

SYMPOSIUM ON CHEMISTRY EDUCATION
A SATELLITE CONFERENCE OF THE WORLD CHEMISTRY CONGRESS 2001

organised by

the Committee on Teaching of Chemistry (CTC) of IUPAC

in conjunction with

IUPAC 2001 Chemistry Congress

and

the 9th Asian Chemistry Congress (9ACC)

on

Sunday 1st July 2001, commencing 8:45 am

Venue: Z Block of the Queensland University of Technology Gardens Point campus, which is situated between the Botanic Gardens and the Captain Cook Bridge. Z Block is almost adjacent to Captain Cook Bridge. For those delegates to the General Assembly of IUPAC, this is the same venue as that used for registration for the General Assembly.

Attendance at the satellite conference will be open and free to WCC delegates (either IUPAC2001 or 9ACC) since it is formally a component of this Congress.

PROGRAMME

The programme of the satellite conference will consist of a plenary presentation, followed by concurrent 30-minute presentations in three thematic streams, and then a closing plenary presentation. Dr Roy Tasker will demonstrate his multimedia molecular animation software after the formal presentations.

Opening and Welcome

Professor Graeme George, Co-Chair, IUPAC 2001 World Chemistry Congress

Professor John Bradley, Chair of the IUPAC Committee on Teaching of Chemistry (CTC)

Opening plenary presentation

One View of the Future: Chemical Education and IUPAC

Peter Atkins (University of Oxford, England, and Chair of the IUPAC Education Strategy Development Committee)

Theme A. Education – based IUPAC projects

Chemical Education: Making civilisation more sustainable?

Natalia P. Tarasova, Pavel D. Sarkisov and Anna A. Dodonova (D. Mendeleev University of Chemical Technology of Russia, Moscow, Russia)

A Small, Strong Wind of Change – The IUPAC/UNESCO Global Programme in Microchemistry

J D Bradley¹ and A N Pokrovsky² (¹ University of the Witwatersrand, Johannesburg, South Africa; ² UNESCO, Paris)

Solid-State and Materials Chemistry for Worldwide Education in Chemical Sciences

Meral Kizilyalli (Middle East Technical University, Ankara, Turkey)

Essential Toxicology – A Multilevel Educational Resource

John H Duffus (The Edinburgh Centre for Toxicology, Edinburgh, Scotland, U.K.)

Modern Tools Applied to Old Problems: The SolEq Speciation Calculation Software

Kip Powell (University of Canterbury, Christchurch, New Zealand)

Transformation from expert knowledge into forms of communication that make sense to students

Bob Bucat¹, John Bradley², Joe Lagowski³ and Tony Wright⁴ (¹ University of Western Australia, Perth, Australia, ² University of the Witwatersrand, Johannesburg, Republic of South Africa, ³ University of Texas, Houston, USA, ⁴ Massey University, Palmerston North, New Zealand)

Theme B. Teaching and learning: research and development

A Study of the Teaching and Learning in Computational Chemistry Using an Action Research Methodology

Maree Baddock and Bob Bucat (University of Western Australia, Perth, Australia)

The Use of Flow Diagrams as a Strategy for Effective Learning in Laboratories

Bette Davidowitz¹ and Marissa Rollnick² (¹ University of Cape Town, Rondebosch, South Africa; ² University of the Witwatersrand, Johannesburg, South Africa)

Improving Teaching and Learning in Science Laboratories: Linking Education Research to Practice

Jennifer Bearfoot¹, Bob Bucat², Mauro Mocerino¹ and Marjan Zadnik¹ (¹ Curtin University of Technology, Perth, Australia; ² The University of Western Australia, Perth, Australia)

APCELL: Developing Better Ways of Teaching in the Laboratory

Simon Barrie¹, Mark Buntine², Ian Jamie¹, Scott Kable¹ (¹ University of Sydney, Sydney, Sydney, Australia; ² Adelaide University, Adelaide, Australia)

Streaming Media for Introductory chemistry Courses

Tony D.J. Haymet (University of Texas at Houston, USA)

Research into Practice: Improving Students' Mental Models of Molecular-Level Structures and Processes using Animations

Rebecca Dalton¹, Roy Tasker¹ and Ray Sleet² (¹ University of Western Sydney, Sydney, Australia; ² University of Technology, Sydney, Australia)

Theme C. Sustainability and green chemistry education

Education and International Green Chemistry Programs

Dennis L. Hjeresen (Director, ACS Green Chemistry Institute, USA)

Teaching Green Chemistry Across the Spectrum

Janet L. Scott and Antonio F. Patti (Centre for Green Chemistry, Monash University, Melbourne, Australia)

Green Chemistry Education in Italy and Europe

Pietro Tundo (Department of Environmental Sciences, Ca' Foscari University - Venice, Italy)

Development of an Undergraduate Course in Green Chemistry

Greg T Klease and John Rideout (Central Queensland University, Rockhampton, Australia)

Use of SATL Techniques as a Method of Creating Green Chemistry Laboratory

A. F. M. Fahmy¹, M. S. A. Hamza¹, H. A. A. Medien¹, W.G. Hanna¹ and J. J. Lagowski² (¹ Ain Shams University, Cairo, Egypt; ² The University of Texas at Austin, USA)

Closing plenary presentation

Chemical Education Research as a Necessary Component for Progress in Modern Chemistry

J. J. Lagowski (The University of Texas at Austin, USA, and Secretary of the IUPAC Committee on Teaching of Chemistry)

Software demonstration

After the formal presentations, Dr Roy Tasker will demonstrate the molecular animation software described in an earlier presentation (Dalton and Tasker)

TIMETABLE

	8:45		<i>Welcome and opening</i>	
	9:00		<i>Plenary: Atkins</i>	
		Stream A	Stream B	Stream C
		Education-based IUPAC projects	Teaching and learning: research and development	Sustainability and green chemistry education
1	9:30	Tarasova	Baddock	Hjeresen
2	10:00	Bradley	Davidowitz	Scott and Patti
	10:30			
3	10:45	Kizilyalli	Mocerino	Tundo
4	11:15	Duffus	Kable	Klease
	11:45			
5	12:00	Powell	Haymet	Fahmy and Lagowski
6	12:30	Bucat	Dalton and Tasker	Fahmy and Lagowski (cont.)
	1:15		<i>Plenary: Lagowski</i>	
	1:45		Demonstration of multimedia software - Tasker	

Abstracts of all talks are now available.

For further information, contact the satellite conference organiser:

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