

Workshop on energy storage in Brussels



EuCheMS representatives on the podium: President Ulrich Schubert and President Elect David Cole-Hamilton (third and second from right).

Securing the energy supply is intimately linked to the need to generate and store energy in an environmentally appropriate and sustainable manner. Chemistry is a crucial factor for designing a future energy scenario built on innovative technologies and new materials that will both save energy and protect the environment.

In view of this, on 11 February 2014, EuCheMS co-organised together with the Scientific and Technologic Option Assessment (STOA) of the European Parliament a workshop entitled “The energy storage challenge: which contribution from chemical sciences?”. The workshop presented the main possibilities to store energy via the chemical sciences: physical devices, such as batteries or super-capacitors, and the storage of energy in chemical bonds to be released at another time and place.

The workshop was attended by more than hundred participants and was also webcasted. It was opened by António Correia de Campos, Member of the European Parliament and STOA Chairman, and Ulrich Schubert, EuCheMS President, stating that sustainable energy production, transport and storage of energy are creating enormous scientific and technological challenges and that the chemical sciences can play a critical role in solving these issues. A substantial breakthrough is needed for efficient energy storage technologies on both small and large scales in order to balance the intermittent supply, e.g. wind and

solar energy, with the variable consumer demand.

The keynote speech was given by Serdar Sariciftci (Johannes Kepler University Linz, Austria). He stressed that to overcome the large scale energy storage problem it is crucial to develop chemical conversion of renewable energies into artificial, transportable fuels. In this respect, CO₂-recycling and methanol can play an important role for a clean energy future.

The panel speakers Gabriele Centi (University of Messina, Italy), Neil Champness (University of Nottingham, UK), Ferdi Schüth (Max Planck Institut für Kohlenforschung, Germany) and Kristina Edström (Uppsala University, Sweden) presented different aspects of current research, such as artificial photosynthesis, the chemical aspects of hydrogen technology and the different options and materials for energy storage. Fabrice Stassin (Umicore, Belgium) joined in the panel discussion to contribute from an industrial viewpoint.

The workshop was closed by David Cole-Hamilton, EuCheMS President Elect. He highlighted the importance of conversion and storage of solar energy in order to maintain the current standards of living while reducing the consumption of fossil fuels. Chemical sciences have an important role to play either in batteries or in high energy compounds.

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Coming soon: ECC5 in Istanbul

The 5th EuCheMS Chemistry Congress (ECC5) will be opening in Istanbul in a few months (31 August). Helena Grennberg, chair of the scientific committee, answers questions from the Newsletter team.

What are the most recent developments concerning the scientific programme of ECC5?

The registration opened in December and approximately two third of the keynote speakers have recently been published. The scientific committee and the topic conveners have been active in defining sub-areas for individual sessions and successful in finding excellent keynote speakers: at present we have about 80 confirmed speakers from twenty countries, in addition to eight plenary speakers.

The maximum number of keynotes is 120. We are still in the nomination-selection process and envisage regular updates with additional keynotes and lecture titles, as well as information on the awards that will be given during the congress. At present, I know that Barry Trost of Stanford University, USA will receive the prestigious GDCh August-Wilhelm-von-Hofmann-Denkünze award on the opening day, and he will also give a lecture on atom economy challenges.

The confirmed keynote speakers are active in various sub-areas of the topics, as detailed at the congress website. Are regular contributions restricted to these sub-areas?

Not at all, we welcome all contributions.

The registration and abstract submission opened in December, is there already activity?

Yes. A few weeks after opening, more than 50 abstracts were already in the system. That compares well with previous ECC meetings, and the number of participants is significantly higher. From experience, most registrations and abstract submissions take place close to the deadlines; for abstract submission this is 15 May and for early bird rates it is 4 June. We intend to finalise the selection for oral contributions during June and to publish the final programme in July. I recommend those intending to participate to submit and register circa two weeks before the deadline.

www.euchems2014.org



General Assembly adopted a new EuCheMS Constitution

The EuCheMS General Assembly 2013 adopted a new Constitution, for which the approval procedure at the Belgium authorities is currently in progress. Major overhaul of the Constitution was necessitated by the relocation of the EuCheMS office from London to Brussels and the associated necessity to conform governance to Belgium law. Furthermore, ten years of experience with the old Constitution had shown that some sections were impractical.

The most obvious change was the splitting of the old Constitution into two parts: the new Constitution, which was reduced to basic essentials, and the bylaws, which detail the general rules. The advantage of doing so is that only the Constitution and any future changes thereof must be authorised by the Belgium authorities (which is a time-consuming and costly process), while the bylaws can easily be modified or amended by the General Assembly. The most important changes to content are:

- clearer definition of the tasks and obligations of the EuCheMS bodies General Assembly, Executive Board and Presidential Council (president, vice-president and treasurer),
- strengthening the rights and position of the General Assembly,
- opening EuCheMS to new types of members (such as research institutes, governmental bodies, companies, etc.)
- clear and practical voting rules for the General Assembly.

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Important! Venue change ECC5

The venue of the 5th EuCheMS Chemistry Congress (ECC5, see page 1) will be WOW Istanbul Convention Centre. This is a change from what has been previously announced. The reason is that the UN together with a Turkish Ministry will have a conference in the Congress Center originally booked for ECC5. Since the Ministry has preferential terms, our contract was repealed. WOW Istanbul Convention Centre fulfills the requirements for ECC5, has plentiful hotel accommodation on site and is easily accessible by metro.

New presidents of chemical societies in Germany, Belgium and Italy

Thomas Geelhaar (Merck, Darmstadt) has been elected President of the Gesellschaft Deutscher Chemiker (GDCh) and took office on 1 January 2014, following



Barbara Albert (Technische Universität Darmstadt). He has been on the Board of the GDCh since 2008 and was treasurer from 2010 to 2013. Geelhaar studied chemistry at the University of Mainz from 1975 to 1981 and received his PhD in physical chemistry at the University of Mainz in 1983. In 1984, he started working in liquid crystal research at Merck in Darmstadt and held since then several leading positions in research, marketing and business development. In 2007 he was appointed as Chief Technology Officer Chemicals and Senior Vice President. In 2012, he became a member of the Editorial Board of *Angewandte Chemie*.

Claudine Buess-Herman has been elected President of the Société Royale de Chimie (SRC) Belgium. She is full professor of analytical chemistry at the Université Libre de Bruxelles (ULB). She received her PhD from ULB in 1978 and has directed the Laboratory of Analytical and Interfacial Chemistry of ULB since 1989. Her research interests are in electrochemistry and interfacial chemistry. She has served as division



officer of the International Society of Electrochemistry (ISE) and is presently the Belgian National Secretary of ISE. She has been active as an expert for the EU, NATO, International Science Foundation, European Space Agency and several national science foundations in Europe. She chaired the Division of Electrochemistry of Fecs from 2001 till 2008, and was a member of the Executive Committee of Fecs (2006 till 2008) and co-founder in 2006 of EuCheMS.

Raffaele Riccio has been elected President of the Italian Chemical Society (SCI). Since 1994 he has been full professor of organic chemistry at the Faculty of Pharmacy, University of Salerno. He started his scientific career at the National Council of Research of Italy after graduation in chemistry in 1973. In 1987 he became associated professor at University of Napoli. At the University of Salerno he has been coordinator of the PhD School of Pharmaceutical Sciences, Director of the Department of Pharmaceutical Sciences and Dean of the Faculty of Pharmacy. He was President of the Division of Organic Chemistry (2008 till 2010) and Vice-President of SCI (2011 till 2013). His main research interests are the chemical and pharmacological investigation of bioactive natural products and the stereochemical analysis of flexible organic molecules by NMR and computational methods.



Policy News

Public consultation on sustainable use of phosphorus

“The public at large is unaware of the seriousness of the phosphorus problem and so are our politicians”, says EuCheMS in its response to the public consultation on sustainable use of phosphorus. Phosphorus is widely used as phosphate in agriculture and is an essential component in fertiliser and feed, but it is a non-renewable resource. The

consultation launched by the European Commission in 2013 asked how to ensure future supply and about ways to minimise the side effects phosphorus use can have on the environment. EuCheMS response to the public consultation is available at www.euchems.eu/publications/policy-positions.

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The EuCheMS Executive Board

The EuCheMS Newsletter introduces the EuCheMS Executive Board members. This issue goes on with Livia Simon Sarkadi (Hungary), Pilar Goya (Spain) and Boguslaw Buszewski (Poland).

Livia Simon Sarkadi is professor and head of the Department of Food Chemistry and Nutrition at the Faculty of Food Science, Corvinus University of Budapest, Hungary. Sarkadi became the first female President of the Hungarian Chemical Society in 2011 and she has almost two decades experience of working within FECS and EuCheMS. In 1996 she became the Representative of the Hungarian Chemical Society in the Food Chemistry Division of FECS/EuCheMS and served as secretary and co-chair of this division. She became chair of the EuCheMS Food Chemistry Division in 2009 and was an appointed member of the Executive Board of EuCheMS (2010 till 2013). As a member of the scientific and local organising committees she helped organise the inaugural EuCheMS Chemistry Congress in Budapest (2006). Sarkadi is one of the two editors of the EuCheMS book "European Women in Chemistry", published in the International Year of Chemistry 2011. Her experience and contacts, her concern for younger chemists and service as a role model for other women in science will enable her to make a significant contribution to EuCheMS activities.



Pilar Goya is research professor at the Institute of Medicinal Chemistry (IQM), which belongs to the Spanish Research Council (CSIC). Her research focuses on drug design in medicinal chemistry. She is also the Vice President of the Spanish Medicinal Chemistry Society (SEQT). In addition to her research activities she has been involved in science management and policy issues, having been the Head of International Affairs of CSIC and director of



the IQM. Goya strongly believes in the role of EuCheMS as a single, authoritative voice in Europe, and is willing to contribute with her international experience: she has served as a member of the European Science Foundation and as the President of the Chemistry Committee for Marie Curie Fellowships. Goya has attended several general assemblies of EuCheMS as Vice President of the Royal Spanish Society of Chemistry and considers it both an honour and a challenge to be a member of the Executive Board. Among the issues that EuCheMS deals with, she is particularly interested in research integrity and good scientific practice, and in fostering public awareness of chemical discoveries and chemistry in general.

Boguslaw Buszewski is full professor and chair of the department Environmental Chemistry & Bioanalytics at the Faculty of Chemistry, University of Torun, Poland. Among his main goals concerning the work within the EuCheMS Executive Board are the promotion of the cooperation between non-profit-making scientific and technical societies in the field of chemistry and molecular sciences in Europe, the popularisation of interdisciplinary chemistry and its importance for the development of civilization, science, culture and art. Buszewski also plans to intensify the support of regional cooperation as well as European programmes (such as ChemLab II) and joint projects. He wants to foster researcher exchange through scholarships or internships and track careers of students and young scientists through the creation and support of the pan-European model. Another topic Buszewski wants to promote is the popularisation of chemistry through Children's Universities, Nights of Science, festivals of research and other events. Cultivating tradition and history of chemistry will be another focus during his work as a member of the EuCheMS Executive Board.



Special issue on mining and the environment

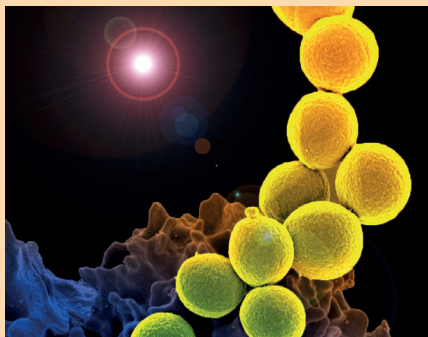
A special issue on "Mining and the Environment – Understanding Processes, Assessing Impacts and Developing Remediation" was published by the scientific journal *Environmental Science and Pollution Research (ESPR)* in November 2013.

Jürg Zobrist and Walter Giger from Switzerland served as guest editors. Giger is chair of the EuCheMS Division of Chemistry and the Environment. For this special *ESPR* issue contributions were solicited from those who had made presentations at the symposium on "Mining and the Environment", held at the 4th EuCheMS Chemistry Congress in Prague on 28 August 2012. In addition, scientists investigating environmental impacts of mining, mainly in Europe, were invited to report on their most recent results. The special *ESPR* issue contains 35 publications from research institutions in 22 countries. The authors discuss problems, basic approaches and new concepts in remediation. This topical compilation of knowledge is addressed to a broader scientific community interested in environmental issues.

Environmental Science and Pollution Research is the publication organ of the EuCheMS Division of Chemistry and the Environment (DCE). The French DCE delegate Philippe Garrigues has served since 2011 as Editor-in-Chief of *ESPR*. Among the Editors are five DCE delegates from different EuCheMS member societies. The journal has experienced an extraordinary growth from 96 published articles in 2009 to 827 papers in 2013, despite a quite high rejection rate of more than 60 percents.

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Interaction of a white blood cell (background) with antibiotic resistant bacteria. (Image: NIH, NIAID)

Antibiotic Awareness Day: public panel on superbugs

In terms of impact on society, there are few public health issues of greater importance than antibiotic resistance. The European Centre for Disease Prevention and Control estimates that antibiotic resistance results in 25 000 deaths a year across Europe. While new microbes continue to emerge and existing pathogens develop resistance, the flow of new antibiotics is diminishing.

On 18 November 2013, coinciding with European Antibiotics Awareness Day, the Royal Society of Chemistry (RSC) held a public panel discussion entitled "Beating the Superbugs: avoiding an antibiotic apocalypse", chaired by TV presenter and journalist Michael Mosley. The debate featured expert views from clinical, research and policy perspectives and was introduced by the Chief Medical Officer for England, Dame Sally Davies. In addition, the RSC has recently become a partner organisation for Antibiotic Action, a global initiative to highlight the threat of antibiotic resistance to the general public.

Throughout 2014, the RSC will continue to work with a number of learned societies to develop community initiatives to support collaboration amongst researchers on the one hand, but also to highlight the issue amongst funders and policymakers on the other. Governments and funders will need to work together. Public-private partnerships such as the Innovative Medicines Initiative may be one approach worth replicating on both a national and global scale.

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Video from the discussion at
<http://rsc.li/superbugs>

Events 2014

18 – 23 May 2014, Riva del Garda, Italy

38th International Symposium on Capillary Chromatography & 11th GCxGC Symposium

http://mytus.unime.it/4daction/web_home/

29 – 31 May 2014, Hamburg, Germany

113th Annual German Conference on Physical Chemistry, www.bunsen.de/bunsentagung2014

11 – 15 June 2014, Malmö, Sweden

15th International Conference on Electroanalysis
<http://eseac2014.com>

15 – 19 June 2014, Gargnano, Italy

International Summer School on Organic Synthesis
A. Corbella, www.corbellasummerschool.unimi.it

23 – 28 June 2014, Uppsala, Sweden

18th International Symposium on Bio- and Chemiluminescence, www.conference.slu.se/isbc2014

29 June – 4 July 2014, Prague, Czech Republic

EUCHEM Conference on Organic Free Radicals
www.uochb.cz/web/structure/1259.html

6 – 10 July 2014, Tallinn, Estonia

EUCHEM 2014 Conference on Molten Salts and Ionic liquids, <http://euchem2014.ttu.ee>

31 August – 4 September 2014 Istanbul, Turkey

5th EuCheMS Chemistry Congress
www.euchems2014.org

7 – 10 September 2014, Prague, Czech Republic

22nd Conference on Isoprenoids
www.vscht.cz/lam/isoprenoids/Isoprenoids.htm

7 – 11 September 2014, Lisbon, Portugal

EFMC-ISMC 2014 – 23rd International Symposium on Medicinal Chemistry

21 – 25 September 2014, Ischia, Italy

Ischia Advanced School of Organic Chemistry
www.iasoc.it/home

Events 2015

5 – 9 July 2015, Bratislava, Slovakia

21st European Conference on Organometallic Chemistry, www.eucomcxi.eu

22 – 25 September 2015, Leipzig, Germany

15th EuCheMS International Conference on Chemistry and the Environment, www.icce2015.org

Calls for EuCheMS Lecture and Award for Service 2014

EuCheMS member organisations, Divisions and Working Parties are invited to make proposals for the EuCheMS Lecture 2014. The EuCheMS Lecture serves to strengthen the image of EuCheMS and of European chemistry in general, promoting scientific cooperation among chemists in Europe. The Lecturer should be a prominent chemist from a European country. The EuCheMS Award for Service acknowledges outstanding commitment with regard to fostering chemistry and molecular sciences in Eu-

rope and the goals of EuCheMS. In addition to recognized service to EuCheMS, this may include activities in governmental, non-governmental or funding organizations, publicity-related activities, etc. Nominations must demonstrate achievements for improved competitiveness, visibility, coherence or structure of chemistry in Europe. Detailed information and nomination forms are available for download on the website www.euchems.eu/awards.

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EuCheMS Newsletter



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