

## MINUTES

### IUPAC Division of Chemistry & the Environment (DCE) Committee Meetings

Free University, Berlin, 7-12 August 1999

#### 1. Attendance and Apologies

J. Miyamoto (President)	K. Racke (Chairman, 640)
P. Holland (Secretary)	J. Gilbert (650)
W. Klein (Vice-president)	P. Dysseler (Chairman, 660)
H. Behret (AM)	
J. Buffle (TM)	
A. Dieffenbacher (TM)	
A. Pohland (TM)	<b>Apologies</b>
T. Tavares (Chairperson, 620)	RP. Martin (TM)
Y. Shevah (Chairman, 630)	A. Malcolm (AM)

L. Klasinc (Secretary, 620); W. Peijnenburg (Secretary 630); D. Hamilton (Secretary, 640); S. Page (Secretary, 650); W. Benson (Chairman, IUPAC/IOCD WP); H. van Leeuwen (Chairman, 610) also attended parts of the meeting.

Dr Miyamoto welcomed committee members and commission chairman to Berlin. The priorities for the GA meeting were to set the Divisional and Commission memberships and to develop the projects for the next two years. However a strong strategic focus was requested to assist IUPAC and the division during a period of change and leading up to the cessation of Commissions and Working Groups at the end of 2001.

#### 2. Minutes and Report to Council

The minutes of the 1998 divisional meeting in Tokyo and the President's report to Council on DCE activities 1998-2000 were accepted.

#### 3. Terms of Reference

The terms of reference set in 1997 were reviewed:

*Through its internationally recognized membership, the DCE will provide unbiased and timely authoritative views on the behavior of chemical compounds in the environment. The DCE intends to undertake both fundamental and applied chemical studies aimed at solving environmental problems. In this way DCE contributes to global sustainable development.*

The general thrust of these ToR were accepted as appropriate to the development of mission oriented activities within DCE. However Dr Gilbert expressed concern that the food area was not explicitly included. It was agreed the ToR would be revised to more fully represent all the activities of the Division.

#### **4. Future Direction and Interactions with International Organisations**

Dr Miyamoto summarised the desired direction of DCE activity:

- Effective and efficient operations during the transitional restructuring period of IUPAC.
- Integration and expansion of current activity in terms of multidisciplinary aspects, e.g. chemical aspects of increased quality food production and environmental risk assessment.
- Closer coordination and collaboration with outside organisations for the mission oriented activities of IUPAC

Dr Miyamoto emphasised the importance of the later for increasing the relevance and visibility of IUPAC. He summarised the activities of DCE with a range of organisations (information supplied to Vice-President A. Hayes and included in the Division report) and exhorted the Commissions to continue to actively seek ways to collaborate and contribute.

#### **5. Restructuring of IUPAC**

A briefing paper was distributed and discussed by the Secretary-General, Dr E. Becker, summarising the key decisions of SDIC and the Bureau. The program of change approved by the Bureau is designed to improve the quality, relevance, international impact and effectiveness of the Union's scientific work by:

- revitalizing long-range planning within the Divisions,
- ensuring the selection of only high quality projects to bear the IUPAC label,
- encouraging participation by the worldwide chemistry community,
- optimizing the use of IUPAC's limited financial resources, and
- simplifying management and accountability.

It was confirmed that all Commissions, Working Parties and Interdivisional Committees will be terminated at 31 December 2001. It will largely be up to the divisional committees to decide on appropriate management structures for continuation of high priority work. Some Commissions could be reinstated but this was seen as the exception and would require Bureau approval. A project driven structure is seen as more generally appropriate using 'task groups' of 3 – 5 year duration to plan and execute major programs of work. Projects will be initiated from within or outside IUPAC. The link of titular membership to funding will be broken with funding for participation in each project being decided on need. Funding priorities for larger collaborative projects (inter-divisional or external) will be decided by a Project Committee set up by Bureau.

There was considerable discussion at the GA, within and outside the Division, on the implications of these changes. The Divisional Committee will have enhanced responsibilities and workload. The dissolution of commissions will require development of other avenues to maintain the 'people power' inherent in the current system for generation of ideas and ensuring high quality outputs. While some money will be freed up by release of titular funds from less active commissions, projects will remain dependant largely on voluntary inputs. The ability for task groups to meet and progress several projects simultaneously was seen as important to efficient use of the limited funds.

For the biennium 2001-2001 the current Commissions and the project and funding systems will continue largely unchanged, but with some enhanced flexibility. However intensive planning must take place to ensure a smooth changeover at 2002.

## 6. Membership of the Divisional Committee 2000-2001

Prof. Buffle, Dr Dieffenbacher and Dr Pohland completed their terms and were each thanked for their long period of contributions to Commission and Divisional management and IUPAC project activities. Elections were held for the new committee. The meeting agreed, with the support of Bureau, that the new Commission Chairmen would become Titular members. There was discussion on the composition of the Committee. Prof. Buffle strongly argued that a full complement of 10 TMs were needed. Dr Klein replied that 8 were sufficient and that the funds saved would be better used on projects. The following formal elections were made, based on open voting by the attending elected members of the current DCE committee.

Dr W. Klein - Division President  
Dr J. Miyamoto - Past President  
Dr P. Holland - Secretary

Moved Pohland that these positions be confirmed, passed with 1 abstention.

Dr K. Racke - Vice-President Nominated Klein, passed with 1 abstention.

Prof. D. Turner (CC 610) - Titular Member  
Prof. T. Tavares (CC 620) - Titular Member  
Dr Y. Shevah (CC 630) - Titular Member  
Dr K. Racke (CC 640) - Titular Member  
Dr J. Gilbert (CC 650) - Titular Member

Moved Pohland that all 5 be elected, passed unanimously.

Dr H. Behret - Associate Member Nominated Holland, passed unanimously.  
Dr R-P. Martin - Associate Member Nominated Miyamoto, passed unanimously.  
Dr A. Malcolm - Moved Pohland that Associate Membership be terminated due to lack of attendance or significant contribution. Passed unanimously.

Dr P. Dysseler - Associate Member Nominated Dieffenbacher, passed unanimously.  
Prof H. van Leeuwin - Associate Member Nominated Buffle, passed, 1 opposing.  
Dr S. Page - Associate Member Nominated Pohland, passed with 1 abstention.  
Dr W. Peijnenburg - Associate Member Nominated Shevah/Klein, passed unanimously.

## 7. Commission Officers 2000-2001

610 H. van Leeuwin (CC) reached his 12 year limit.

D. Turner new CC, G. Horvai CS (membership list not submitted at GA)

611 T. Tavares CC, L. Klassinc CS

630 Y. Shevah CC, W. Peijnenburg CS

640 K. Racke CC, D. Hamilton CS

650 The merger of 650 and 660 (Oils, Fats and Derivatives) was completed to form a new Commission on Food Chemistry. J. Gilbert new CC, S. Page new CS

Joint WP with IOCD on Environmental Analytical Chemistry in Developing Countries.  
W. Benson, Chairman

## **8. Current Projects**

Each commission is requested to:

1. Forward to the IUPAC Secretariat and the DCE Secretary the minutes of their Berlin meeting containing a summary of the status of current projects.
2. Download their current project information from the project database at the IUPAC Web Site. These should be updated with brief but complete information on the current status of each approved project. Email the file back to Dr Myers who will use it to update the database.

Note: It is the responsibility of each commission to keep their project information on the database up-to-date and informative. The Web site is now a key window for the science community into the activities of IUPAC.

## **9. New Projects**

Ten new projects were submitted to the Secretariat between February and August 1999. Two were workshop/extension projects, two were large interdivisional studies collaborative with outside organisations and six were standard science based commission projects. Only one project has been approved (DCE-2 FAO/IAEA/IUPAC workshop on method validation, Budapest Nov 1999 - \$12k of Bureau funding). The others were at various stages of review (external reviewers comments had been received for four of them).

Discussion was held on the new project system. The slow and unwieldy approval process was initially due to internal procedures but the main delays are now with the external reviewing. Only about 50% of reviewers respond and two reviews are regarded as the minimum. Some of the reviewer comments reflect unfamiliarity with IUPAC and its goals and limited budgets. Some priming of reviewers is required, either by more extensive 'Notes for Reviewers' from the Secretariat or by personal approaches from the proposers. The latter carries the risk of compromising the impartial review process. Appended is the current Divisional view of the project approval process. This is subject to change depending on advice received from the Bureau sub-committee on projects.

The appended spreadsheet contains the current list of submitted projects. Included, without DCE codes, are further new projects submitted since the GA or under development (in commission order). Note this list does not include continuing approved projects.

An additional factor for large conferences or congresses is the need for formal approval by IUPAC of its role as a sponsor, even where no financial support is involved. A separate AIQ form and approval process are involved and adequate lead time is required (18 months – 2 years). DCE regards sponsorship approval and external review as unnecessary for workshop type extension projects. These invariably involve IUPAC funding support and the new project system provides adequate checks and balances. Rather than external review, extension projects would be better served by letters of support from relevant co-organising and external funding agencies.

Dr Klein emphasised the importance of projects with strong links to other divisions or to other international science bodies. These links need to be cemented at not just an individual scientist level but also inter-organisation so that IUPAC can be seen to be active in international science and decision making. Funding will flow from Bureau in support of such projects (see below).

## 10. Budgets

### 1998-1999

The current budget (to 31 December 1999) is estimated to have about US\$6,000 unallocated. The following additional applications for expenditure by commissions were approved:

- 610 Increase from \$4,000 to \$5,000 the allocation to the meeting scheduled for October 1999.
- 650 New allocation of \$2,000 for travel to workshop in January 2000 on techniques for determining toxicologically relevant PCBs in fish and human adipose tissues (Project 650/90/97).

### 2000-2001

The Divisional budget for the new biennium is \$55,200, a 5% increase on the previous budget. As in the past, this budget does not include TM travel/subsistence to the next GA. From the money being requested for new projects it is clear that the DCE budget is inadequate to cover all proposed commission activities, particularly if projects are costed on the basis of individual meetings. This emphasises the need for commissions to carefully plan joint activities such as the GA meetings to maximise the use of limited funds. It was agreed that the budget would be largely allocated to Commission science activities (travel/subsistence for Commission members). Funding for workshops, extension and other special activities will be sought from Bureau, especially where the projects are collaborative (inter-Commission, inter-Divisional, external bodies). The outgoing IUPAC Treasurer, Dr John Ward indicated large reserves were being accumulated (>\$500k) to fund new activities and to cover the additional expenses associated with the 2001 GA in Australia.

The following allocations were decided. Note these are subject to final approval by the new Divisional President (Dr W. Klein).

610	Meeting May 2000, to advance book output for project 610/72/97 ‘Transport kinetics at chemical-biological interfaces in environmental systems’.	\$7,000
620	Commission meeting, to advance projects, June 2000. In conjunction with DCE meeting and workshop on aerial deposition, Tel Aviv, Israel.	\$7,000
630	Commission meeting, to advance projects, June 2000. In conjunction with DCE meeting and workshop on aerial deposition, Tel Aviv, Israel.	\$7,000
640	Commission meeting, to advance projects, October 2000. In conjunction with pesticide workshop in Taichung, Taiwan.	\$8,000
650	Commission meeting, to advance projects and plan new Task Groups. In conjunction with symposium, Warsaw, Poland.	\$9,000
DCE	Div. Committee meeting June 2000, in conjunction with workshop on Aerial deposition, Tel Aviv, Israel	\$8,000
		<hr/>
		<b>\$46,000</b>

The following projects have been designated for Bureau funding and formal application has been made (further details, including supporting letters and budgets may be required):

1. Environmental Analytical Chemistry – Workshop on problems relating to mining in Africa. September 2000, Nairobi, Kenya.  
*Proposer: W. Benson, Chairman, Joint WP with IOCD on Environmental Analytical Chemistry in Developing Countries.*  
Supported by: 620, 630, 650, Div. II and Div. V.  
External Support: IOCD, AOAC Int., UNESCO, Kenyan Nat. Acad. Sciences  
Total Budget: \$40,000  
Funding Request: \$10,000
2. International Workshop on Harmonisation of Pesticide Management: Regulation, monitoring and evaluation. October 2000, Taichung, Taiwan.  
Continuation of a series of regional workshops organised by 640 on pesticide issues.  
*Proposers: S.S. Wong and K. Racke, 640*  
Supported by: IOCD, Taiwan Commission of Agriculture  
Total Budget: \$55,000 (\$40k promised by TCOA)  
Funding Request: \$15,000
3. Regional Workshop on Environmental Effects of Atmospheric Deposition. June 2000, Tel Aviv, Israel  
*Proposers: R. Gricken, 620 and Y. Shevah, 630*  
Supported by: 610, Israeli science and industry groups  
Total Budget: \$35,000  
Funding request: \$8,000
4. Regional Workshop on Standards and Analytical Procedures for Export Oilseeds, Fats and Oils. November 2000, Brazil  
*Proposer: P. Dyssele, 650/660*  
Supported by: AOCS, AOAC Int., SCB, Latin American Oil industry groups  
Total Budget: \$40,000  
Funding Request: \$12,000

In addition Commission 650 will request \$5,000 from Bureau to assist with publication of the proceedings for the 10<sup>th</sup> IUPAC Congress on Mycotoxins and Phycotoxins (Brazil, July 2000).

Other DCE initiatives underway which will require Bureau funding support in future:

- SCOPE/IUPAC Project on Endocrine Disrupters (Dr J. Miyamoto).
- CHEMRAWN Conference on Chemistry and Safety (650, Dr S. Page).

## 11. DCE Mini-symposia

The following programs were organised by the division and presented in two sessions during the General Assembly. Although the audiences were disappointingly small, the standards of presentation were high and there were interesting question and answer sessions. The presentations will be put on the IUPAC/DCE Web site. The DCE committee thanks the presenters, chairmen and coorganisers for their efforts.

## Contributions of Chemistry to Ameliorating Environmental Contamination

Wednesday, August 11, 14:00 – 18:00

Chairman: *Professor Leo Klasinc, Croatia*

- Impact on soil and water ecosystems by wet and dry deposition *Dr Yehuda Shevah, Israel*
- Objectives in soil protection *Dr Werner Koedel, Germany*
- Transport of chemicals by macropore flux *Dr Nick Jarvis, Sweden*
- The role of bioavailability in risk assessment *Dr Willie Peijnenburg, Netherlands*
- Global transport and distribution of pollutants *Dr Cornelius Zetzsch, Germany*

## Contributions of Chemistry to Sustainable Food Production

Thursday, August 12, 9:00 – 13:00

Chairman: *Dr Kenneth Racke, USA*

- Determining the Authenticity of Foods *Dr Elke Anklam, Italy*
- Development and Registration of Reduced Risk Pesticides *Dr Kenneth Racke, USA*
- Environmental Chemistry and Evaluation of Best Management Practices for Crop Protection Technologies *Prof. Alan Felsot, USA*
- Transgenic Crops: Impact on the Use of Agrochemicals and the Environment. *Dr Harry Kuiper, Netherlands*
- Progress in Codex with the Acute Dietary Intake Assessment of Pesticide Residues. *Denis Hamilton, Australia*
- Food Application and Quality Assurance of Oils and Fats *Dr A. Dieffenbacher, Switzerland*

### 12. IUPAC Council Meeting

Outgoing President, Prof. J. Jortner tabled a comprehensive report on the state of the union which provided much information on IUPAC activities, decision making and progress with restructuring. This document can be found on the IUPAC Web site.

Dr Alan Hayes (UK) will be the President of IUPAC for 2000-2001. Prof Pieter Steyn (South Africa) was elected Vice-President. The new Treasurer is Dr C. Buxtorf (Switzerland).

### 13. Next Meeting of DCE Committee,

5- 7 June 2000, Tel Aviv, Israel

Dr Yehuda Shevah to make local arrangements for the DCE meeting and the associated workshop on aerial deposition (620 & 630). "[Shevach Yehuda](mailto:tahalcmp@netvision.net.il)" <[tahalcmp@netvision.net.il](mailto:tahalcmp@netvision.net.il)>

### 14. 41<sup>st</sup> IUPAC General Assembly, 2001

This will be held 1-6 July in Brisbane, Australia and in conjunction with the 38<sup>th</sup> IUPAC Congress – Frontiers in Chemistry. <http://www.ccm.com.au/wcc>

<b>Appendix 1: IUPAC project approval process</b>		<b>Time</b>
<b>- as at August 1999 (Email unless noted)</b>		<b>(weeks)</b>
1	Proposal moves through preliminary drafts and acceptance within the commission(s).	12 - 100
2	Proposers put project on official form, including 4-6 suggested external reviewers.	2
3	Send to secretariat@iupac.org (Dr Fabienne Myers), and copied to commission chairperson.	
4	Fabienne enters project into system, assigns a DCE-** tracking code and sends to Div. Committee.	1
5	President DCE recommends that project go for external review (committee can also forward comments).	1
6	Fabienne sends proposal to 4 - 6 external reviewers.	1
8	Fabienne receives and collates reviewer comments and sends to proposer, copied to Div. Secretary	4 - 6
9	Proposer sends revised project to Div. Secr. who distributes to Div. Committee with reviewer comments.	1
10	Div.committee, or Bureau (interdiv. projects) formally accepts the revised project (in light of comments) and assigns a budget.	4
11	Secretariat assigns formal project number and contacts proposer/Comm./Div..	1
12	Project proceeds with annual reviews of progress.	
13	At project completion the Div. Committee reviews the final report and recommendations prior to publication.	

**Appendix 2: Division of Chemistry & the Environment**  
**- New Projects Under Evaluation**

<b>Appendix 2: Division of Chemistry &amp; the Environment - New Projects Under Evaluation</b>						<b>Dates</b>		
<b>Source</b>	<b>Number</b>	<b>Title/Subject</b>	<b>Submitter</b>	<b>DCE</b>	<b>Ext. rev.</b>	<b>Rev. rec.</b>	<b>Revised</b>	<b>Approved</b>
Joint IOCD/IUPAC Working Group	DCE-1	Environ. Analytical Chem. for Regulatory Chemists and Lab.Mgrs - IOCD/IUPAC workshop, Kenya, Sept.2000	W. Benson	19/01/99				
640 & IDWP on QA systems	DCE-2	Principles & Practices of Method Validation - Joint FAO/IAEA/IUPAC workshop, Budapest, Nov.1999.	A. Ambrus & A. Fajgelj	15/02/99				1/06/99
640	DCE-3	Acute Dietary Pesticide Exposure Assessment.	D. Hamilton	12/03/99	1/06/99			
650	DCE-4	Mycotoxin Methods for Developing Countries - Aflatoxins.	E. Anklam	19/03/99	1/06/99	7/08/99		
DCE (subm. to SCOPE)	DCE-5	Environmental Implications of Endocrine Active Substances - present state of the art and future research needs.	J. Miyamoto	22/03/99				
630	DCE-6	Soil and Water Bio-remediation: In-situ treatment of polluted soil and water with emphasis on the use of GMOs.	Mandelbaum & Y. Shevah	3/05/99	1/06/99	17/07/99		
630, 130, V, VI	DCE-7	Biosensors for Monitoring Environmental Pollutants: - evaluation of newly developed biosensors.	Y. Shevah & Peijnenburg	3/05/99	1/06/99	20/07/99		
630	DCE-8	Airborne and Remote Monitoring of Water Quality - evaluation of remote sensing techniques.	Dekker & Dassenakis	3/05/99	1/06/99	7/08/99		
640	DCE-9	Regulatory Limits for Pesticide Residues in Water.	D. Hamilton	21/06/99	28/06/99			
IDWP III/VI	DCE-10	Synthetic Pathways and Processes in Green Chemistry.	P.Tundo & J. Miyamoto	16/02/99	1/03/99			
640	DCE-11	Regional workshop "Harmonisation of pesticide management", Taichung, Taiwan 3-6 October 2000.	SS. Wong	30/08/99				
610		Redox chemistry of Fe(II) on estuarine particles	D. Turner					
620		Glossary of terms in atmospheric chemistry	S. Schwartz					
620		Local radiation balance: influence of aerosols	J. Slanina					
620		Assessment of human exposure to outdoor pollution	O. Hertzel					

620/IOCD		Regional workshop "Local air pollution in developing countries", Guanzhou, China, August 2001	Y. Zhang					
620/630		Regional workshop "Atmospheric deposition", Tel Aviv, Israel, - June 2000	R. Gricken & Y. Shevah					
630/V/VI		Quality chemical data and reporting practices	W.Peijnenburg					
630/640		Environmental considerations for endocrine disrupters - continuation of project 630/26/95	Lintelmann J. Linders					
640		Influence of transgenic crops on the uses and environmental impacts of pesticides	H. Kuiper					