

IUPAC Committee on Chemistry and Industry (COCI)
Annual Meeting
Sundsvall, Sweden
8 June 2002

Present:

Nelson Wright, Chairman	12539 Rue Ranger, Montreal, PQ, Canada
Mark C. Cesa, Secretary	BP Chemicals Inc., USA
Paul De Bievre	President, National Committee on Chemistry, Belgium
H.-Luzius Senti	Chatel Dessous, CH-1271 Givrins, Switzerland
Jinliang Qiao	Research Institute of Chemical Industry, SINOPEC, China
Min-Che Chon	President, Chon International Co., Ltd, Korea/Seoul
Aldo Bologna Alles (Obs.)	Lactosan-McCormick, Uruguay
Akira Ishitani	Kanagawa Academy of Science and Technology, Japan
Esma Toprak (Observer)	Chemical Engineering Department, Bogazici University, Turkey
Michael D. Booth	Chemical and Allied Industries' Association, South Africa
Mikhail V. Gorelik	NIOPIK, Russia
Alan Smith	Hydowns Farm, Woodlands, Wimborne, Dorset, UK
Jonas Unger	Ungernet AB, Sweden

Guests:

Peter W. Atkins	Chairman, Committee on Chemistry Education, IUPAC
Alexandre Pokrovsky	Division of Basic and Engineering Sciences, UNESCO
Liev Sydnes	Vice President, IUPAC
Ivar Giaever	Nobel Laureate, General Electric (retired)

Absent:

Johnsee Lee	Industrial Technology Research Institute, China/Taipei
Gabor Blasko	EGIS Pharmaceuticals Ltd., Hungary
Manfred Grasserbauer	European Commission – JRC/IRMM, Belgium
Rob Taalman	CEFIC
Junshi Miyamoto	Chemicals Evaluation and Research Institute (CERI), Japan
John D. Bradley	Dept. of Chemistry, Univ. of Witwaterstrand, South Africa
Rene Paul Martin	Elf-Atochem, France
Guy J. Martens	Solvay & Cie SA, Belgium
Qing Ling Chen	Shanghai Research Institute of Petroleum Technology, China
Kan-Nan Chen	Dept. of Chemistry, Tamkang University, China/Taipei
Michael Droscher	Creavis GmbH, Germany
W. Lubiewa-Wielezyski	Industrial Chemistry Research Institute, Poland
Edwin P. Przybylowicz	IUPAC Bureau
Zoltan Csizer	UNIDO
Igor Volodin	UNIDO
David J. Thompson	Jealott's Hill International Research Centre, Syngenta, UK

Agenda Item 1 – Welcome/Local Arrangements

Jonas Unger gave a brief overview of the state of chemistry in Sweden. In 1997 280,000 people were employed in chemistry in some form (including the pulp and paper industry). Everyone received a copy of the book, "A Gastronomic Tour of the Scandinavian Arctic," and an overview brochure of facts and figures for the chemical industry in Sweden. Jonas was thanked for his outstanding work in organizing the COCI meeting, tours of industrial and academic sites, and entertainment activities.

Agenda Item 2 – Membership/List of Representatives and Observers

Dr. Rob Taalman of CEFIC was unable to attend. Changes from Drs. Smith, Pokrovsky and Gorelik were received at the meeting. An updated list will be sent. Dr. Grasserbauer has been unable to be contacted – Dr. de Bievre reported that Dr. Grasserbauer is unable to participate in COCI activities due to voluminous other commitments. Dr. Wright asked for updated contact information on Dr. Rene-Paul Martin, and Dr. de Bievre agreed to follow up.

Action: COCI Members, representatives, and observers to make changes as necessary to their personal information in the membership list.

Agenda Item 3 – Finalization of the Agenda

Two additions were made to the agenda – 19a: Update to the Strategic Plan for IUPAC (refer to May 22 letter from Dr. Wright); 19b: Suggestions for the WCLM. See below.

Agenda Item 4 – Approval of Minutes of Brisbane Meeting

The minutes were approved as amended – see the program book.

Agenda Item 5 – 2001/02 Updates to Members

Updates shown in the program book were accepted.

Agenda Item 6 – 2001-02 COCI Reports to/from IUPAC (Web page, etc.)

Members were asked to update the IUPAC Web pages for areas of their responsibility. The membership list on Web Site needs updating. Drs. Blasko, Chen, and Mino are to be dropped as they have retired or have not been active with COCI. COCI members should check the most recent Web page updated Feb. 2002.

Action: COCI members to update IUPAC web pages in their areas of responsibility.

Agenda Item 7 – Company Associates

a. General

Members were reminded that it is the responsibility of COCI to maintain contacts with CA's in their home countries. We now send certificates to CA's to acknowledge their initiation or renewal of membership. Dr. Gorelik reported that there are now 3 Russian CA's, an increase despite the decline in the chemical industry in the former USSR, now Russia. Russian academic science has been in a period of reconstruction and stabilization over the last few years, and further improvements are expected. There are few if any CA's among former Soviet republics other than Russia.

Dr. Ishitani reported on CA interactions in Japan. Over 40 CA's are maintained, but many are under financial pressure to cut costs and are foregoing maintaining membership fees. Dr. Ishitani works hard personally to see to it that the Japanese CA's retain their affiliation with IUPAC wherever possible. He organizes meetings between CA's for information exchange, providing CA representatives the opportunity to meet senior Japanese officials in IUPAC (for example, Drs. Yamamoto and Ohtaki).

Dr. Alles plans to help build bridges in Latin America. He pointed out that industrial money is easier to obtain when you can point out what industry gets for their money, a common theme in discussion on IUPAC's relationship with industry.

b. Current/Future Solicitations

There has been little recent publicity about CA's and their interactions with IUPAC. Page 113 of the program book shows a way in which CA dollars are used in Canada for travel grants to IUPAC meetings. Members were encouraged to publicize industrial activities in *Chemistry International* (CI).

Dr. Pokrovsky plans to use his influence and contacts developed through his work on DIDAC and Microscience Expts. to solicit CA membership among companies he's working with (Fisher, etc.) Dr. Wright commented that, more important than the money are the interactions with the CA's to make IUPAC work more relevant to them. Dr. Pokrovsky also pointed out that mechanisms must be in place to convert local currency to dollars when contributions come in.

Dr. Sydnes commented that NAO's can pay as little as \$1000 for membership in IUPAC (based on chemist populations within countries), and that contacts with scientific societies in local countries can help as well. Mr. Unger reiterated the importance of relating industrial contributions to projects where both industry and IUPAC can benefit. Dr. De Bievre pointed out that IUPAC must work to improve the image of chemistry in the world. Dr. Peter Atkins reported that another important level of interaction is with those with political influence, and that as chairman of CCE it will be his responsibility for improving these conditions. Dr. Sydnes commented that there is an important objective within CCE and at the highest levels to build influence about the positive aspects of chemistry and the public. Dr. Atkins proposed joint CCE-COCI task force on the issue. Dr. Sydnes also commented that local interactions are the very important basis of making improvements. Dr. Sydnes plans to visit NAO's and national chemical societies to explore issues related to the public impact of chemistry. Dr. Ishitani reported that having two Nobelists in the last two years from Japan has greatly improved image of chemistry in Japan. The Japanese are now working on programs specifically targeted to students, scientific professionals, industry, etc. to improve image of chemistry as well.

ACTION: Dr. Ishitani to write article for CI about two-way flow of information as it relates to work to improve image of chemistry.

Agenda Item 8 – IUPAC-UNESCO-UNIDO Safety Training Program

Dr. Cesa made a brief presentation on the status of the program. The PowerPoint presentation will be sent to members separately. Four Safety Training Program Fellows are slated for training in 2002 at Sasol in South Africa, BP Chemicals in the US (2 trainees), and Sankyo in Japan. Several other candidates will be scheduled for training in 2003. At the earlier COCI subgroup meeting on Safety, Dr. Kevin Connelly of Astra-Zeneca pledged interest in acting as a Host Company, and Dr. Alles will work to identify Latin American trainee candidates.

Dr. Pokrovsky is working within UNESCO to establish a contract for support of the Safety Training Program. Upon establishment of the contract, COCI will receive \$5,000 for the latter 6 months of 2002. The contract is expected to be completed in July. For 2003, Dr. Pokrovsky told the committee to expect \$4,000 - \$5,000 from UNESCO. Dr. Pokrovsky will meet with UNIDO staff later this year to discuss the nature of their continued involvement in

the Safety Training Program. As the mechanism for UNESCO funding evolves, Dr. Pokrovsky recommended that the title, "Social Impact of Chemistry: Safety Training Program" (or similar wording) should be used as a title for proposals for 2004 and beyond. As a mechanism for recruitment of trainee candidates from Eastern Europe, Dr. Pokrovsky suggested that we contact the Lithuanian Academy of Sciences and the Latvia Foundation for Science in his name; he will provide contact information. They will need to receive information on the program and what we expect from them. Dr. Wright suggested UNIDO be encouraged to contribute to host company costs.

Action: Dr. Pokrovsky to provide contact information for the Lithuanian Academy of Sciences and the Latvia Foundation for Science, for use in identifying candidates for the Safety Training Program.

Ms. Esmat Toprak, COCI observer and 2000 Safety Training Program trainee, reported that as regulations are developed for Turkey, interest among industry in implementing safe practices is increasing, and Esmat is trying to take advantage of this. She administers a summer training program at Bogazici University, including safety for industrial employees, so that safety practices can be disseminated to industry. She will also audit their practices. Ms. Toprak attended a three-week seminar on earthquake preparedness and now is including earthquake preparations in her teaching on safety. Dr. Senti will provide information for safety training for pharmaceutical professionals for Ms. Toprak's use. Dr. Alles asked about putting together a training course. Dr. Chon suggested we put together a brief program book to provide training – a course outline.

Action: Dr. Pokrovsky to send members copies of the CD-ROM on toxicology to provide model for course outline.

Agenda Item 9 – DIDAC

Dr. De Bievre reported that Agfa-Gevaert has transferred the rights to DIDAC to Dr. Pokrovsky and UNESCO. All materials will be available for free. Dr. De Bievre circulated a document detailing the countries where DIDAC has been introduced, along with specific activities. There are about 45 countries so far. See notes from yesterday's safety premeeting. Dr. Wright asked Dr. De Bievre to update the IUPAC DIDAC web page.

Action: DIDAC-active members to send Dr. Wright updated information for publicity purposes via CI, etc.

Agenda Item 10 – Workshops on Safety in Chemical Production

COCI decided, in cooperation with UNESCO, to target the Chinese workshop for October - November 2002 and the workshop in Turkey for May 2003. UNESCO contracts will be received soon. \$4000 - 5000 each from UNESCO for each workshop. There was considerable discussion about possible sources of funding for travel for workshop speakers.

Dr. Booth and Dr. Qiao reported on plans for the Chinese workshop. The workshop will have a petrochemical theme, and one speaker has been identified so far (Harry Heo - BP). Other speakers are sought - 5 to 6 total are needed for the one-day meeting.

Action: To identify speakers for the China workshop, Dr. Smith to follow up with RSC to identify; Dr. Wright will find one in Canada; Cesa to find someone through ACS; Mr. Unger from Sweden. Dr. Qiao to follow up on Dr. Pokrovsky's suggestion of a speaker from Princess Institute in Thailand.

Agenda Item 11 – Follow-up to Previous Projects

a. Green/Sustainable

See the program book for articles on growth of the term "green", including more recent *Chemical and Engineering News* (C&EN) articles (May 2002, April 2002, 2 articles). COCI still prefers the term "sustainable," but the term "green" is becoming synonymous.

b. Chlorine

A recent C&EN article on PVC, circulated by Dr. Wright, shows continued growth.

c. Oestrogens/Endocrine

Dr. Wright reported on Dr. Miyamoto's activities on the SCOPE/IUPAC project – see past minutes. UNESCO will contribute to SCOPE project, and a contract is expected in July.

d. Molecular Basis of Biodiversity

The final report has been prepared.

e. The Museum of the Chemical Industry

Dr. Wright promoted an article in CI about the museum, and hopes that publicity for the museum will increase visitorship.

Agenda Item 12 – Reliability Problem in Chemical Measurements

An article on this topic appeared in C&EN in April 2002. Dr. De Bievre has also published an article in CI. Awareness of the problem is beginning to build. Dr. De Bievre reported that accredited or ISO 9000, etc., labs are not doing significantly better than non-accredited facilities. The European Federation of Accreditation Bodies has written a formal agreement to provide training for lead assessors in the basics of metrology in chemistry. Since this project is nearing an end, Dr. De Bievre agreed to close the project, then follow up with UNESCO on specific outcomes warranting further work, such as water chemistry.

Agenda Item 13 – Cooperation with UNESCO and UNIDO

Examples of cooperation of COCI with UNESCO and UNIDO are detailed in Sections 8, 9, 10, and 11 above.

Action: Dr. Pokrovsky outlined several new interactions he will pursue as the result of the Sundsvall meetings:

Mid-Sweden University: a 50/50 joint venture with UNESCO for workshop on phys. chem.

Kubal (aluminum producer): cooperation proposal for workshop on university-industry cooperation.

Coordination with Mr. Unger: Visit of Ebba Wahlstrom, secondary school education expert, to centre for chemistry education in Latvia; Dr. Pokrovsky

will send materials on DIDAC and Microscience Expts. to Ebba Wahlstrom if Centre will agree to present workshop on use of the materials.

Additional cooperation on workshop in coordination with Ottawa congress in 2003.

WLCM – after Ottawa meeting, Dr. Pokrovsky will meet with CCE to organize a Chinese workshop on public understanding of chemistry.

The exact wordings of the workshop titles are to be finalized.

Agenda Item 14 – Liaison with Other Committees/Divisions

a. Committee on Chemical Education (CCE)

Dr. Atkins reported on changes within the new CCE. The current composition of CCE has titular members and division committee representatives, but no formal COCI or CHEMRAWN connection. Dr. Atkins asked for a COCI representative to sit formally on CCE. There will be opportunities to set up a task force of CCE/COCI members to work on public understanding issues.

Action: Dr. Senti will be the formal representative of COCI to CCE. Drs. Alles, Cesa and Senti volunteered for the task force, to be confirmed after Dr. Wright consults with Dr. Mahaffey, the task group organizer.

b. CHEMRAWN

Dr. Smith reported on the status of several CHEMRAWN conferences. The last meeting of CHEMRAWN was held in Brisbane. CHEMRAWN XIV (Toward Environmentally Benign Products and Processes) was held in June 2001, and there have since been regional follow-up meetings, including in South America and Europe. CHEMRAWN XIII (Chemistry for Cleaner Energy, 2003) is not moving forward yet. CHEMRAWN XV (Chemistry and Water) is scheduled for November 2003. A newly suggested CHEMRAWN XVI (Innovation in the Chemical Industry) is at the idea stage and would be held in 2003 or 2004.

Dr. Pokrovsky had several comments. He proposed a donation of books to countries in the developing world related to CHEMRAWN XV. Alternatively, the World Congress in February 2003 on chemistry and water may take the place of this conference, and there may also be a water chemistry environmental workshop in Moldova, to be organized in 2002. On CHEMRAWN XIII, Dr. Pokrovsky reported that UNESCO money was not spent in 2001 and was thus lost. Dr. Smith reported that the RSC is to provide additional input to CHEMRAWN and IUPAC.

c. Division of Chemistry and the Environment

Dr. Miyamoto, the C&E representative to COCI, was not present at this meeting. Dr. Wright will select a new COCI representative to C&E and asked for volunteers. Dr. Alles volunteered and was asked attend their meeting in Ottawa.

Action: Dr. Wright to consult with C&E chairman to get approval for Dr. Alles to be COCI representative.

d. Division of Chemistry and Human Health

Dr. De Bievre was appointed by Dr. Wright to be COCI representative to this division.

Action: Dr. Wright to consult with CHH chairman to get approval for Dr. De Bievre to be COCI representative.

e. CEFIC

Dr. Wright has asked John Jost to provide input to help build interactions with CEFIC. Rob Taalman of CEFIC was not in attendance. Dr. Sydnes suggested that a regional-based representative of COCI should interact with ACC and CEFIC. It was also reported that a successor has now taken over Dr. Taalman's responsibilities at CEFIC.

Action: Mr. Unger to contact Dr. Taalman to discuss future interactions.

Agenda Item 14a – Finance Subcommittee

a. Current Status of Fund

See program book. The current balance of the COCI account is \$31,000. Dr. Wright reviewed the composition of finance committee and the rules for expense authorization. COCI has committed to cover the travel expenses for Safety Training Program trainees not covered by UNESCO. He also reported that financial assistance was granted for attendance for several COCI members for this meeting.

b. Future, with IUPAC Biennium Budget

It was reported that COCI will receive \$15K per annum from IUPAC for ongoing expenses, pending resolution of COCI status. The existing fund will be grandfathered.

Action: Dr. Wright will verify the amount of the IUPAC annual budget contribution to COCI.

Agenda Item 15 – IUPAC/ICSU Funding of New Projects

This topic was discussed briefly for information purposes. Dr. Wright urged members to read and study the information in the program book. There is one project in place with Drs. Pokrovsky and Bradley for funding of the DIDAC CD-ROM.

Agenda Item 16 – New Project Suggestions

Dr. Atkins suggested a model CCE has used for generation of new projects, where guidelines were written to help provide a strategic focus for project submissions. A strategic focus is needed for COCI as well. Dr. Atkins suggested a project coordinator be named, whose responsibilities would be to gather referees' reports and submit projects to the IUPAC Secretariat. For example:

1. Nobel prize submissions
2. Chemistry and Society: Safety and Toxicology for the Chinese workshop; for future Safety Training Program, etc.
3. Refereeing responsibilities on SCOPE/IUPAC project, Molecular Basis of Biodiversity.

Dr. Cesa reported on early feedback from U. S. National Committee to IUPAC on ideas and suggestions for strategic focus of COCI; for example, a suggestion to focus on worldwide coordination of safety practices, etc., such as inconsistencies in chemical hazard information around the world.

This will be major item of business at COCI Ottawa meeting. Dr. Senti proposed a brainstorming session with reps of industrial organizations for Ottawa.

Agenda Item 17 – Can We Encourage Industry to “Offer” More Candidates for the Nobel Prize in Chemistry?

Dr. Ivar Giaever gave a very entertaining PowerPoint presentation (copies to be distributed to members separately) on the nature of industrial research and the candidacy of industrial researchers for the Nobel Prize. Dr. Wright suggested a position paper be drafted for sharing with Company Associates to encourage them to seek and advance nominations for industrial scientists. We will revisit this topic in Ottawa.

Action: Dr. Wright to draft a position paper encouraging industrial nominations for the Nobel Prize, for members’ review and consideration.

Agenda Item 18 – Ad Hoc Committees on IUPAC/Industrial Relations and the new Industrial Relations Strategy Committee

Dr. Wright updated COCI on the Committee’s progress to date – see program book. – The next meeting of the Industrial Relations Strategy Committee, chaired by Alan Hayes, with COCI members Drs. Wright and Ishitani, will be in London, Sept. 12, 2002. Dr. Wright asked for ideas before September on the future of COCI – projects, organization, membership, task forces, etc.

Dr. Cesa suggested that COCI make efforts to get industry involved early in the project process so that they can see the work and benefits directly.

Dr. Sydnes commented on the future of COCI. He said that COCI should expect some change, but that the IUPAC Bureau is realistic in its expectations. He has received favorable comments on ideas for involving industry in an early stage of relevant projects. He suggested that we introduce industrial people to the IUPAC Web Site to build familiarity. We are encouraged to suggest a framework for operations of the future committee; such suggestions should be received favorably by the Bureau.

Dr. De Bievre stated that more projects should involve younger non-retired workers in academia, industry, etc. to avoid the danger of IUPAC being or becoming retiree-heavy.

There was discussion on the contributions of IUPAC to community service as they relate to the responsibilities of chemists in academia (and elsewhere.)

Action: COCI members to send Dr. Wright any ideas or suggestions on the future composition and responsibilities of COCI in time for the September Industrial Relations Strategy Committee meeting in September.

Agenda Item 19 – Are We Aligned With the Future Directions of IUPAC? Inputs to the Planned Reorganization of COCI

See program book for other background information.

Based on the COCI terms of reference page on the IUPAC web site, Dr. Wright would like to see a Mission Statement developed for COCI.

Action: Dr. Senti to propose changes to terms of reference for review at Ottawa.

Agenda Item 19A – Update to the Strategic Plan for IUPAC

The current IUPAC strategic plan is posted on the IUPAC Web site. Inputs have been sought for updates by Dr. Przybylowicz, and some individuals have responded. Dr. Booth reported that some COCI members are now providing input on a variety of current topics. Members are referred to recent e-mails on this subject from Dr. Przybylowicz.

Dr. Wright referred to April 2002 C&EN articles on "UK chemistry under pressure – public opinion of science" as a possible source of ideas and suggestions.

Action: COCI members to provide suggested changes, additions, etc. to IUPAC strategic plan to Dr. Wright by July 1.

Agenda Item 19B – Suggestions for WCLM

Drs. Wright, Pokrovsky, and Smith attended World Chemistry Leadership Meeting (WCLM) planning meeting in Brisbane. Input for the next meeting (August 15) input to be solicited and coordinated by Smith. Dr. Smith will make meeting minutes available to members to assist with this. Mr. Unger commented that Swedish local issues revolve around interest in chemistry among the public and particularly among students. Dr. Sydnnes mentioned upcoming fundraising campaign to increase profile of chemistry in schools.

Action: COCI members to provide Dr. Smith with input on topics of interest to industry for this group. Dr. Smith to provide previous meeting minutes to COCI members.

Action: Mr. Unger to send written comments on public and student interest in chemistry and Sweden to Dr. Wright.

Agenda Item 20 – Next COCI Meeting – Our Role in the Next Congress in Ottawa

The next IUPAC General Assembly and Congress is scheduled for August 10-15, 2003 in Ottawa, Ontario, Canada. Dr. Wright reported on the status of plans for Safety Training Program fellows to come to Ottawa to review progress on the Program. We will support travel expenses to the extent that UNESCO cannot. The activity will likely take the form of a poster session. Dr. Pokrovsky has been asked by Dr. McAuley for travel funds for fellows to Ottawa for the poster session/workshop on evaluation of safety training program activities. Dr. Pokrovsky provisionally stated that approx. \$5K would be available from UNESCO, and that this total could be increased.

A poster session on DIDAC at Ottawa has been suggested by Dr. McAuley. Dr. Pokrovsky has proposed a demonstration of the new DIDAC materials at the World Congress. Dr. Pokrovsky prefers that the demonstration take the form of a talk/demonstration with discussion by himself and Dr. De Bievre. Dr. Atkins reminded the committee to make sure that DIDAC is presented before the appropriate audience. A best fit could be within sessions on the flow of ideas. There will be continuing discussion on the best forums for presentation and publicity of the DIDAC materials.

Wright invited COCI members to visit his homes at Montreal and Ste. Agathe before, during, or after the Congress.

Agenda Item 21 – Other Business/Adjournment

Dr. Booth reported on the Johannesburg conference on sustainable development. ICCA (comprised of 46 countries who are signatories to Responsible Care) filed a report with the United Nations on chemistry and the environment. This report can be found on the ICCA Web site or the UNET Web site. Dr. Booth was also asked by ICCA to do a report on capacity building in South Africa and Brazil and to report on ways to respond to HSE issues in both countries. Dr. Booth will make the report available (or parts of it) to COCI members.