing presence in markets for isocyanates and petrochemical building blocks such as ethylene oxide (EO) and propylene oxide (PO) is projected to be further advanced downstream in urethane systems as well as surfactants. Lending credence to Kottmann’s remarks about shedding assets, the paper says the portfolio will be simplified, with complexity reduced, while utilizing significant strategic flexibility to consider value creating add-on acquisitions and divestments. The Plastics & Coatings and Textile Effects will be managed for cash and turnaround while all other businesses will be managed for growth and margins.

Clariant Hires Goldman Sachs to Avert Activist Action

August 2, 2017: CEO, Hariolf Kottmann conceded that the Swiss player might shed the plastics assets, including masterbatches, pigments and additives, which were spun off into a separate company at the beginning of 2016.

Swiss specialty chemicals producer Clariant has hired US investment bank Goldman Sachs as an additional advisor to fend off a campaign by activist investor White Tale to stop the proposed \$20 billion merger with US-based Huntsman. “Goldman has been taken on board because of their knowledge and ties to US investors and ability to predict and pre-empt White Tales’ next moves,” a person close to the matter told Reuters news agency. White Tale, an acquisition vehicle for US hedge funds Corvex and 40 North, owns 10% of Clariant and has criticized the merger for lacking strategic rationale and undermining the Swiss group’s strategy of becoming a pure-play specialty chemicals company. The investor believes that a direct sale of Clariant, or some of its parts, would yield a higher return than combining with Huntsman. Without having made any specific demands, White Tale is said to have but it has approached fellow shareholders to explore alternative options. These could include the group divesting its Plastics & Coatings division, its largest business unit said to account for 40% of sales. With the proceeds, Clariant could then pay a special dividend, which could in turn lure investors to accept an alternative to the merger. At Clariant’s press conference to present half-year results last week, CEO, Hariolf Kottmann conceded that the Swiss player might shed the plastics assets, in-

cluding masterbatches, pigments and additives, which were spun off into a separate company at the beginning of 2016. Since the spin-off was announced, analysts have urged the Swiss group to divest the business. "We've always said that we could part from these items when the time is right," Kottmann commented. In an update on the merger plans, the CEO suggested that in merging with Huntsman Clariant could divest up to 25% of its portfolio.

Lonza Buys Swiss Micronization Technology Specialist Micro-Macinazione

August 4, 2017: Swiss fine chemicals and biologics producer Lonza has acquired Micro-Macinazione, a contract manufacturer providing micronization of active ingredients for the pharmaceutical and fine chemical industries based in Monteggio, Switzerland. Micro-Macinazione had sales of around 20 million Swiss francs in 2016 and has 120 employees, Lonza stated, without disclosing financial details of the deal. The acquisition of Micro-Macinazione expands Lonza/Capsugel's existing micronization clinical and commercial manufacturing capabilities that are based in Quakertown, Pennsylvania, USA. A key focus for the new combined business will be highly potent active pharmaceutical ingredients (HPAPIs). Lonza's Pharma&Biotech COO, Marc Funk, commented: "With the acquisition of Micro-Macinazione, Lonza becomes the largest and most diversified provider of micronization services to the pharmaceutical industry. Micronization is an attractive technology for Lonza given its applications across many of the high growth areas of the pharma market." Markus Arigoni, CEO of Micro-Macinazione, added: "Micro-Macinazione was founded in 1970 and has been a pioneer in the development of jet mill equipment and contract micronization services. We operate in a niche market with high growth expectations. Micronization is often seen as key to improving the bioavailability of the growing number of highly potent and complex APIs, which an increasing number of pharma and biotech companies are looking to develop."

IMCD Buys Canada's L.V. Lomas

August 8, 2017: In its second North American acquisition this year, IMCD is to acquire Canadian and US specialty chemicals and ingredients distributor, L.V. Lomas. Financial terms were not disclosed but IMCD said it would fund the acquisition from available cash and existing bank facilities. Lomas represents IMCD's first step into Canada and also boosts the Dutch group's position in the US, following its recent purchase of Houston, Texas-headquartered Bossco Industries. Commenting on the deal, IMCD's CEO, Piet van der Slikke, said: "This is an important step in the further development of IMCD's North America region as it not only expands our geographical presence into Canada in all core markets but also further strengthens our US organization and coverage." Rand Lomas, chairman of L.V. Lomas added: "Together we will become a market leader in North America for the sales, marketing and distribution of specialty chemicals and food and pharmaceutical ingredients." Headquartered in Toronto, L.V. Lomas has offices in Montreal and Vancouver as well as operations at six locations in Canada and the US. The business generated revenues of C\$383 million in 2016 and employs approximately 280 people. The transaction, which is subject to the usual closing and regulatory conditions, is expected to close at the end of August.

In separate news, IMCD has signed an exclusive agreement with Givaudan to distribute the Swiss company's flavors range in food and nutrition markets in Germany, France, Italy, Spain, Benelux, the UK and Nordic countries. "This relationship will allow us to reach a whole new customer base of small- to medium-sized enterprises where we can add value and help customers create inspiring products which delight consumers," said Kevin Robinson, Givaudan's commercial head of Western Europe.

Paris Accord May be Derailed by Cheats

August 10, 2017: US President Donald Trump's announcement of the American withdrawal from the Paris Accord is not the only threat to achieving the ambitious targets of the climate agreement and may not be the biggest, the British Broadcasting Company BBC warned while unveiling the results of a recent investigation.

"Potent, climate-warming gases are being emitted into the atmosphere but are not being recorded in official inventories," the BBC asserted, pointing a finger at homegrown problems in the heart of Europe as well as countries as far away as India and China. Among the key provisions of the accord signed by 195 countries in December 2015 is the requirement that all participants submit an inventory of their own greenhouse-gas emissions every two years. But in its Counting Carbon program the BBC noted that air-sampling programs that record actual levels of gases "sometimes reveal errors and omissions," and some countries cheat. The program pinpoints Italy as one of the cheaters, based on a Swiss claim – an accusation Italy has denied, saying its inventory is correct and compliant with UN regulations. Stefan Reimann of the Swiss Federal Laboratories for Materials Science and Technology, however, that Italy's inventory may be too short. Between 2008 and 2010, Reimann said, scientists at the Jungfraujoch monitoring station in the Alps traced emissions of the ozone-depleting chlorofluorocarbon HFC-23 to a location in northern Italy. Emissions estimated at 60-80 t/y are still from coming from there, he said, despite the fact that Italy's official inventory for the Paris Accord only lists emissions in the range of up to 10 t/y or even 2-3 t/y. Outside Europe, the investigation identified China and India as countries breaking air quality rules. "Levels of some emissions from India and China are so uncertain that experts say their records are plus or minus 100%," the Counting Carbon team asserted. Another suspected global warming culprit, carbon tetrachloride, has been banned in Europe since 2002; however, Reimann said the Swiss air quality station "still sees 10,000-20,000 t coming out of China every year." There is no Chinese inventory for this gas, as it is banned, he explained. China's approach to monitoring and reporting output of warming gases to the UN is spotty and subject to constant and subject to significant revision, the Swiss climate scientist said, adding that the People's Republic's last submission was only about 30 pages, compared with several hundred for the UK. The investigation unveiled in the TV report also turned up what it said are "vast uncertainties" in carbon emissions inventories being drawn up by developing countries in particular. Levels of the world's second most important greenhouse gas, methane, for instance, have been rising in recent years for reasons not entirely explainable. In any case, the accuracy of adding emissions levels to inventories is in doubt, especially in India, which is home to 15% of the world's livestock, BBC warned. Anita Ganesan of the University of Bristol, who has overseen air monitoring research in India, said in an interview officials there are vague about the accuracy of reporting and probably underreport. International scientists working in Russia have reported similar uncertainties about methane emissions there. Euan Nisbet, a professor at Royal Holloway, University of London, told the BBC that the warming impact from increasing methane emissions "is enough to derail Paris." All in all, Counting Carbon presented a grim outlook for slowing global warming. Although the rules covering how countries report their emissions are currently being negotiated, Glen Peters, from the Centre for International Climate Research in Oslo, Norway told the program that if progress in curbing greenhouse gases cannot be tracked sufficiently, "you basically can't do anything." "Without good data as a basis, Paris essentially collapses. It just becomes a talkfest without much progress," Peters said.

BASF to Limit Use of Insecticide Fipronil

August 11, 2017: As an EU-wide scare involving contaminated eggs dominates headlines, BASF has announced it will not reapply for authorization for some uses of its Fipronil pesticide. However, the German chemical giant told news agencies the decision was for business reasons and not related to the current issue. The EU authorization, which is due to expire on Sept. 30, covers only a small number of applications in treating seeds grown in greenhouses, but BASF said the “high cost” makes the registration process uneconomical. Use of the insecticide is restricted in some agricultural applications in the EU, due to the threat it may pose to honeybees. Fipronil is also banned from being used to treat animals for human consumption. It is, however, permitted to be used in veterinary products to control fleas, lice and ticks and may also be used in the EU as a biocide to control ants, cockroaches and termites, at least until 2023. In the Netherlands, a product supplied from Belgium, which should not have contained the chemical, was used to clean henhouses. The misuse became public throughout the EU on Aug. 1 when Dutch authorities ordered certain charges of eggs removed from supermarket shelves. Contaminated eggs have also turned up in Germany, Belgium, Sweden, Switzerland, the UK and France. Belgium and the Netherlands have blamed each other for not making the misuse public earlier. The two general managers of the cleaning firm meanwhile have been arrested. In large quantities, the insecticide is considered by the World Health Organization (WHO) to be “moderately hazardous” and can have dangerous effects on kidneys, liver and thyroid glands. The German Institute for Risk Assessment said, however, that based on the highest level of contamination found in a single egg, an adult weighing 65 kg would have to eat seven eggs in 24 hours to sustain any health damage.

Dermira Takes Rights to Roche’s Dermatitis Drug

August 16, 2017: US biotech Dermira has agreed to license certain rights from Swiss drugmaker Roche and its subsidiary Genentech for the investigational atopic dermatitis drug, lebrikizumab. The transaction is expected to close in the third quarter of 2017. Under the terms of the deal, which could be worth more than \$1.4 billion for Roche, Dermira will gain exclusive, worldwide rights to develop and commercialize lebrikizumab, a monoclonal antibody that targets interleukin 13 (IL-13). Roche will retain certain rights, including exclusive rights to develop and promote the drug for interstitial lung diseases, such as idiopathic pulmonary fibrosis. Dermira will make an initial payment of \$80 million, then further payments totalling \$55 million in 2018. The California-based company will also be required to make additional payments upon achieving certain milestones. These include \$40 million on the initiation of Dermira’s first Phase 3 clinical study; up to \$210 million for regulatory and first commercial sale milestones in certain territories; and up to \$1.025 billion based on reaching certain thresholds for net sales of lebrikizumab for indications other than interstitial lung disease. “Atopic dermatitis is one of the most common skin diseases in the world, affecting millions of adults and children, and moderate to severe forms of this condition present a tremendous burden for patients,” said Tom Wiggans, Dermira’s chairman and CEO. “We believe atopic dermatitis is one of the greatest unmet needs in dermatology and lebrikizumab, if successfully developed and approved, could represent a meaningful advancement in the treatment of this disease.” Dermira plans to initiate a Phase 2b dose-ranging study assessing lebrikizumab in adult patients with moderate-to-severe atopic dermatitis in the first quarter of 2018.

US Probes Huntsman Clariant Positions

August 18, 2017: The US Federal Trade Commission (FTC), which is reviewing the planned merger of Swiss specialty chemicals producer Clariant with US peer Huntsman, has sent the

companies a request for information on two products – sodium isethionate, used in personal care products such as soaps and shampoos – and a polyetheramine product used in certain construction and additive/paint and ink applications. As these products accounted for less than \$24 million in total revenues of each of the two companies in the US market in 2016, Clariant said it is “confident” that the parties will be able to satisfy any FTC concerns on a timeline consistent with the merger, still planned to be completed by the end of this year. According to Clariant, the regulatory clearance process continues to move forward in other jurisdictions as well. Clariant and Huntsman announced in May they had agreed to merge in an all-stock deal that would create a leading chemical specialty company named HuntsmanClariant, with sales revenue of roughly \$13.2 billion and an enterprise value of about \$20 billion. Clariant shareholders would hold a 48% interest in the merged entity, with the remaining 48% to be owned by Huntsman. US activist investor White Tale, an acquisition vehicle for US hedge funds Corvex and 40 North that together own 10% of Clariant, is seeking to torpedo the merger, saying it lacks strategic rationale and in particular would undermine the Swiss group’s strategy of becoming a pure-play specialty chemicals company. Clariant has hired US investment bank Goldman Sachs to advise it on how to parry the investors’ thrust.

SK Capital Changes Tack on Archroma

August 22, 2017: US buyout group SK Capital Partners has opted not to sell Archroma, announcing it has reinvested in the Swiss producer of textile chemicals, paper specialties and emulsions, which was carved out from specialty chemicals producer Clariant and sold to the New York-based investor in 2013. The private equity investor put Archroma up for sale in January of this year, reportedly seeking a buyer for either a majority or minority stake. It is unclear what led to the change of plans. Aaron Davenport, SK Capital’s managing director, commented: “Our new equity and recapitalized balance sheet will provide the financial and operational flexibility to continue building Archroma’s competitiveness and market position.” SK Capital said that, under its ownership, Archroma has revitalized its performance by carving out three non-core divisions and establishing them as independent and integrated companies. The investor added that the company is now in a strong position to execute a number of attractive acquisition opportunities that leverage its existing platform and technology base. Archroma bought BASF’s textile chemicals business in July 2015 and a 49% stake in textile dyes and chemicals manufacturer M. Dohmen in May 2014. In separate news, SK Capital has signed a definitive agreement to acquire Perrigo API, the active pharmaceutical ingredients (API) business of US-based Perrigo. The company is a leading developer and manufacturer of generic APIs and finished dose forms (FDF) with operations mainly located in Israel and supporting functions in the US and India. As part of the transaction, the parties will enter into a long-term supply agreement for Perrigo API to supply multiple existing commercial and pipeline APIs to its former owner. A new trade name will be selected and announced for the business before the deal closes, expected to take place during this year’s fourth quarter. SK Capital said the acquisition complements its other portfolio companies operating in the API and FDF value chain, including Noramco, Tasmanian Alkaloids and Halo Pharmaceutical, all of which will continue to operate independently after the transaction closes.

Clariant Tries Friendly Persuasion on Huntsman Vote

August 28, 2017: With the countdown running to a November vote by Clariant shareholders on management’s plan to merge with US peer Huntsman, the Swiss group’s CEO Hariolf Kottmann is seen to be pulling out all stops to push the deal through, over opposition from the two activist shareholders behind the

acquisition vehicle White Tale. The all-share transaction would create a new company with annual sales of \$13 billion and an enterprise value of \$20 billion, but some Clariant shareholders, led by White Tale, believe they could come up short, despite the Muttenz-based specialty chemicals producer owning a 52% controlling stake. One of prime challenges will be to persuade a large number of shareholders to attend the extraordinary meeting to vote on the fusion plans, as a low turnout would threaten Kottmann's chances of gaining approval. One way of boosting attendance could be announcing the date of the vote sooner than legally required, to allow more time to reach out to small retail shareholders, a source told the news agency Bloomberg. The merger partners have already engaged investment bank Goldman Sachs to help fight off the challenge from White Tale's owners, the hedge funds Corvex Management and 40 North, which together hold a stake exceeding 10%. They have also formed a steering committee of company managers to review the merger plans. Clariant must win more than two-thirds of votes cast on relevant agenda items in order to move ahead with its plans, Bloomberg notes, while pointing out that attendance at investor meetings has been dwindling, with only 53.6% of share capital represented at its 2017 annual general meeting. The activist investors have urged Clariant's management to "fully explore all the strategic options" to merging with Huntsman, which they believe was not "seriously" done before inking up the deal. The former owners of Süd Chemie – who sold the Munich-based chemical company to Clariant in 2011 and together hold an estimated 14% stake – are supporting the Muttenz management. Huntsman and Clariant have identified at least \$400 million in annual cost savings that they say could be fully in place by the end of 2019, potentially creating \$3.5 billion in value for investors.

Rail Glitch Hits German Chemical Shipments

August 28, 2017: Delivery of chemical products by rail from north to south through Germany is currently being hampered

by the closure of the Rhine Valley Railway line, and this is creating supply shortages and boosting transport costs, the chemical industry association VCI reports. Already, there is a back-up in deliveries of specialty equipment such as tank containers and cooling trucks, said Andrea Heid, who has responsibility for transportation matters at the association. German chemical producers Evonik, Covestro and Lanxess as well as US producers with production facilities in Germany, such as Dow Chemical, DuPont and LyondellBasell, all have transportation links north of the track closure between the towns of Rastatt, and Baden-Baden. Without quantifying the volume of goods affected, VCI said about half of all base material shipments to chemical plants and deliveries of finished product to customers can be rerouted along other rail lines, while the rest is currently having to be transported by truck or barge instead. The association has called on the German railway operator, Deutsche Bahn, to better prepare for line closures in future. VCI said it fears that, due to the long delay, companies may abandon rail transport and move goods back onto Germany's busy traffic or river arteries. As the rail line is expected to remain closed until Oct. 7, Deutsche Bahn said it is working with counterparts in Switzerland, France and Austria to put additional trains on alternative routes via France and Austria. A shuttle service for commercial goods between Kornwestheim, north of Stuttgart, and Zurich, Switzerland is also being considered. Passenger trains likewise are being affected by delays that in some cases have doubled travel time between Frankfurt and Zurich. The problems started on Aug. 12 when the ground sagged above part of a new tunnel that the railway company was drilling in Rastatt, causing flooding and the collapse of the track. The extent of the needed repairs was determined about a week later. According to official statistics, an estimated 28 million t of chemical products are transported by rail in Germany, about 8% of the 363.5 million t of freight shipped by rail in the country altogether.