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Society News and Announcements

Review: SCS-Syngenta Symposium 2011: Modern Catalysis for Sustainable Chemistry

Mathilde Lachia and Sarah Sulzer, Syngenta Crop Protection

On October 28, 2011, chemists from industry and academia gathered for a one-day symposium entitled 'Modern Catalysis for Sustainable Chemistry' organized by Syngenta as a contribution to the international year of chemistry 2011, in partnership with the Swiss Chemical Society (SCS).

In his opening remarks, Dr. ***Gerardo Ramos***, Head of Syngenta Crop Protection Research & Development (R&D), reminded everybody that "chemistry has significantly improved people's quality of life, for example through the development of novel pharmaceuticals, agrochemicals and modern telecommunications to name but a few. We at Syngenta are proud to continue the tradition of making significant advancements in chemistry to ensure sustainable agriculture and help meet the global food challenge we are now facing."

Dr. ***Andrew Plant***, Head of Chemistry within Crop Protection R&D, at the end of an intense day, concluded that "this was a fantastic event, with excellent lectures and, more importantly, some vigorous discussions around catalysis and sustainable chemistry. Syngenta is proud to have fostered the advancement of these technologies."

Discussing and Learning

The symposium was designed as a forum to exchange and learn more about catalysis as a tool to address the sustainability challenge in modern chemistry. The one-day event brought together participants (*ca.* 160) from leading companies and top universities from across all of Switzerland, as well as France and Germany, for a series of cutting edge lectures and a poster session (*ca.* 50 posters) discussing many aspects of catalysis, including bio-, organo-, organometallic and radical chemistry as well as new technologies such as CH-activation, flow chemistry and computational chemistry.

Hosting this event at its research center in Stein, Syngenta has perpetuated a long relationship between the Basel area and the chemical sciences, in service of healthy food, medicines and consumer products

Morning Session – Chairman: Prof. Peter Kündig (University of Geneva, Swiss Chemical Society President)

Prof. ***Uwe T. Bornscheuer*** from the University of Greiswald opened the day with a lecture on biocatalysis and the different strategies to achieve highly effective biotransformations. A combination of literature analysis, bioinformatics and optimization of the reaction conditions allowed protein engineering to deliver highly selective and efficient enzymes such as transesterases, (*R*)-selective transaminases or Baeyer-Villiger monooxygenases that can successfully compete with established chemical transformations.[1]

Next Dr. ***Peter Nesvadba*** from BASF presented his work on nitroxide chemistry. New nitroxides have been developed with increased reactivity for the oxidation of structurally challenging alcohols, or with improved properties for easier recovery. Nitroxides are also employed for controlled radical polymerizations and alkoxamines as precursors of nitroxides were developed with applications for the synthesis of pigment dispersants.[2]

Prof. ***Frank Glorius*** from the University of Münster presented an overview of his work on N-heterocyclic carbenes (NHCs) in catalysis. Novel NHCs derived from bisoxazolines were developed and employed as ligands in metal-catalyzed reactions. Different aspects of *umpolung* chemistry were also studied, including the reactions of aldehydes with unactivated double bonds or with Michael acceptors.[3] Subsequently the methodology was extended to the umpolung of conjugated aldehydes.

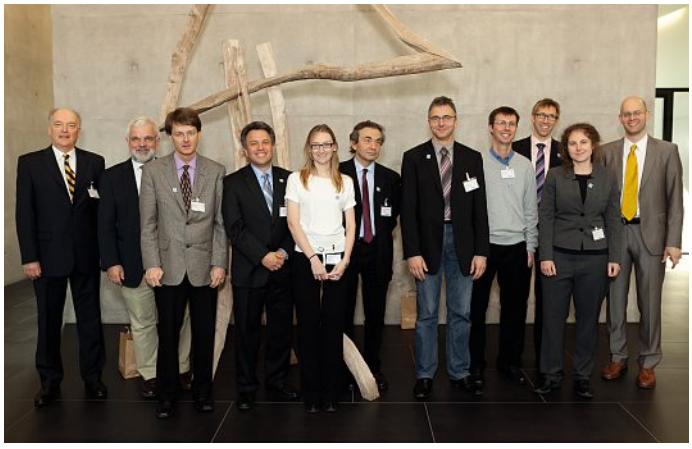
Dr. ***Lionel Saudan*** from Firmenich concluded the morning session with a lecture on the development of amino-phosphine ruthenium complexes for the hydrogenation of esters under mild conditions.[4] The process was successfully applied to esters containing C=C double bonds.

Afternoon Session – Chairman: Dr. Alain de Mesmaeker (Principal Fellow, Syngenta Crop Protection R&D, Research Chemistry)

Prof. ***Cristina Nevado*** from the University of Zürich opened the afternoon session with a lecture on dual roles in gold catalysis. Her research group has developed non-classical gold-stabilized carbocations to enable the efficient stereocontrolled synthesis of 5-, 6- and 7-membered rings. She also described her recent investigations on redox chemistry of gold [Au(I)/Au(III)] using C–H-functionalization processes.[5]

Dr. ***Dominique Roberge*** from Lonza introduced the field of flow chemistry and showed the benefits of continuous flow methodologies for ring-closing metathesis (RCM) applied to industrial applications.[6]

Dr. ***Hermann Wegner*** from University of Basel highlighted his recent work in using bidentate Lewis acids as catalysts for activating 1,2-diazines to undergo inverse electron-demand Diels-Alder reaction.[7]



Dr. ***Franziska Schoenebeck*** from ETH Zürich described how the interplay of computational and experimental tools is key for understanding reaction mechanisms and hence developing novel applications in organometallic catalysis.[8]

Prof. ***Jonathan Ellman*** from Yale University, USA, closed this cutting edge symposium with a lecture on C-H bond functionalization. His talk focused on catalysis for the synthesis and elaboration of nitrogen heterocycles and amines. He also demonstrated the utility of these methods by the syntheses of bioactive natural products and drugs.[9]

The 2013 SCS-Syngenta symposium is being developed. More information will be available by spring 2013.

SCS-Syngenta symposium organizing committee Dr. Andrew Plant (Head of Chemistry, Syngenta Crop Protection R&D), Dr. Alain de Mesmaeker (Principal fellow, Syngenta Crop Protection R&D, Research chemistry), Dr. Jérôme Cassayre (Head of Insecticide chemistry, Syngenta Crop Protection R&D), Dr. Mathilde Lachia (Team Leader, Syngenta Crop Protection R&D, Research chemistry), Dr. Sarah Sulzer (Team Leader, Syngenta Crop Protection R&D, Research chemistry) and Prof. Peter Kündig (University of Geneva, Swiss Chemical Society President).

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Symposium website: *http://www.syngenta.com/country/ch/de/symposium/Pages/home.aspx*

More photos: *http://vimeo.com/31481070*

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[2] S. Miele, P. Nesvadba, A. Studer, *Macromolecules* **2009**, 2419.
[3] A. T. Biju, M. Padmanaban, N. E. Wurz, F. Glorius, *Angew. Chem. Int. Ed.* **2011**, *50*, 8412.
[4] L. Saudan, C. M. Saudan, C. Debieux, P. Wyss, *Angew. Chem. Int. Ed.* **2007**, *46*, 7473.
[5] T. de Haro, C. Nevado, *Synthesis* **2011**, *16*, 2530.
[6] S. Monfette, M. Eyholzer, D. M. Roberge, D. E. Fogg, *Chem. Eur. J.* **2010**, *16*, 11720.
[7] S. N. Kessler, M. Neuburger, H. Wegner, *Eur. J. Org. Chem.* **2011**, 3238.
[8] F. Proutiere, M. Aufiero, F. Schoenebeck, *J. Am. Chem. Soc.* **2012**, *134*, 606.
[9] D. A. Colby, R. G. Bergman, J. A. Ellman, *Chem. Rev.* **2010**, *110*, 624.

Review: SCS Spring Meeting 2012 'New Development in Analytical Chemistry'

The SCS Spring Meeting 2012 held in Geneva, February 16, 2012, provided a full-day program of outstanding contributions from national and international scientists in the field of analytical chemistry. Led by the conference topic 'New Development in Analytical Chemistry' the participants could follow lectures of Prof. ***Albert Heck***, Dr. ***Bernd Bodenmiller***, Dr. ***Thomas B. Hofstetter***, Prof. ***L. Ferguson***, Prof. ***R. Heeren*** and Dr. ***C. Amatore***.

An additional lecture by ***Nicolai Cramer*** (Werner Prize winner 2012) completed the program. It is very unfortunate that not more than ~80 participants followed the invitation and traveled to Geneva to participate in this interesting conference.

The SCS would like to thank Gérard Hopfgartner for organizing the conference and all sponsors for their generous support. Event Sponsors: AB Sciex, BASF, Merck-Serono, Novartis, Roche, SCNAT, Shimadzu, Sigma-Aldrich, Syngenta, Thermo Scientific, and the University of Geneva

The next Spring Meeting 'Catalysis' will take place at EMPA in Dübendorf in April 2013, organized by Dr. Davide Ferri.

Werner Preis 2012 to Prof. Nicolai Cramer

The 2012 Werner Prize is awarded to Prof. ***Nicolai Cramer*** for his pioneering studies in metal catalyzed C–C and C–H activation reactions and their application in organic synthesis. The award ceremony followed by a 35-minute lecture took place on the occasion of the Spring Meeting in Geneva on February 16, 2012.

The SCS would like to congratulate Prof. Cramer again for his outstanding contributions.

Prof. Nicolai Cramer earned his PhD degree at University of Stuttgart in 2005. After two research stages in Osaka und Stanford (2006/7) he got his habilitation at ETH Zürich in 2010. In fall 2010, he took up his current position at EPF Lausanne.

Sarah Schmitz joined SCS as new Assistant on March 1, 2012

Sarah Schmitz started working with the SCS from March 1st and succeeded Marie-Claire Lauster who left the society at the end of February. Ms Schmitz was born in 1981 and lives together with her husband and her five months old daughter in Lyss (BE). Before joining the SCS she worked as a business travel consultant for ten years and acquired high competences in organization and communication.

We welcome Sarah Schmitz and wish her much success and enjoyment in her new position.

Heilbronner-Hückel Lectures 2012

The Swiss Chemical Society is happy to announce the Heilbronner-Hückel Lectures 2012. In collaboration with the GDCh this series is provided on a yearly basis alternately in Switzerland and Germany.

The 2012 series is given by Professor Dr. ***Joachim Sauer*** from the Humboldt-Universität, Berlin (Germany)

1) Tuesday, April 17, 2012, 16.45 h
ETH Zurich, Hönggerberg Campus
Lecture Hall HCI J 3
'Storage and activation of methane – *ab initio* approach'

2) Wednesday, April 18, 2012, 16.30 h
University of Basel
Department of Chemistry, Physical Chemistry Building
Klingelbergstrasse 80, Lecture Hall, 2. Stock
'Zeolites and their catalytic activity – quantum chemical results'

3) Thursday, April 19, 2012, 17.15 h
Université de Fribourg, Département de Chimie
Grand Auditoire
'C–H bond activation by metal oxides in the gas phase and on solid surfaces'

4) Friday, April 20, 2012, 11.15 h
EPF Lausanne, Institute of Chemical Sciences and Engineering
Lecture Hall CH G1 495
'Atomistic understanding of heterogeneous catalysis by oxides – quantum chemistry in concert with experiment'

Contact: Professor Dr. Dr. h. c. Martin Quack
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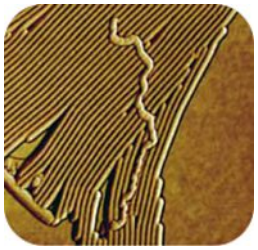
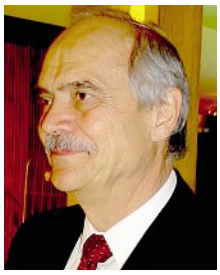


Call for Contributions for the SCS Fall Meeting 2012

The Fall Meeting 2012 will take place at ETH Zurich, Department of Chemistry and Applied Biosciences on September 13, 2012, 9.30–18.00.

The 'Call for Contributions' is open until April 15, 2012.
Further information and submission on
www.scg.ch/fallmeeting

Retirement of Prof. Dr. Heinz Berke, University of Zurich



The Swiss Chemical Society would like to thank Prof. Dr. ***Heinz Berke*** for his outstanding scientific contributions throughout his career and the great engagement for the Swiss Chemical Society. Prof. Berke is member of the Divisional Board of Chemical Research and was chair of various scientific events organized by the SCS. We wish Prof. Berke all the best and good luck in his post academic period of life.

Heinz Berke received his Diploma in chemistry at the University of Erlangen in 1971 and his Ph.D. from the University of Tübingen in 1974. Apart from a short stay in the laboratory of R. Hoffmann at Cornell University 1977, he was at the University of Konstanz from 1974–1988. He finished his habilitation in 1981, and in 1983 was awarded the 'Heisenberg Fellowship from the Deutsche Forschungsgemeinschaft' and the 'Dozentenpreis of the Fonds der Chemischen Industrie'. He was promoted to professor at the University of Konstanz in 1987, before joining the University of Zürich in 1988.

Heinz Berke's research activities cover various fields of organometallic chemistry. Major efforts are devoted to the area of main group and transition metal hydrides, which is related to homogenous catalysis with emphasis on hydrogenations. A tuning of the metal–hydrogen bond strength and bond polarity is expected to lead to new types of catalysts and eventually to new hydrogen storage materials. Also under study is the organometallic chemistry of metallacumulenes. Carbon-based units bridge transition-metal centers to generate rigid-rod 'molecular wires' for use in molecular electronics. As a very special aspect his research deals with the chemistry and archaeometry of man-made ancient blue pigments, like Egyptian Blue, Chinese Blue and Purple, and Maya Blue.

On Friday, February 16, 2012 a farewell symposium at the University of Zurich honored a life devoted to chemistry and a wide range of scientific achievements.

A warm welcome to our new members!

Divambal Appavoo, Neuchâtel – Carlos Calle, Bern – Julie Charpentier, Zürich – Julien Ducy, Russy – Sylvie Guinchard, Lausanne – Michael Huber, Zürich – Alfredo Ibanez, Zürich – Fitore Kasumaj, Zürich – Gisbert Schneider, Zürich – Marcel Sommer, Killwangen – Laetitia Souillart, Lausanne

SCS
Division of Analytical Chemistry

Weiterbildung Analytik

Trenntechnik
Analytische Anwendungen
Methoden der Life Sciences
Qualitätssicherung
InCompany Trainings

Code	Titel	Ort	Termin
LC-7d	Nanoflow-HPLC-MS: Prakt. Grundlagen beim Arbeiten m. kl. Flussraten – neu	Dübendorf	03.04.2012
LC-6d	UHPLC mit sub-2µ stationäre Phasen	Basel	17.–18.04.2012
QS-5d	Validieren von Analysenverfahren I – Grundlagen	Dübendorf	18.04.2012
DC-1d	Dünnschichtchromatographie: Einführung in die Moderne Technik	Muttenz	18.–19.04.2012
QS-2d	Messunsicherheit in der Analytik	Dübendorf	19.04.2012
AA-12d	IR Spektroskopie: Einführung und Interpretation der Spektren	Biel-Benken	08.–09.05.2012
BA-5d	Isolierung und Reinigung von Proteinen	Basel	08.–09.05.2012
AA-13d	IR Spektroskopie: Interprtationstraining	Biel-Benken	10.05.2012
AA-15d	Komb. Interpret. von ein- u. zweidimens. NMR-. IR-, und Massenspektren	Dübendorf	14.05.2012
CE-1d	Grundlagen der Kapillarelektrophorese (CE)	Basel	22-23.05.2012
AA-3d	Tipps und Tricks für fortgeschrittene GC-MS Anwender/-innen	Dübendorf	22-23.05.2012
AA-2d	Werkzeuge und Strategien zur Interpretation von EI-Massenspektren unbekannter Verbindungen mittels Datenbanken	Dübendorf	24.05.2012
IC-1d	Ionenchromatographie (IC) in Theorie und Praxis	Zofingen	31.05.2012
AA-1d	Elektrochemischen Titrationsmethoden: Einführung in die Praxis	Zofingen	05.06.2012
AA-5d	Karl Fischer-Titration	Zofingen	07.06.2012
QS-6d	Validieren von Analysenverfahren II - Praktische Beispiele	Dübendorf	11.06.2012
QS-4d	Qualifizieren von Analysengeräten	Dübendorf	12.06.2012
AA-16d	Kritischer Umgang mit Informationsquellen in der Chemie	Zürich	12.06.2012
Französisch			
MS-2f	Analyse structurale de (bio)molécules par spectrométrie de masse	Lausanne	29.–30.03.2012
GC-2f	Méthodes de la GC dans la pratique	Genève	02.–03.04.2012
GC-4f	Introduction à la GC / MS	Genève	17.–18.04.2012
GC-3f	Ionisation chimique en GC/MS	Genève	19.04.2012
MS-1f	Introduction à la LC/MS	Genève	24.–26.04.2012
AA-4f	Echantillonnage ou prélèvement représentatif en production	Genève	03.-04.05.2012
AA-2f	Préparation de l'échantillon liquide	Genève	08.05.2012
AA-3f	Analyse de matrices solides	Genève	09.05.2012
MS-4f	Analyse qualitative et quantitative en GC/MS	Genève	10-11.05.2012
GC-5f	Troubleshooting en GC/MS	Genève	15.05.2012
AA-1f	Spectrométrie atomique: AAS-GF et ICP-OES	Genève	18.05.2012

Es freut uns, Ihnen das Weiterbildungsprogramm 2012, das wir zusammen mit dem Centre de Compétence en Chimie et Toxicologie Analytiques (CCCTA) realisiert haben, vorzustellen.

Einzelmitglieder der folgenden Fachverbände können unsere Kurse zum vorteilhaften Mitgliedertarif besuchen:

Fachverband Laborberufe (FLB), Gesellschaft Deutscher Chemiker (GDCh), Schweizerische Arbeitsgemeinschaft für Spektrometrie und Elementaranalytik (SASP), Schweizerischer Chemikanten- und Cheministen-Verband (SCV), Schweizerische Gesellschaft für Lebensmittel- und Umweltchemie (SGLUC) und Schweizerische Gruppe für Massenspektroskopie (SGMS).

Falls Sie sich für unsere Veranstaltungen interessieren, erreichen Sie uns unter Telefon: **058 765 52 00** oder **Fax: 058 765 58 01** oder mailen Sie an **verena.schmid@eawag.ch**. Online-Anmeldung im Internet unter: *www.scg.ch/dac*

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- Inhalte an firmenspezifische Anforderungen und Wünsche anpassen
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Ein weiterer Vorteil der InCompany-Trainings: Für Ihre Mitarbeiterinnen und Mitarbeiter fallen keine Reise- und Übernachtungskosten an!

Experten stehen Ihnen für eine persönliche Bedarfsabklärung und Beratung gerne zur Verfügung.

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10. Swiss Course on Medicinal Chemistry in Leysin Switzerland, October 14-19, 2012

This exciting course focuses on concepts and tools of medicinal chemistry, science at the interface of synthetic chemistry, computational chemistry, biochemistry, pharmacology and toxicology, drug metabolism and disposition. As such, it primarily addresses medicinal chemists, synthetic chemists, biochemists and pharmacologists but interested parties from related fields are also welcome.

Modern preclinical drug research and development will be communicated by state-of-the-art lectures, interactive lectures, case studies and tutorials presented by experts from both academia and industry.

More information can be found on
http://www.swiss-chem-soc.ch/smc/leysin/leysin.html
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