

# Report of the Project Group of CCE for the Istanbul Meeting during the 47<sup>th</sup> GA in August 8-15, 2013

July 19, 2013

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Prof. Richard Hartshorn (New Zealand)  
Prof. Morton Z. Hoffman (USA)  
Prof. Masahiro Kamata (Japan)

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Acknowledgement

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- Previous Report: submitted at the CCE Meeting in Roma during 22. ICCECRICE in July 15-20, 2012.
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## 1. Membership of the Project Group

Prof. Mustafa Sözbilir (Turkey) – Project Coordinator  
Prof. Tina Overton (UK)  
Prof. Richard Hartshorn (New Zealand)  
Prof. Morton Z. Hoffman (USA)  
Prof. Masahiro Kamata (Japan)

## 2. Review Procedure of Proposals in IUPAC

- Step 1. Receipt at the Secretariat
- Step 2. Internal evaluation and identification of outside reviewers
- Step 3. Distribution to the outside reviewers and gathering of the reviews
- Step 4. Communication of the reviews to the Division(s) or Standing Committee(s) for final decision or recommendation to the Project Committee
- Step 5. Consideration and action by the Project Committee (when applicable)
- Step 6. Notification of IUPAC's decision to the submitter
- Step 7. Responsibility for project management

Review Procedure of Proposals in the Project Group, CCE  
(Step 2 in above)

- Step 1. FM (Dr. Fabienne Mayer) sends the proposals to the members of Project Group.
- Step 2. Each member sends his (her) opinion to FM
- Step 3. FM sends the opinion of the members to Project Coordinator (PC).
- Step 4. PC summarizes and sends the collective opinion to Chairman of CCE and FM

## 3. Project Budget

USD 20,000 per two years

## 4. Current Projects

### 4.1 CCE Projects (from the most new)

- 1. Project No:** 2013-022-2-050 (Joint with COCI)  
**Title:** Design for International Standards for Chemistry Education (ISCE)  
**Chair:** Mei-Hung CHIU  
**Members:** Jan Apotheker, Suzanne Boniface, Michael Droescher, Richard Hartshorn, Masahiro Kamata, Rachel Mamlok-Naaman, Mauro Mocerino, Leontina Lazo Santibañez, Hannah Sevian, Mustafa Sözbilir  
**Start Date:** 04 July 2013  
**Planned End Date:** July 2015  
**Budget in USD:** 5.800  
**Web Page:** [http://www.iupac.org/nc/home/projects/project-db/project-details.html?tx\\_wfqbe\\_pi1%5bproject\\_nr%5d=2013-022-2-050](http://www.iupac.org/nc/home/projects/project-db/project-details.html?tx_wfqbe_pi1%5bproject_nr%5d=2013-022-2-050)
- 2. Project No:** 2013-020-1-050 (Joint with OPCW)  
**Title:** Updating, Piloting, and Disseminating Educational Material for Raising Awareness of the Multiple Uses of Chemicals and the Chemical Weapons Convention  
**Chair:** Alastair Hay  
**Members:** Peter Mahaffy,  
**Start Date:** 05 July 2013  
**Planned End Date:** July 2015  
**Budget in USD:** 17.715  
**Web Page:** [http://www.iupac.org/nc/home/projects/project-db/project-details.html?tx\\_wfqbe\\_pi1%5bproject\\_nr%5d=2013-020-1-050](http://www.iupac.org/nc/home/projects/project-db/project-details.html?tx_wfqbe_pi1%5bproject_nr%5d=2013-020-1-050)
- 3. Project No:** 2011-003-3-050  
**Title:** Best Practices in the Use of Learning Outcomes in Chemistry Education  
**Chair:** Maja Elmgren

**Members:** Eva Åkesson, Christiane S. Reiners, Marcy Towns, Siegbert Schmid, Ilka Parchmann, Jan H. Apotheker, Nina Aremo, Pascal Mimero, Hilmi Namli.

**Start Date:** 08 June 2012

**Planned End Date:** June 2014

**Budget in USD:** 8.160

**Web Page:** [http://www.iupac.org/nc/home/projects/project-db/project-details.html?tx\\_wfqbe\\_pi1%5Bproject\\_nr%5D=2011-003-3-050](http://www.iupac.org/nc/home/projects/project-db/project-details.html?tx_wfqbe_pi1%5Bproject_nr%5D=2011-003-3-050)

**Update:** Maja Elgrem is going to make an update during meeting.

**4. Project No:** 2012-014-2-050

**Title:** A Virtual Colloquium to Sustain and Celebrate IYC 2011 Initiatives in Global Chemical Education

**Chair:** Robert E. Belford

**Members:** Mustafa SOZBILIR, Liberato Cardellini, Fabienne Meyers

**Start Date:** 10 May 2012

**Planned End Date:** July 2013

**Budget in USD:** 3.020

**Web Page:** <http://www.iupac.org/web/ins/2012-014-2-050>

**Update:** The virtual colloquium was held from May 18 - June 29, 2012 using the CCCE ConfChem conference management system that allowed participants to discuss papers through emails and comment features. See <http://www.ccce.divched.org/spring2012confchem>

During this time 824 people were registered to the email list and the virtual papers received 11 616 hits and 155 comments. As of March 18, 2013 the number of hits has grown to 30893. Many of the comments were extensive, for example the nine page paper on the IUPAC periodic table of the isotopes (paper 6) had 25 pages of comments.

The third aspect of this project is still ongoing. Recognizing the ephemeral nature of the internet, the task group chair had made an arrangement with the Journal of Chemical Education to allow ConfChem authors to submit a series of communications for peer reviewed publication. The Journal would allow them to upload the original ConfChem papers and discussions as supporting documents, and bundle all the papers into a section of the printed journal. The authors of ten of the twelve papers opted into this, the communications are currently under review and should be published within the year.

**5. Project No:** Project No: 2008-042-1-050 **(Final Report Pending)**

**Title:** Development of a framework of priorities for IUPAC Committee on Chemistry Education

**Chair:** Dr. Tony Ashmore

**Members:** Åkesson, Eva; Chiu, Mei-Hung; Kirchhoff, Mary; Lamba, Ram S.

**Start Date:** 01-May-2009

**Planned End Date:** 31 August 2012

**Budget in USD:** 7.880

**Web Page:** <http://www.iupac.org/web/ins/2008-042-2-050>

**Update:** This project has been moved to the Mei-Hung CHIU as the Chair of CCE to deal with. Mei-Hung is going to make an update.

## 4.2. Interdivisional Projects (Joint Projects with Other Inter-Division /Standing Committees projects)

1. **Project No:** 2012-048-3-400

(Joined with Div-IV: Polymer Division)

**Title:** A Brief Guide to Polymer Terminology

**Chair:** Vohlídal, Jiří; Hiorns, Roger

**Members:** Boucher, Ray; Do, Choon (CCE Contact), Duhlev, Rumen; Hodge, Philip; Jones, Richard; Kratochvíl, Pavel; Luscombe, Christine; Ober, Christopher; Stepto, Robert; Stingelin, Natalie; Walter, Michael

**Start Date:** 03 June 2013

**Planned End Date:**

**Budget in USD:** 5.000

**Web Page:** [http://www.iupac.org/nc/home/projects/project-db/project-details.html?tx\\_wfqbe\\_pi1%5Bproject\\_nr%5D=2012-048-3-400](http://www.iupac.org/nc/home/projects/project-db/project-details.html?tx_wfqbe_pi1%5Bproject_nr%5D=2012-048-3-400)

2. **Project No:** 2012-027-3-400

(Joined with Div-IV: Polymer Division)

**Title:** Enhancing Educational Website for Polymer Chemistry

**Chair:** Christopher Ober

**Members:** Do, Choon (CCE Contact); dos Santos, Cláudio; Jones, Richard; Korley, LaShanda; Mormann, Werner

**Start Date:** 01 March 2013

**Planned End Date:**

**Budget in USD:** 6.000

**Web Page:** [http://www.iupac.org/nc/home/projects/project-db/project-details.html?tx\\_wfqbe\\_pi1%5Bproject\\_nr%5D=2012-027-3-400](http://www.iupac.org/nc/home/projects/project-db/project-details.html?tx_wfqbe_pi1%5Bproject_nr%5D=2012-027-3-400)

3. **Project No:** 2007-032-1-100 **(Final Report Pending)**

(Joined with Div-I: Physical and Biophysical Chemistry Division)

**Title:** Green Book - Abridged Version

**Chair:** Marquardt, Roberto

**Members:** Brett, Christopher M. A.; Cvitas, Tomislav; Frey, Jeremy G.; Hinde, Robert J.; Holmström, Bertil; Kuroda, Yutaka; Pavese, Franco; Quack, Martin; Smith, Sean; Stohner, Jürgen; Thor, Anders J

**Start Date:** 27 November 2007

**Planned End Date:** 31 December 2012

**Budget in USD:** 12.500

**Web Page:** <http://www.iupac.org/web/ins/2007-032-1-100>

**Update:** No update is available

## 5. Projects Under Consideration

Currently there are no projects under consideration. New projects are welcomed for the 2014-15 biennium.

## 6. Completed Projects

1. **Project No:** 2011-054-1-050

**Title:** Flying Chemists Program in Mexico and Panama

**Chair:** Cecilia BERRIOS, Jorge IBANEZ

**Members:** Juan Pérez Hernández, Héctor Cárdenas Lara, Mei-Hung Chiu, Abdiel Aponte, Cristina Rueda,

**Start Date:** 01 January 2012

**Planned End Date:** Completed

**Budget in USD:** 5.465

**Web Page:** <http://www.iupac.org/web/ins/2011-054-1-050>

**Update:** Read about the October 2012 activity as reported in Chem Int May-June 2013, p.20. In April 2013, Peter Mahaffy had a follow-up visit to Mexico City for workshops and lectures with Mexican Faculty and Students at both UNAM and Ibero-American University. CCE has emphasized the importance of sustainable outcomes in the IUPAC FCP program, and the activities this week are an excellent example of local initiatives to follow-up on the FCP visit.

2. **Project No:** 2007-005-2-050

**Title:** Research-based evaluation of the Young Ambassadors for Chemistry

**Chair:** Dr. Lida Schoen

**Members:** Mei-Hung Chiu, Ponnadurai Ramasami, Erica Steenberg, and Natalia Tarasova

**Start Date:** 01 January 2008

**Planned End Date:** Completed

**Budget in USD:** 11.070

**Web Page:** <http://www.iupac.org/web/ins/2007-005-2-050>

**Update:** A report published in Chemistry International, 34(5), 7-9, 2012.

3. **Project No:** 2007-038-3-200

(Joined with Div-II: Inorganic Chemistry Division)

**Title:** Development of an isotopic periodic table for the educational community

**Chair:** Holden, Norman E.

**Members:** Böhlke, John Karl; Coplen, Tyler B.; Mahaffy, Peter G.; Vocke, Robert D.; Walczyk, Thomas R.; Wieser, Michael; Yoneda, Shigekazu; de Laeter, John R.

**Start Date:** 01 April 2008

**Planned End Date:** Completed

**Budget in USD:** 11.000

**Web Page:** <http://www.iupac.org/web/ins/2007-038-3-200>

(A feature titled 'Atomic Weights - No Longer Constants on Nature' published in Chemistry International March-April 2011, by Tyler B. Coplen and Norman E. Holden. It could be read at [http://old.iupac.org/publications/ci/2011/3302/2\\_coplen.html](http://old.iupac.org/publications/ci/2011/3302/2_coplen.html)). For more information please also visit <http://www.ciaaw.org>.

**Update:** The Periodic Table of the Isotopes have been updated and final updated version is available at the <http://www.ciaaw.org>. A new extension project submitted to the IUPAC is under review entitled "Extension 2007-038-3-200 - Development of an Isotopic Periodic Table for the Educational Community (2012-016-12) with 20.650 USD budget" **Project No:** 2010-031-2-050 (**IYC 2011 Activity**)

4. **Title:** Chemistry as a Cultural Enterprise

**Chair:** Prof. Christiane S. REINERS & Dr. Lida SCHOEN

**Members:** Boshra M. AWAD, Liberato CARDELLINI, Mei-Hung CHIU, Mary J. GARSON, Morton, Z. HOFFMAN, Rachel MAMLOK-NAAMAN, Liliana MAMMINO, Daniel RABINOVICH & Thomas R TRITTON

**Start Date:** 01 September 2010

**Planned End Date:** Completed

**Budget in USD:** 1.735

**Web Page:** <http://www.iupac.org/web/ins/2010-031-2-050>

**IYC 2011 Activity Page:** <http://www.chemistry2011.org/participate/activities/show?id=110>

**5. Project No:** 2010-025-1-050

**Title:** Enhancing the capacity to provide quality chemistry education at secondary and tertiary levels in Ethiopia

**Chair:** Prof. Temechegn ENGIDA

**Members:** Yonas CHEBUDE, Mei-Hung CHIU, Peter G. MAHAFFY, Ahmed MUSTEFA

**Start Date:** 01 September 2010

**Planned End Date:** Completed

**Budget in USD:** 5.500

**4. Project No:** 2010-011-1-050 (Joined with Div V: Analytical Chemistry) (IYC 2011 Activity)

**Title:** Global Chemistry Experiment for the International Year of Chemistry – Design and Development

**Chair:** García-Martínez, Javier; Wright, Anthony (Tony) H.

**Members:** Camões, Maria Filomena; Cesa, Mark C.; Hasler, Julia; Humphris, Colin J.; Joyce, Alexa; Kamata, Masahiro; Steenberg, Erica

**Start Date:** 01 January 2010

**Planned End Date:** Completed

**Budget in USD:** 15.000

**Web Page:** <http://www.iupac.org/web/ins/2010-011-1-050>

**IYC 2011 Activity Page:** <http://www.chemistry2011.org/participate/activities/show?id=92>

**IYC 2011 Activity Page:** <http://water.chemistry2011.org>

A report can be read at [http://www.iupac.org/publications/ci/2012/3403/3\\_martinez.html](http://www.iupac.org/publications/ci/2012/3403/3_martinez.html)

**5. Project No:** 2009-055-1-050

**Title:** Toward Higher Quality of Chemistry Teacher In-service Training in Croatia

**Chair:** Judaš, Nenad; Vladušić, Roko

**Members:** Bucat, Robert B.; Chiu, Mei-Hung; Luetić, Marina; Šunjić, Vitomir

**Start Date:** 01-05-2010

**Planned End Date:** Completed

**Budget in USD:** 5.000

**Web Page:** <http://www.iupac.org/web/ins/2009-055-1-050>

**6. Project No:** 2009-037-3-050 (IYC 2011 Activity)

**Title:** Developing Toolkits for National Chemistry Weeks during IYC

**Chair:** Prof. Mustafa SOZBILIR

**Members:** Choon Ho DO, Morton HOFFMAN, Ram S. LAMBA, Jan H. APOTHEKER

**Start Date:** 1 August 2010

**Planned End Date:** Completed

**Budget in USD:** 3.300

**Web Page:** <http://www.iupac.org/web/ins/2009-037-3-050>

**IYC 2011 Activity Page:** <http://www.chemistry2011.org/participate/activities/show?id=61>

**7. Project No:** 2008-043-1-050

**Title:** Visualizing and understanding the science of climate change

**Chair:** Prof. Peter Mahaffy

**Members:** Chiu, Mei-Hung; Engida, Temechegn; Hasler, Julia; Kirchhoff, Mary; Martin, Brian; Osborne, Colin; Tarasova, Natalia P.

**Start Date:** 01-Feb-2009  
**Planned End Date:** Completed  
**Budget in USD:** 8.400  
**Web Page:** <http://www.iupac.org/web/ins/2008-043-1-050>

The set of peer-reviewed, interactive, web-based materials has been released at <http://www.explainingclimatechange.ca>.

- 8. Project No:** 2006-050-3-100  
(Jointed with Div-I: Physical and Biophysical Chemistry)  
**Title:** Wet surface vibrational spectroscopy experiments  
**Chair:** James McQuillan  
**Members:** Masatoshi Osawa, Derek Peak, Bin Ren, Zhong-Qun Tian, and Thomas Wandlowski  
**Start:** 14 March, 2007  
**End:** Completed  
**Budget in USD:** 8.200  
**Web Page:** <http://www.iupac.org/web/ins/2006-050-3-100>
- 9. Project No:** 2004-045-1-700  
(Jointed with Div-VII: Chemistry and Human Health)  
**Title:** Training of school children on pesticides and health - "Toxicology in the classroom"  
**Chair:** Temple, Wayne A.  
**Members:** Awang, Rahmat; Besbelli, Nida; Duffus, John H.; Heinzow, Birger; Makalinao, Irma Omar, Maizurah; Binti Rexilius, Lutz; Schweinsberg, Fritz  
**Start:** 01 March, 2005  
**End:** Completed  
**Budget in USD:** 6.007  
**Web Page:** <http://www.iupac.org/web/ins/2004-045-1-700>  
**Update:** (November 2009 - feature published in Chem. Int. Nov-Dec 2009. Please visit [http://www.iupac.org/publications/ci/2009/3106/4\\_omar.html](http://www.iupac.org/publications/ci/2009/3106/4_omar.html)) In addition an amended version of the Toxiclaro multimedia package is now been developed which can be found at [www.prn2.usm.my/toxicology2009](http://www.prn2.usm.my/toxicology2009).
- 10. Project No:** 2004-037-1-400  
(Jointed with Div-IV: Polymer)  
**Title:** Design of polymer education material for French speaking countries  
**Chair:** Gerard Froyer  
**Members:** Djafer Benachour, Philippe Dubois, Jean-Pascal Eloundou, Dhanjay Jhurry, Hamid Kaddami, Armand Soldera, and Françoise Winnik  
**Start:** 01 April 2005  
**End:** Completed  
**Budget in USD:** 5.000  
**Web Page:** <http://www.iupac.org/web/ins/2004-037-1-400>  
(June 2011 - project completed - a collection of 400 ppt slides is available via the IUPAC Polymer Education Website portal (<http://www.iupac.org/polyedu/page36/page38/page38.html>)). The slides illustrate different chapters of Polymer Science and are grouped together into 6 chapters forming an expanded introduction to polymers: Introduction to polymer science, Polymer chemistry, Polymer solid state, Simulation of polymer chains, Rheology and processing, Electrical and optical properties of polymers.

The project continues under French Polymer Group whose website (<http://www.gfp.asso.fr>) provides additional resources and references. Additional topics will cover physical chemistry, mechanical properties, and biopolymers.)

## 6. Future Projects

IUPAC operates using a project-driven system. This is done to ensure by selection that only high quality projects bear the IUPAC label, and to encourage participation by the worldwide chemistry community. Therefore you are encouraged to produce more projects and submit.

## 7. Information about IUPAC & Projects

For information about IUPAC Organisation structure please visit

<http://www.iupac.org/home/about.html>

For information about IUPAC projects and project submission and review process please visit <http://www.iupac.org/home/projects/project-submission-and-approval-process.html>

For CCE Projects please visit

[http://www.iupac.org/nc/home/projects/projects-by-divisions/project-list-for-division.html?tx\\_wfqbe\\_pi1%5Bdivision%5D=Committee%20on%20Chemistry%20Education](http://www.iupac.org/nc/home/projects/projects-by-divisions/project-list-for-division.html?tx_wfqbe_pi1%5Bdivision%5D=Committee%20on%20Chemistry%20Education)

## 8. Appendixes (Update about some projects)

## 9. Acknowledgements

Most of data in this report was obtained from the website of IUPAC. We appreciate very much for Dr. Fabienne Meyers and Linda Tapp's excellent documentation in the web site. We also thank many internal and external reviewers for their efforts to screening and identifying excellent projects.