

Where 2B & Y

- Critical analysis of chemistry curricula & textbooks
- Tertiary chemistry education & lifelong learning
- Research in chemical education, including ethics
- Green chemistry and environmental chemistry education
- Public awareness and appreciation of chemistry
- International Chemistry Olympiad (IChO)

Among the workshops and forums being planned are Microscale Chemistry, International Chemistry Olympiad (IChO), Young Ambassadors of Chemistry (YAC), Ethics and Professional Codes of Conducts of Chemists, and Green Chemistry Education and Practices. There will be a special session on the Chemical Weapons Convention (CWC) and Multiple Uses of Chemicals to be jointly organised with the Organisation for the Prohibition of Chemical Weapons (OPCW). A virtual colloquium on CWC is also being planned with OPCW (see ConfChem, below). Science and chemistry educators are invited to propose other workshops or forums for ICCE 2016.

ICCE 2016 is the right forum for science educators, education researchers and practitioners, and decision makers to present their new ideas and approaches, research findings, and innovations in science education

and the practice of chemistry. Some may want to share their experience or expertise in science education with fellow colleagues. ALL ARE INVITED. ICCE 2016 is being held in the beautiful and lush green city of Kuching in the state of Sarawak, North Borneo, Malaysia. Kuching is a multiracial and multicultural cosmopolitan city at the mouth of the Sarawak River, which flows into the South China Sea. It is an eco-friendly city situated amidst a million-year-old rainforest with much biological diversity.

On behalf of ICCE 2016 Organising Committee, I look forward to welcoming you to Kuching next August. In addition to the conference, you are also invited to bring along your family and friends to enjoy the beautiful experience of visiting Kuching. There are so many things to do and see in Kuching and Sarawak. Malaysians, known for their warm hospitality, treat visitors as friends of the family. It will be a memorable experience that you will never forget.

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Science, Disarmament, and Diplomacy in Chemical Education

6 May 2016 - 30 June 2016,
online @ www.ccce.divched.org/ConfChem

The Organisation for the Prohibition of Chemical Weapons (OPCW), the IUPAC Committee on Chemistry Education (CCE) and the ACS CHED Committee on Computers in Chemical Education (CCCE) have teamed up to offer a free Spring 2016 ConfChem online conference on chemistry, disarmament, and education, starting 6 May 2016. Participants across the globe will have a chance to interact with the authors of papers and learn about OPCW programs and initiatives. This is an open access virtual colloquium where anyone is welcome. Further information is available at the conference homepage [1].

Why an online colloquium on Chemistry, Disarmament and Education?

The diplomacy of weapons of mass destruction disarmament and an international treaty to eliminate chemical weapons might appear more at home in a course on international relations or security studies, than in one

on chemistry. Yet science, especially the science of chemistry, plays a critical role in chemical weapons disarmament and in the implementation of the Chemical Weapons Convention (CWC), an international disarmament treaty banning chemical weapons. For those unfamiliar with the CWC, the treaty opened for signature in 1993 and today is in force in 192 States Parties (the governments that have agreed to uphold the norms and obligations required by the treaty). The OPCW, the recipient of the 2013 Nobel Peace Prize for its efforts in chemical disarmament, is the implementing body for the CWC. The subject of chemical weapons disarmament provides opportunities to introduce students to the nexus of science and international diplomacy, perhaps inspiring chemistry students to use their scientific training to bring technical insight into policy and diplomacy.

Disarmament is one of many examples of science informed and supported diplomacy; and a strong example of one that has critical needs for scientific expertise. Science not only ensures that a treaty like the CWC remains relevant as science and technology transform the world around us, it also supports treaty implementation through its contributions to verification meth-

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ods, national implementation of the provisions of the CWC, and the promotion of international collaboration for peaceful uses of chemistry as a means to build trust between States Parties [2].

The upcoming Spring 2016 Confchem will bring together an international group of chemists from across the States Parties of the OPCW to provide an overview of the OPCW, its educational initiatives, and the scientific aspects of international disarmament. The OPCW itself has placed a priority on education and engagement to raise awareness of its work and the contributions both from and to science in chemical disarmament; this has included supporting and producing educational materials [3,4] (for example on the multiple uses of chemistry [5]). The appointment of the OPCW's science policy adviser as an observer to the IUPAC Committee on Chemistry Education further emphasizes the commitment OPCW has placed on engagement in chemistry education activities and initiatives.

Papers included in the OPCW ConfChem will highlight the incorporation of the CWC into the teaching of chemistry, describe the role of analytical chemistry developed for and employed by chemical weapons inspectors in international events, provide an overview of definitions of toxicity, look at the chemistry of riot control agents, explain how simple sensors can be used to teach concepts in analytical chemistry and facilitate international collaborations, and discuss responsible use of science and ethical considerations for the practice of chemistry.

Looking beyond the OPCW ConfChem, a symposium on the CWC and multiple uses of chemicals is

planned for the upcoming IUPAC International Conference on Chemistry Education (ICCE2016), to be held in August 2016 in Malaysia [6].

Participation in the OPCW ConfChem is free of charge.

<http://confchem.cccce.divched.org/2016SpringConfChem>

References

1. Science, Disarmament, and Diplomacy in Chemical Education: The Example of the Organisation for the Prohibition of Chemical Weapons. <http://confchem.cccce.divched.org/2016SpringConfChem>
2. "The Intersection of Science and Chemical Disarmament"; B. Maneshi, J. E. Forman, *Science & Diplomacy*, 2015, 4(3); www.sciencediplomacy.org/perspective/2015/intersection-of-science-and-chemicaldisarmament.
3. For resources for students and teachers that are available on the OPCW website, see: www.opcw.org/special-sections/education.
4. For science and technology focused resources on the OPCW website, see: www.opcw.org/special-sections/science-technology.
5. "Multiple Uses of Chemicals IUPAC and OPCW Working Toward Responsible Science"; P. Mahaffy, J. Zondervan, A. Hay, D. Feakes, and J. Forman; *Chem Int*, 2014, 36, pp. 9-13. DOI:10.1515/ci-2014-0508; see also DOI:10.1515/ci-2014-0509 and DOI:10.1515/ci-2014-0510.
6. 2016 ICCE, www.icce2016.org/my

Visas

It is a condition of endorsements that organizers of meetings under the auspices of IUPAC, in considering the locations of such meetings, should take all possible steps to ensure the freedom of all bona fide chemists from throughout the world to attend irrespective of race, religion, or political philosophy. IUPAC sponsorship implies that entry visas will be granted to all bona fide chemists provided application is made not less than three months in advance. If a visa is not granted one month before the meeting, the IUPAC Secretariat should be notified without delay by the applicant.

How to Apply for IUPAC Endorsement

Conference organizers are invited to complete an Application for IUPAC Endorsement (AIE) preferably 2 years and at least 12 months before the conference. Further information on granting endorsement is included in the AIE and is available upon request from the IUPAC Secretariat or online.

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