



2ND EUCHEMS CHEMISTRY CONGRESS

2008 SEPTEMBER 16 - 20
TORINO, ITALY

**CHEMISTRY:
THE GLOBAL SCIENCE**

PLENARY LECTURES BY
Peter AGRE (Baltimore, USA)
Avelino CORMA (Valencia, Spain)
Jean M.J. FRÉCHET (Berkeley, USA)
Robert H. GRUBBS (Pasadena, USA)
Kyriacos C. NICOLAOU (La Jolla, USA)
Martyn POLIAKOFF (Nottingham, UK)
K. Barry SHARPLESS (La Jolla, USA)

KEYNOTE LECTURES BY
Varinder AGGARWAL (Bristol, UK)
Lucia BIANCI (Florence, IT)
Matthias BELLER (Rostock, DE)
Richard CATLOW (London, UK)
Ken CAULTON (Bloomington, USA)
Fritz FRIMMEL (Karlsruhe, DE)
Dante GATTESCHI (Florence, IT)
Jana HAJŠLOVA (Prague, CZ)
Dino MORAS (Illkirch, FR)
Ulrich STIMMING (Munich, DE)
Philip TAYLOR (Geel, BE)
Jun-ichi YOSHIDA (Kyoto, JP)

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Special topic symposia:

ADVANCES IN SYNTHESIS
 ■ Organic Catalysis
 ■ Radical Reactivity in Transition Metal Chemistry
 ■ Reactions under Novel Conditions

ADVANCES IN UNDERSTANDING
 ■ Chemical Measurement Quality: Societal Impact
 ■ Cutting Edge Chemistry with Computers
 ■ Food Analysis: Pushing Detection Limits down to Nothing

CHEMISTRY AND LIFE SCIENCES
 ■ Biomolecular Interactions and Mechanisms
 ■ Drug Targeting and Delivery
 ■ Metal Homeostasis

ENERGY AND INDUSTRY
 ■ Biorefineries and Biotechnologies
 ■ Energy Production & Storage
 ■ New Trends for Agrochemicals

ENVIRONMENT
 ■ Greening Chemistry
 ■ Greenhouse Gases
 ■ Water Pollutants

MATERIALS AND DEVICES
 ■ Branched Polymers - Smart Functional Materials
 ■ Nanomaterials
 ■ Porous Materials

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*EuChEms, the European Association for Chemical and Molecular Sciences incorporates
 52 member societies which in total represent some
 150.000 individual chemists in academia, industry and government in over
 35 countries across Europe.

OVER 100 HOURS OF SCIENCE

The 2nd European Chemistry Congress in Turin promises to repeat the great success of the Budapest congress two years ago.

Igor Tkatchenko, co-chairman of the scientific committee and organiser of the scientific programme of symposia and lectures, talks to *Nachrichten aus der Chemie* about the goals of the second Euchems conference.

Nachrichten: As co-chairman of the scientific committee, you were responsible for organising the scientific programme. Was this more of an honour or a burden?

Igor Tkatchenko (IG): I'd say both. I have organised many conferences in France, of course – the 150th anniversary of the French Chemical Society was especially good training. But considering the many factors involved in an international conference, I admit it was a challenge – especially to make this one even better than the first!

Nachrichten: Budapest was a great success. What changes are in store for this second congress in Turin?

IG: I think we should pursue the interaction between the academic-scientific world and industry. We discussed this in Budapest, but colleagues in industry tell me there is more to be said here. So we have increased the number of lectures given by industry. We have chosen

topics relevant to industry, but that call for sound basic research at the start. Another aspect was to invite industrial chemists to co-host the scientific symposia: we now have three hosts from industry.

Nachrichten: So the 2nd Euchems conference seeks to attract chemists especially from industry?

IG: No, not especially. But we want to increase participation from both industry and academia: after all, chemistry is both a science and an industry. It is important to know the viewpoint of industrial scientists – and engineers, too: not only scientists working in laboratories but also people developing processes.

Nachrichten: How is this reflected in the scientific programme?

IG: For example, the plenary lectures the first evening. The one by Kyriacos C. Nicolaou will give a general introduction on how to crea-

te molecules. The second, by Martyn Poliakoff, will describe how to produce molecules. This is an exciting time for both chemistry and chemical engineering. So we have to stress the continuum between pure science and its applications.

Nachrichten: The 2nd Euchems congress wants cutting-edge promotion of chemistry and chemical sciences. What were your criteria for the scientific programme?

/G: By taking "Chemistry – Global Science" as the subtitle of the 2nd Euchems, we intend to show how chemistry affects virtually all aspects of human activity – not only life sciences, but also energy and therefore industry and the environment, climate change, etc. How can chemistry help solve the problems of sustainable development? The aim was to be truly interdisciplinary, also in regard to industry. This will mean stressing process development, specifically chemical engineering, which was notably absent from the first congress in Budapest. In three-and-a-half days, one clearly can't say everything about the importance of chemistry for human life. But one can try.

Nachrichten: What does the programme look like? How are the individual symposia structured?

/G: We have six main themes, with three more specialised symposia on each one. Two of the main themes go to the very core of chemistry: "Advances in Synthesis" and "Advances in Understanding". The associated symposia will cover organic catalysis, transition metal chemistry, process design, analytical sciences and computational sciences. The four remaining themes point up the interrelation between chemistry and our environment in general terms: "Chemistry and Life Sciences", "Energy and Industry", "The Environment", and "Materials and Devices". We have tried to mix basics with applications. For example, in life sciences we look at the basic processes or interactions between large molecules and bio-

molecules. There is a symposium on that and another on aspects of metal homeostasis, which is relevant to disorders such as Parkinson's, Alzheimer, Creutzfeld-Jakob disease, etc. An additional symposium is about drug targeting and delivery.

Nachrichten: A whole lot of chemistry...

/G: Yes, indeed. There are 18 symposia altogether – 102 hours of science in symposia, seven hours for plenary lectures and some 25 hours of poster sessions – very, very intense. The posters will be displayed throughout the conference so as to allow plenty of time for interaction between senior and junior scientists, academia and industry, and scientists from different countries.

Nachrichten: The scientific programme brings various branches of chemistry together. Isn't there a danger of the spectrum's being too broad? That real cutting-edge science can only take place at specialist conferences?

/G: Of course there could be a whole congress on, say, transition metal chemistry, but keep in mind that the same year we will have the international symposium on homogenous catalysis in Florence, and the international conference on organometallic chemistry in Rennes. In addition to these, there's the international conference on coordination chemistry in Jerusalem. So there will

be a lot of transition metal chemistry within Europe in one year – in two months, even. We are trying to avoid duplication. The idea with this Euchems series, starting in Budapest, was to make interdisciplinary science contacts that would broaden the scope of chemistry.

Nachrichten: Is it only a matter of strategy, or are there practical reasons, too?

/G: I don't believe the Euchems executive committee means to copy the ACS meetings, with 15,000 people gathered in one place. In Europe, there just aren't many venues that can accommodate a large



number of people – with seating for 2,000 or more. There were already 2,500 present in Budapest. We expect about the same in Turin. Our meeting will be different from the ACS, which is after all just one national society: Euchems represents 50 chemical societies from 37 European countries.

Nachrichten: Is the congress designed only by Europeans, for Europeans? What about guests from other parts of the world?

/G: We do indeed hope to attract scientists and other people outside of Europe. Of course we have invited speakers from outside of Europe. Most are from the US, but we will have one keynote speaker from Japan and one from China. If Euchems is to take its place as Europe's banner chemistry body, like the ACS in the US, we must have scientists from all over the world, who then go home and say: Europe is a top address! We want to attract even more people from non-European countries than we did in Budapest.

Nachrichten: Would you regard this Euchems European conference as unique? Do the scientists see themselves as "Europeans", or is this just another international conference?

/G: We are a long way from unifying Europe. I think we do have some consciousness of European chemistry now – thanks to the Euchems scheme and the European journals. The chemical societies all tend to be a bit nationalistic. Putting together their publications into a single European scheme was already a major step toward the idea of European chemistry. In Chemistry – A European Journal, "European" is right there in the title – that's excellent. This editorial unification of chemical societies in a single journal sends an important signal: that there really is a European corpus of work with its attendant publications. Euchems is the kind of federative European association that can speak in Brussels as the academic representative of chemistry. Such representation on political issues is essential in Brussels, where all decisions on framework programmes are taken.

Nachrichten: And what about the national societies? Do you think there is any change in self-perception there?

/G: Yes, I do. For example, the German Chemical Society is holding its board meeting at the Euchems conference. This means that all of the Board members of the German Chemical Society will be present in Turin! Nowadays the chemical societies in Europe continue to see themselves as national societies, it's true, but they also see themselves as European societies.

Nachrichten: Would the several bi-national prizes be another example of this trend?

/G: Certainly. There's the Grignard-Wittig-Prize between the

GDCh and France's SFC. But France has similar links to the chemical societies of the UK, Italy, Spain and Poland. I believe the GDCh also has such connections. It seems to me that this approach strengthens cooperation between the societies, and Euchems as well. The national societies seek to be represented in Brussels, of course, but "Whose CheMS?" is the question. When it comes to Brussels, it's not the SFC or the GDCh: it's Euchems on behalf of all of the national chemical societies.

Nachrichten: Do you think that someday we will merge the chemical societies as we did the European journals?

/G: No, I don't think so. Europe's wealth lies in linking different cultures and approaches, not merging them. That way, we can maybe come up with something more interesting and important – a sort of supranational society.

Nachrichten: In Budapest you were responsible for the Young Chemist Award ...

/G: I was just chair of the jury. I was keenly interested and pleased to hear such talented young people. It is very gratifying that one award winner, Lee Cronin from Glasgow, will be giving a lecture in Turin.

Nachrichten: So would you say that the Euchems conference will have an impact on young chemists, too?

/G: Yes, I would. And not only because of the Young Chemist Award, but as evidence to young chemists that the lecturers, too, can be young. I hope that word-of-mouth will attract a number of talented young people.

Nachrichten: Are grants available to enable young people to attend the conference?

/G: We rely on the national societies for grants for young scientists, PhDs and post-docs. As yet, this is not possible on the Euchems level. But in future we should indeed have some funding of our own for young scientists, either directly or through corporate sponsorship. This is a priority. We charge only half of the usual fee for young scientists, but we still have to rely on the national societies to sponsor national participants.

Nachrichten: What message do you want the congress participants to take home?

/G: That the congress was a resounding success – that they are better informed, better connected and more aware than they were when they came. This depends about one third on science, one third on organisation – convenience, social aspects, etc. – and one third on the weather. So let's hope for the best!