ECTN Annual Conference & ECTN Association Meeting 2006



April 18-21, 2006 Vienna University of Technology Vienna / Austria

Organized by the Institute of Applied Synthetic Chemistry



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Conference Venue – Area Map Getreidemarkt



Area Map - Getreidemarkt

Registration

(1) Registration/Info Desk - 1st floor

Lecture Rooms

- 2 Radinger HS 1st floor
- (3) Chemie HS 1st floor
- (4) Vortmann HS 3rd floor

Seminar Rooms

- (5) Seminar Room 166/4 4th floor
- 6 Seminar Room 163/2 2nd floor

Public Internet Access

(7) Internet Access Point - basement

Meeting Point - Heuriger

8 Meeting Point for departure to the Rural Buffet

Map of Surroundings



Congress Venue: Faculty of Chemistry (Getreidemarkt 9)
Lunchroom at University Restaurant - "Freihaus" 1st floor

Viennese Dinner at *Wegenstein´s Restaurant Gösser Bräu Elisabethstrasse 3 - 1010 Vienna*

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der Naturwissenschaften und der Mathematik e.V.

Perspectives of Cooperation between the European Chemistry Thematic Network Association and ASIIN

- Abstract -

The presentation will begin with a brief introduction of ASIIN outlining the development of the organization and the fields and disciplines in which ASIIN carries out the accreditation of study programs. Other issues are the organization's legal form, its membership base and the role of the members, and its organizational structure. Most importantly, the membership of ASIIN is characterized by a large diversity: its membership is composed of networks of universities and universities of applied sciences in Germany, federations and trade associations, scientific societies and umbrella organizations from industry and trade unions providing ASIIN with expertise and ensuring that its accreditation criteria and standards are supported by all relevant stakeholders. The organizational structure of ASIIN emphasizes the competences of experts in the relevant subject areas while ensuring that a general and interdisciplinary point of view is also taken into account. The financial side of ASIIN's operations will also be addressed (sources of revenue, costs of accreditation procedures). These aspects will be addressed within the context of the German system of higher education.

In a second step, the ASIIN system of quality assurance for the accreditation of study programs in chemistry will be described. Here, the functions of the different bodies will be outlined in greater detail, with an emphasis on their function in the quality assurance process and the process itself.

The accreditation decisions themselves are based on the accreditation standards and criteria formulated by ASIIN. The general standards and criteria of ASIIN are supplemented by subject-specific standards which are formulated based on the educational standards established in the respective scientific community. General as well as subject specific criteria combine an output-oriented approach with a set of input criteria – a strong emphasis is placed on general and subject specific learning outcomes formulated as a set of competences students should have acquired by the time of their graduation. Overall, the structure of the ASIIN Accreditation Standards and Criteria are modelled after the rationale of the educational process in an academic program. Both types of sets of standards and criteria are regularly revised to take into account recent developments in the respective academic field(s) and the legal framework.

The final part of this presentation will focus on the international activities of ASIIN. ASIIN is part of international accreditation networks covering various subject disciplines and geographical and economic regions. Accordingly, the ASIIN standards and criteria are developed taking a wider international context into account. The integration of ASIIN in these networks promotes the international recognition of the ASIIN Accreditation Standards and Criteria and of the qualifications of students graduating from ASIIN-accredited programs. At the same time, it promotes the incorporation of the high quality standards applied by ASIIN into national and international standards developed by its partners.

Progress in Green Chemistry

Pietro Tundo

Department of Environmental Science, Ca' Foscari University, Dorsoduro 2137, 30123 Venice (Italy) Interuniversity Consortium" Chemistry for the Environmnt", INCA

Chemistry is perceived by the society as the chemical industry. This wrong position leads to identify this fundamental science, which has the mission to produces benefits to the mankind, as pollutant tout court. To reduce pollution, however, it is not necessary to decrease the production of chemicals, but to alter it – which is precisely the aim of Green Chemistry.

Green Chemistry attempts to design new, environmentally more benign ways to manufacture products. Chemists reduce or eliminate the use and generation of hazardous substances throughout the production process. For instance, in synthesising a chemical, sometimes a toxic organic solvent can be replaced by water or other less dangerous solvents. Or a production process can be altered to use less energy; or green, sustainable energy sources can be drawn upon.

Green chemistry was established in the early 1990s and has now gained a strong foothold in both industry and academia. Today one finds journals, graduate programs and summer schools on Green Chemistry; there are Green Chemistry committees or programs in all major associations of chemists, Green Chemistry Institutes and conference series.

Specifically, just a few months ago in Victoria, Canada, the G8 Ministers of Research and Education founded the **"International Green Network"**, which aims to improve the coordination and research in all field of Green Chemistry. In fact, different part of the World ask chemistry to get involved in their problems - differently, but all relating to green chemistry - which range from the utilization of the natural resources, to fight drought, to the decontamination, to improve the competitiveness through a cleaner production, to intervene in Climate Change.

The **European Technology Platform for Sustainable Chemistry** seeks to boost the competitiveness of the European Industry by strengthening chemistry, biotechnology and chemical engineering research and development in Europe. It is a joint initiative of Cefic, EuropaBio and the European Commission's DG Research. Furthermore, the relation between Green Chemistry and the new EU regulatory framework for chemicals (REACH) will be reported. Green Chemistry in fact is the natural answer to health and environment demands.

The collaborations between scientific and industrial research, and the dissemination of the principle of Green Chemistry in developing Countries are the topics also of the recently established Mediterranean Green Chemistry Network (**MEGREC**).

International cooperation is in fact of central importance: there are worldwide demands for the expertise of Green Chemistry, concerning issues such as cleaner production, the use of the natural resources, the fight against droughts, decontamination, or intervention in climate changes.



SME Higher Education Expectations and the Reality

Charles Watkinson, Corrocoat Inc.

The Corrosioneering Group works worldwide through operations in 37 countries. The Group comprises a number of SME's and we have our own research and development team comprising electrical/electronic engineers, mechanical engineers, corrosion engineers and chemists in two of those locations.

We don't require degree level for entry and both graduate and non graduate staff are employed to fulfil our requirements for technical personnel.

The FE (Further Education) system works well in some ways but seems tailored to providing students for specialist work in large conglomerates or within academia and yet SME's provide over 80% of the job market. Innovation is necessary to be at the forefront of Research and Development and this seems stifled in the system in some ways.

From the view point of one SME, what do we get from the FE system and what do we want? These aspects are discussed.

Can the old-European tradition be dangerous? Petrification of the science system in Poland: a lesson for the future

Karol Grela

Institute of Organic Chemistry, Polish Academy of Sciences Kasprzaka 44/52, P.O. Box 58, 01-224, Warsaw, Poland

Motivation^[1]

"We are a team of highly motivated young chemists trying to make a difference. We believe that Germany and Europe need a change in mentality: AUFBRUCHSTIMMUNG and OPTIMISM! Let's go for it!"

Western scientists rarely understand how science works in Poland and some other Central and Eastern European countries.^[2] Therefore, during this lecture some possible career paths available for young scientists in a field of experimental chemistry will be presented, based on the author's own experience. It is planed to give an impression how young scholars from Central and Eastern Europe think about our common future. It is hoped that the progressive integration of Central and Eastern European countries into the European Union will boost European science. However, multiple reforms of science and higher education in these countries are still required.^[3] This cannot be made without establishing new UE programs and fellowships *targeted solely to young and creative scientists* in Central and Eastern Europe.^[4]

References:

- [1] Prof. Dr. Frank Glorius, C3-Professor at the University of Marburg (2006) http://www.chemie.uni-marburg.de/~glorius/
- [2] Cezary Wójcik, "Eastern Europe: progress stifled by the old guard" Nature, 427, 196 (2004).
- [3] Quirin Schiermeier, "Poles apart, or together with Europe?" Nature, 421, 471 (2003).
- [4] Juraj Gregan, "Eastern Europe nurtures talent for the West" Nature, 421, 459 (2003);

DEVELOPING FASCINATION IN SCIENCE – CHANCES AND CHALLENGES

Zbigniew L. Pianowski

Institut de Science et d'Ingenierie Supramoleculaires Universite Louis Pasteur 8, allee Gaspard Monge, 67000 Strasbourg, France

In the course of my talk I would like to show some of the key points at the beginning of a scientific career. Following passionate teachers from the early stage of education opens for students a way to develop outstanding skills. Organizations supporting talented scholars can very effectively improve that process by exchange of ideas among the young people as well as between them and academic staff, creating an extremely intelectually stimulating environment. Such a contribution is far more effective than any direct financial support of single talents would ever be.

Such an experience for gifted teenagers is of great importance when the way and the form of academic studies is to be chosen. While hardly any talent is restricted only to one department, interfaculty studies are a very interesting alternative to the regular ones. Although in that moment there is usually a scientific tutor to be found directing the general passion towards certain scientific problems and investigations, the more wide and general background than usually is gathered, being of high importance when an independent research career will begin. Creating opportunities to perform doctoral studies with scientists working on the most recent scientific issues is the logical consequence of investing money and effort in the previous steps of education. For such young PhD people there is usually no other motivation but interesting research.

I will mention the existing European institutions which effectively stimulate young students and points where, in my oppinion, the help is unsufficient yet.

As science does not happen 'in vacuo', scientists are an important part of every local society. Apart from the research work and literature knowledge, the scholars should be also familiar with basic ethical and cultural issues to become in the future not only highly qualified workers, but real leaders and examples for their apprentices.

Choosing for Chemistry: Make It Easy!

Some personal data:

Name:	Annemiek Knijnenburg
Date of Birth:	May 11, 1984
Education:	2000-2002 pre-bachelor education at the Rotterdam Conservatory
	(Music department, Accordion)
	2002 High School Diploma
	2006 Bachelor in Chemistry

After finishing High School one thing for me was certain: I wanted to study something in which I could use both brain and hands. The practical aspect of the study of Chemistry was really important for me. To make new molecules with your own hands makes you really enthusiastic! Probably this was noticed by the staff and I got involved as ambassador to High School students to promote studying Chemistry at the University. I am still involved in this program and find it quite rewarding! Chemistry is seen by many as an old-fashioned and boring study and it is nice to see that when giving a realistic view about the study at the University, High School students also become enthusiastic! I recently completed my bachelor education and continued for a Master in 'Design and Synthesis', with a major subject in Organic Chemistry In my free time I like to play the accordion and play a lot of sports.

Proposal for a presentation:

Most of the time the Study of Chemistry is seen as a boring and old-fashioned study and this image needs to be improved! In the High Schools in the Netherlands not much time is devoted to practical work. As far as I am concerned that is a pity. To make High School students enthusiastic one should give them practical experience in the University. This should make it easier for them to choose Chemistry. Today one can study many subjects related to Chemistry at the University and this makes it difficult for the High School student to get a clear picture. Hopefully, this problem can be solved by offering the High School student one year of introduction to Chemistry. In this year every direction of chemistry is introduced. After the first year the students will choose their main subject for example 'Chemical Technology', 'Sustainability' or 'Fundamental Chemistry'. This new study is called 'Molecular Science & Technology' and it is offered together with the Delft University of Technology.

Hopefully this cooperation and the modern methods of promoting this new program will help to increase the number of chemistry students in the near future!

Walter Zeller astyle, *linguistic competence; HBLVA f. chem. Ind.* **Leo Gros** *Europa Fachhochschule Fresenius*



ESP:C an English Course for Chemists

This course will help you master the language and skills which are indispensable for the professional development of scientists.

When you enter the course (<u>www.esp-c.org</u>) and register as a guest, it allows you to use all the material free of charge for one day. You can then decide whether you would like to follow the course with a teacher or whether you will do it all by yourself.

An examination will be held at the end of the course (always on the last Saturday in May). The certificate issued will show that you can communicate efficiently as a chemist on the level B2.

This course has been recognised by the Royal Society of Chemistry and by the Czech Chemical Society for Purposes of Continuing Professional Development.



Programme

Tuesday, April 18

17:00 - 20:00 ECTN(A) Management Committee Meeting [CHEMIE HS]

Wednesday, April 19

- 09:00 11:00 ECTN Plenary Session [RADINGER HS]
- 11:30 13:00 Working Group 1: EChemTest [SEMINAR ROOM 166/4] Working Group 2: Chemistry and Cultural Heritage [CHEMIE HS] Working Group 3: Developing Independent Learners in Chemistry [RADINGER HS]
- 14:30 16:00 Working Group 1: EChemTest (Vienna Testing Center Launch) [SEMINAR ROOM 166/4]

Working Group 4: Rare Chemistry [CHEMIE HS]
Working Group 5: 2nd and 3rd Cycle Studies [VORTMANN HS]
Working Group 6: The Bologna Process for the Practice-Oriented HE Sector in Chemistry [RADINGER HS]

- 16:30 17:30 **ECTN Plenary Lecture 1**: Iring Wasser *ASIIN c/o VDI, Germany* Perspectives of Cooperation between the European Chemistry Thematic Network Association and the ASIIN [RADINGER HS]
- 17:30 18:30 ECTN Plenary Lecture 2: Pietro Tundo University of Ca' Foscari of Venice, Italy Progress in Green Chemistry [RADINGER HS]

Thursday, April 20

- 09:00 09:30 ECTN Association Plenary Association Business [RADINGER HS]
- 09:30 11:00 EChemTest, Eurobachelor, Euromaster [RADINGER HS]
- 11:30 12:30 **ECTN Plenary Lecture 3**: Charles Watkinson *Corrocoat Ltd., Leeds, UK* SME Expectations from Higher Education and the Realities

SME Expectations from Higher Education and the Realities [RADINGER HS]

12:30 - 13:00 **ECTN Plenary Lecture 4**: Karol Grela *Institute of Organic Chemistry, Polish Academy of Sciences, Poland* Can the old-European tradition be dangerous? Petrification of the science system in Poland: a lesson for the future [RADINGER HS]

- 13:00 13:30 **ECTN Plenary Lecture 5**: Zbigniew Pianowski *Institut de Science et d'Ingenierie Supramoleculaires ULP Strasbourg, Franc*e Developing Fascination in Science - Chances and Challenges [RADINGER HS]
- 15:00 18:30 TASSEP Meeting [CHEMIE HS]

Friday, April 21

- 09:00 10:30 Working Group 7: Multimedia [CHEMIE HS] Working Group 8: Links with Schools [SEMINAR ROOM 166/4] Working Group 9: Teacher/Teaching Evaluation [RADINGER HS]
- 10:30 11:00 ECEN Contact Meeting and short presentations [RADINGER HS] Short presentation 1: Annemiek Knijnenburg University Leiden Choosing for Chemistry: Make It Easy! [RADINGER HS] Short presentation 2: Walter Zeller HBLVA f. chem. Ind. ESP:C an English Course for Chemists [RADINGER HS]
- 11:30 13:00 Working Group 10: Biological Chemistry [SEMINAR ROOM 166/4] Working Group 11: Image of Chemistry [CHEMIE HS] Working Group 12: Newly Appointed Teaching Staff [RADINGER HS]
- 14:30 16:00 Working Groups Presentations / Reports [RADINGER HS]
- 16:30 18:30 ECTN Plenary Session and Closing of the Meeting [RADINGER HS]

Saturday, April 22

09:00 - 12:00 Optional EChemTest Meeting - individual discussions Chemistry [SEMINAR ROOM 166/4]

There will be a limited number of Poster Presentations (mainly working group topics) in the foyer where the coffee breaks take place.

List of Accommodations

Austria Trend Hotel beim

Theresianum

Favoritenstrasse 52 1040 Vienna phone: +43-1-5051606 fax: +43-1-5051609 theresianum@austria-trend.at

Hotel Beethoven

Millöckergasse 6 1060 Vienna phone: +43-1-5874482-0 fax: +43-1-5874442 info@beethoven.bestwestern.at

Hotel Drei Kronen

Schleifmühlgasse 25 1040 Vienna phone: +43-1-5873289 fax: +43-1-5873289-11 office@hotel3kronen.at

Hotel Haydn

Mariahilferstrasse 57-59 1060 Vienna phone: +43-1-5874414 fax: +43-1-5861950 info@haydn-hotel.at

Hotel Ibis

Mariailfer Gürtel 22-24 1060 Vienna phone: +43-1-59998-0 h0796@accor.com

Hotel Mercure Secession

Getreidemarkt 5 1060 Vienna phone: +43-1-58838151 fax: +43-1-58838153 stefanie.steurer@accor.com

Hotel Papageno

Wiedner Hauptstrasse 23-25 1040 Vienna phone: +43-1-5046744 fax: +43-1-5046744-22 reservation@hotelpapageno.at

Hotel Pension Shermin

Rilkeplatz 7 (Ecke Margaretenstrasse 2) 1040 Vienna phone: +43-1-5866183-0 fax: +43-1-5866183-10 hotel@shermin-apartments.com