

ECC-6: Chemists met in Seville

The wonderful friendly city of Seville was abuzz with chemistry in mid-September: The 6th EuCheMS Chemistry Congress (ECC-6), hosted by the National Association of Spanish Chemists (ANQUE), took place in front of 2000 people, most of them young. All aspects of chemistry were explored through nearly 800 oral presentations and a similar number of posters.

The congress started with a fine exposition from Nobel Laureate Dick Schrock on molybdenum alkene metathesis catalysts. EuCheMS Lecture Award winner Gérard Férey presented metal organic frameworks, which breath (the pore size changes) and have exciting applications.

Very sadly, Bucky-balls discoverer Harry Kroto died recently. However, it was a delight to have Harry's wife Margaret there when Nazario Martin delivered a touching tribute to him. He highlighted Harry's pioneering discoveries in the field and then described his own work on chiral fullerenes amongst others.

The winner of the Prince of Asturias Prize, Avelino Corma, showed exquisite control over placing catalytically active centres in or on supports with wide commercial applications. Molly Stevens' spectacular work on new biomaterials for sensing and for regenerative medicine included new ways to grow bone and the multilayer structure of cartilage as well as sensors for the prostate specific antigen (PSA), HIV and Ebola in cured patients for mapping virus types. Janine Cossy explored heterocyclic syntheses, many of which benefitted from the presence of cyclopropane rings in the skeleton for cyclisation, whilst Nobel Laureate Jean-Marie Lehn looked at the selection of drug candidates from dynamic combinatorial assemblies synthesised in the presence of the target. Roberta Sessoli showed how magnetic materials can be used in spintronics and to make q-bits, the centrepiece of quantum computers.



Great success: tapas and chemistry in Seville.

The congress finished with the winner of the August-Wilhelm-von-Hofmann-Denk-münze (awarded by GDCh), Ben Feringa, on nano motors that can be controlled by light. These and all the other lectures and posters were the bedrock of the congress but there was so much more: master classes, sessions devoted to the Federation of Latin American Chemical Societies, John Dalton's 250th birthday, transnational exchange (joint with the American Chemical Society), debates on CO₂ usage, the role of chemistry in society and ethics. Helena Grennberg was presented with her EuCheMS Award for Service and one of the most successful events of the European Young Chemists' Network involved lectures in a tapas bar. The European Young Chemists Award was again a hugely successful competition.

Overall, the congress was a great success, for which massive thanks go to Peter Edwards (scientific committee), Carlos Negro (local organising committee), to Ernesto Castañeda and Lorenzo Baselga (ANQUE) and to Nineta Majcen, Bruno Vilela and Irina Simion (EuCheMS). More details on ECC-6 at www.euchems.eu/newsletters/newsletter/bnu-september-2016-ecc6-special-issue/. We very much look forward to welcoming you in Liverpool for ECC-7 in August 2018.

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EYCN Career Days in Seville

The four-day programme "Creating a successful career", which was organised by the European Young Chemists' Network (EYCN), contained lectures about scientific oral and writing skills, entrepreneurship, project management and career development. Workshops were held for CV and job-hunt advice, experimental troubleshooting and research funding in Europe. In addition, the soft launch of the International Young Chemists' Network (IYCN) took place, which defined the first actions of this network unifying all young chemists in the globe. Furthermore the presentations from the finalists of the European Young Chemist Award were held.

The social programme included a career networking reception, organised by the Gesellschaft Deutscher Chemiker (GDCh) and sponsored by GDCh and the Royal Society of Chemistry. This event created the ideal opportunity for young chemists to connect with HR managers from different chemical companies and publishing houses.

Once again, the Research in Germany Council (DFG) showcased many opportunities for a future career in Germany. This was a great occasion for young chemists to find information on the different options available to chemists, and was particularly enjoyed by the five American young chemists who attended the EuCheMS Chemistry Congress as part of the Young Chemists Crossing Borders exchange programme, organised by EYCN and the Younger Chemists' Committee of the American Chemical Society.

The EYCN brought the conference inside the heart of the city centre by organising the first EYCN Science Café in a tapas bar. The combination of delicious tapas and highly accessible chemical sciences was a huge success and attracted a multitude of attentive participants. The EYCN programme finished on a high with Ricardo Lopez introducing the fascinating chemistry of wine to a full room with, of course, complementary and surprising tasting session of different kinds of wines from all over Spain.

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The European Association
for Chemical and Molecular
Sciences

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The Seville declaration on the use of chlorine in warfare

During its General Assembly 2016 in Seville in September, EuCheMS signed the following declaration:

"We, the Member Societies of the European Association for Chemical and Molecular Sciences (EuCheMS), deplore the use of chlorine in the Syrian conflict or any other and call upon the international community to bring to justice those responsible for the misuse of chlorine."

ACS and EuCheMS: Memorandum of Understanding

During the EuCheMS General Assembly 2016 in Seville, which took place just before the 6th EuCheMS Chemistry Congress (ECC-6), Diane Grob Schmidt, Past President of the American Chemical Society (ACS), EuCheMS President David Cole-Hamilton and EuCheMS Secretary General Nineta Majcen signed a Memorandum of Understanding.

The two societies agree to work together to "promote the ethical use of chemistry" and "collaborate for the good of the chemical enterprise, of their members, and of the subject of chemistry" in such areas as events, surveys, lobbying, ethics and safety, global challenges, exchange programmes, especially for young people, the public understanding of chemistry etc. The Memorandum of Understanding also provides for preventing interference of either society with the other's "mission or applicable law".

Already, joint sessions have been developed at ECC-6 and one is planned for the ACS Spring meeting which will take place in San Francisco in April 2017. ACS has sponsored ECC-6, a joint employment survey is being planned and the Atlantic Basin Conference on Chemistry (ABC Chem) is being launched as a new type of conference (see page 4).

We very much look forward to developing further joint initiatives between ACS and EuCheMS, two of the world's largest chemistry based organisations.

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Nineta Majcen, Diane Grob Schmidt and David Cole-Hamilton signed the Memorandum of Understanding. Below: Members of the General Assembly 2016.

EuCheMS General Assembly in Seville

This year EuCheMS met for its General Assembly in Seville in September, just before the 6th EuCheMS Chemistry Congress. The General Assembly send a strong message to the world by signing "The Seville declaration on the use of chlorine in warfare" (see left). Furthermore, to formalise and further develop collaboration between EuCheMS and the American Chemical Society (ACS) a Memorandum of Understanding was signed on behalf of EuCheMS and ACS (see left) by David Cole-Hamilton (EuCheMS), Diane Grob Schmidt (ACS) and Nineta Hrastelj Majcen (EuCheMS).

During the Member Societies' Initiative session Sir John Holman, President of the Royal Society of Chemistry, addressed the European community on Brexit aspects relevant for research community and confirmed the RSC commitment to remain open for collaboration.

The General Assembly unanimously elected Pilar Goya (Spain) as President Elect and Eckart Ruehl (Germany) as Treasurer. Both will start their term as ex-officio members of the EuCheMS Executive Board and members of the EuCheMS Presiding Council on 1 January 2017. On this date, Christophe Copéret (Switzerland) and Artur Silva (Portugal) will join the EuCheMS Executive Board as its elected members. The term of office for EuCheMS Past President Ulrich Schubert and Treasurer Francesco De Angelis ends this year. EuCheMS expressed



its sincere gratitude for strategic leadership during their term of office.

The special session at the General Assembly meeting was dedicated to the upcoming employability survey. The survey is coordinated by Reiner Salzer and will be carried out jointly by EuCheMS and the European Chemistry Thematic Network Association (ECTN), in collaboration with the ACS. The European Commission has been notified on the follow up and was represented at the meeting by Antonio Cammarota, DG EMPL/B3.

EuCheMS continues to grow also through its growing membership: This year, the European Federation for Medicinal Chemistry was accepted as a supporting member of EuCheMS.

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Chemists urge the State of Israel to ban chemical weapons

Israel, Egypt, Southern Sudan and North Korea are the only countries of the 196 recognised countries that have not signed and ratified the Chemical Weapons Convention (CWC) which provides for the elimination and monitoring of chemical weapons under the auspices of the Organisation for the Prohibition of Chemical Weapons. Israel has signed but not ratified the CWC, Southern Sudan plans to sign.

The Israel Chemical Society is a member of EuCheMS. So EuCheMS President David Cole-Hamilton has been supporting Ehud Keinan, President of the Israel Chemical Society, in his attempts to remove these dreadful weapons from Israel. These attempts have culminated in an open letter from Keinan to the Prime Minister of the State of Israel, Benjamin Netanyahu, urging him to sign the CWC. The letter ends with the passionate plea: "The Israeli chemists and chemical engineers, together with the large community of chemists around the world, are working together to remove the curse of chemical weapons from the face of the earth. We prefer to use these materials

to fight cancer and pathogens, to purify drinking water, to produce energy-saving insulation materials and many other useful materials for the sake of humankind. We request that the government of Israel would independently ratify the CWC. Not only the chemists, but also all Israeli citizens would rejoice at the ratification and applaud the Israeli government for keeping Israel in the sane part of the world."

Cole-Hamilton says: "I applaud Ehud Keinan's brave action. Chemical weapons have no place in a civilised society. They do not act as a deterrent and their effects are appalling. We have a unique opportunity to rid the world of this scourge and we are so close to doing it. EuCheMS calls upon Prime Minister Netanyahu to ratify the CWC as soon as possible and for Egypt, Southern Sudan and North Korea to follow this inspiring lead."

Together with a journalist, Keinan and Cole-Hamilton published an article in *The Conversation* drawing attention to the letter (<https://theconversation.com/why-ratifying-the-chemical-weapons-convention-is-in-israels-best-interest-63889>).

Chemical weapons in Syria: Letter to *The Times* and *The Guardian*

We are extremely concerned about the continuing use of chlorine as a chemical weapon in Syria and the suffering it causes for an already traumatised people (see "Assad used gas weapons, UN confirms", *The Times*, 26 August). Any use of chemical weapons, whatever the toxic chemical used, is illegal under the 1997 Chemical Weapons Convention (CWC) and international customary law. Some 192 countries have signed up to this convention including Syria.

As with many chemical weapons attacks identifying the user is problematic because the perpetrator has invariably fled the scene. Collecting evidence in the middle of an active theatre of war is even more complicated. We therefore welcome the recent report of the UN investigation and the call by the United States that President Assad be held

accountable by the Security Council. It must be emphasised by all signatories to the CWC that those using chlorine to injure and kill are committing a crime and will be held to account.

So, we call on the UK Government, the UN and the international community to be resolute in their commitment to investigating both the use and users of chemical weapons in Syria and to prosecuting the perpetrators.

We also call on all practitioners of chemistry, be they in academe, industry or trading of materials, to point out that chemicals should be used to help mankind. Chlorine has many legitimate and valuable roles but absolutely not as a poison for human lungs.

*Alastair Hay, Leeds University
Incoming Chair of the
Chemical Weapons Advisory Group (CWAC)*

50 years ago: discovery of PCBs in the environment

Environmental chemists struggle every day to discover new chemicals and unravel their fate in the environment and in humans by developing new methodologies and analytical techniques. Using state-of-the-art instrumentation we can today identify and quantify thousands of chemicals in complex samples at very low levels.

In 1964, the young Danish scientist Sören Jensen was hired at the Department of Analytical Chemistry, Stockholm University, Sweden to analyse levels of the pesticide DDT in the Swedish population. In his samples he found not only DDT and its degradation products but also a number of unknown peaks, a great motivator for any analytical chemist. With skill, ambition, curiosity and lots of hard work, aided by the development of mass spectrometry, Jensen discovered polychlorinated biphenyls (PCBs) in the environment in 1966. He found these PCBs in his samples interfering with his DDT analysis, but also in hair from his children and wife and realised their widespread persistence and transfer from mother to child via breast milk.

Within ten years of his discovery PCBs were regulated and banned in a large part of the world but they are still an issue of concern. The discovery was later followed by brominated flame retardants detected in fish downstream from textile industries in Sweden and the widespread environmental contamination of fluorinated compounds and various pharmaceuticals.

Chemicals which are banned are replaced by industry-developed substances with similar properties that are hunted and scrutinized by smart environmental chemists – 50 years ago, today and tomorrow.

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From Seville to Stockholm

The 2016 Nobel Prize for Chemistry goes to Jean-Pierre Sauvage, Sir J. Fraser Stoddart and Bernard L. Feringa for their work on molecular machines. Feringa was Thursday's plenary speaker at ECC-6 in Seville (see page 1).



Sandy Lawson



Karin J. Schmitz



Uta Neubauer



Jürgen Bugler

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EuCheMS Newsletter: the Frankfurt team says goodbye

“Aufhören, wenn es am schönsten ist” (quit at the top) the Germans say, and that is exactly what the EuCheMS newsletter team at the GDCh headquarters in Frankfurt/Germany is going to do. This EuCheMS newsletter is the last issue produced in Frankfurt. In the future the EuCheMS secretariat will be responsible for the newsletter and you will receive the issues from Brussels.

The EuCheMS newsletter started ten years ago in May 2006, with Sandy Lawson as coordinator, Uta Neubauer and Ernst Guggolz as editors and Jürgen Bugler as graphic designer. In October 2007 Karin J. Schmitz took over the coordinator's job from Sandy, who concentrated on the proofreading of all articles.

It was a pleasure for us to produce the newsletter for you and to contribute – at least a bit – to make EuCheMS a unique and real European organisation. We wish our colleagues in Brussels every success and satisfaction in their new assignment.

The Frankfurt team will remain EuCheMS fans, and that's a promise!

Karin J. Schmitz
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Experts needed for the evaluation of EU grants

The European Commission desperately needs more experts to help in the evaluation of grants. They need both men and women from all countries but there are some countries where there are simply no women nominated. The benefits for reviewers include allowing them to understand the processes of grant applications better and to know the kinds of things the panels are looking for. Some reviewers may also be asked to join panels. So whatever European country you come from, whether you are female or male, young or old, please add your name to the database at <http://ec.europa.eu/research/participants/portal/desktop/en/experts/index.html>.

Events 2017

18 – 22 June 2017, Oslo, Norway

ICCE 2017 – 16th EuCheMS International Conference on Chemistry and the Environment
www.icce2017.org

2 – 5 July 2017, Copenhagen, Denmark

4th EuCheMS Inorganic Chemistry Conference
www.eicc-4.dk

3 – 7 July 2017, Naples, Italy

ISSNP 2017 – International Summer School on Natural Products, www.issnp.org

3 – 6 September 2017, York, United Kingdom

3rd EuCheMS Congress on Green and Sustainable Chemistry, www.york.ac.uk/3EUGSC

29 August – 2 September 2017, Trondheim, Norway

11ICHC – 11th International Conference on the History of Chemistry, www.ntnu.edu/11ichc

10 – 13 September 2017, Berlin, Germany

GDCh-Wissenschaftsforum Chemie 2017 (WiFo 2017)
www.wifo2017.de

Events 2018

4 – 7 June 2018, Prague, Czech Republic

IIS Prague 2018 – 13th International Symposium on the Synthesis and Applications of Isotopes and Isotopically Labelled Compounds, www.iis-prague2018.cz

Atlantic Basin Conference on Chemistry (ABC Chem): a new kind of conference will start in 2018

The Atlantic Basin Conference on Chemistry (ABC Chem) is designed to be a new type of conference where chemists from countries around the Atlantic basin will meet to exchange ideas and develop collaborations.

The pilot conference will take place in Cancun, Mexico, from 24 to 27 January 2018. It is jointly sponsored by the American, Brazilian, Canadian and Mexican Chemical Societies as well as EuCheMS and further supported by the Federation of Chemical Societies of Africa, the South African Chemical Institute and the Federation of Latin American Chemical Societies.

The numbers of participants will be controlled to be not more than 500. Arrangements are being made to ensure even representation from the various participating organisations. The meeting will be self-contained in a single



Representatives of EuCheMS and the American, Brazilian, Canadian and Mexican Chemical Societies.

hotel, so it is expected that the opportunities for networking and discussions will be enhanced.

We hope you will join us in being interested in this exciting new venture.

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EuCheMS Newsletter



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