

# **INORGANIC CHEMISTRY DIVISION COMMITTEE OF IUPAC**

## **Minutes of Meeting at Singapore 24 and 25 July 2014**

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**INORGANIC CHEMISTRY DIVISION COMMITTEE OF IUPAC**  
**Meeting at Singapore, July 24-25, 2014**

**DRAFT MINUTES**

**Attendance:** Present were *President*, Jan Reedijk (Netherlands); *Vice President*, Lars Öhrström (Sweden), *Past president* Robert Loss (Australia), *Secretary*, Markku Leskelä (Finland); *Titular Members*: Tiping Ding (China), Milan Drabik (Slovakia), Daniel Rabinovich (USA), Thomas Walczyk (Singapore), Michael Wieser (Canada); *Associate Members*: Joseph Buchweishaija (Tanzania), Ken Sakai (Japan), and *National representatives*: Yang F. Abdul Aziz (Malesia), Ledda Meesuk (Thailand), *Observer IUPAC past president* Kaz Tatsumi (Japan)

**Apologies** were received from *Titular Member* Edit Tsuva (Israel), *Associate member* Javier Garcia-Martinez (Spain) who could not attend.

Paragraphs in the minutes have been written in the order they were presented in the agenda. Discussions were carried out in a few cases in slightly different order.

**1 – Introductions and announcements (J. Reedijk)**

The meeting commenced at 11:00 a.m. on Thursday, July 24, 2014. Div. President Reedijk welcomed the members, and also thanked the AM and NR members for attending on their own funding. Those present introduced themselves and described their professional affiliations and areas of expertise. Our local host Thomas Walczyk gave information on the practical things.

**2 – Presentation and discussion of the Agenda (Reedijk)**

The previously distributed Agenda was accepted by the meeting. Lars Öhrström volunteered to collect the “Action Items” for this meeting which are added in these Minutes as **Appendix 1**.

**3 – Approval of Minutes from Division Meeting in Istanbul (Leskelä) and status of the action items from the Istanbul meeting (Reedijk)**

Minutes of the Cologne (2013) meeting had been distributed in draft form previously and amended according to corrections and comments received from the Division members and distributed by email to the Division members a few weeks before the present meeting. The final copy will also be available on the IUPAC Division II web page. The final version of the Minutes was approved without further change and thanks to the Division Secretary.

The action items from the Istanbul meeting were included in the Minutes of that meeting as Appendix 1. All of these items had been addressed by the designated individuals.

#### **4- Report from the last elections; list of 2014-15 Division Members (Reedijk)**

The list of members was reviewed (**Appendix 2**)

#### **5 – Report of IUPAC Bureau and Executive actions (Reedijk)**

The Bureau and Division Presidents met in Coimbra, Portugal. Reedijk reviewed the main items that were discussed at this meeting. A short description is as follows:

The personnel in the IUPAC office has changed: Secretary general Rene Deplanque has resigned and an acting secretary Colin Humphris has been appointed as acting secretary till the next General Assembly. Managing director John Peterson has also resigned and a new person is looked for. Bryan Pearson who has been responsible for the IT sector has also left. Therefore the IUPAC web-pages are not very updated. Improvements in the web-pages are needed and development work is in progress.

Journals PAC and CI have a new publisher (deGruyter) and so far everything has gone smoothly.

Economic situation of IUPAC is tight and budget cuts of 15 % have been made for all divisions and commissions for 2014-2015. In reimbursements some new rules have been taken in use as has been described in the web-page:

[http://www.iupac.org/nc/home/projects/information-for-task-group-chairs/claim-of-expenses.html?sword\\_list%5B%5D=2014](http://www.iupac.org/nc/home/projects/information-for-task-group-chairs/claim-of-expenses.html?sword_list%5B%5D=2014)

Election of new member for IUPAC bodies is a too slow process. A new model to speed up the process will be taken in use. Election is prepared in a committee where the division's representative is the vice-chairman.

No separate bureau meeting will be organized in 2015, but the meeting is in conjunction to the General Assembly in Korea.

The Russian Chemical Society has requested that the IUPAC Periodic table be officially named by IUPAC as the D.M. Mendelejev Period Table. The issue has been discussed by the IUPAC executive and an ad-hoc committee is nominated to investigate the matter and make a recommendation to the Executive Committee. Division members favored the present form of the IUPAC Periodic table.

A copy of the Report on Division II that Div. President Reedijk has presented in the meeting is attached to these Minutes as **Appendix 3**.

#### **6 - Reports from other IUPAC bodies and Affiliated Organizations**

The report from Committee on Chemistry Education written by Javier Garcia was presented by President Reedijk (**Appendix 4**). Javier had collected in the report a few items which might be of interest for Div II. The activity of Javier as editor of a book (Chemistry Education, Wiley-VCH) was appreciated.

Contact person for Div VIII (Chemical Nomenclature and Structure Representation Division) from Division II was discussed. Jan Reedijk has been the representative, but a new person is needed. Later in the meeting Dan Rabinovich was selected.

### **7- Report from Commission on Isotopic Abundances and Atomic Weights (CIAAW) and its Subcommittees, including the relevant Project Reports (Loss, Ding)**

Loss and Ding went through the report made by Juris Meija (Appendix 5). They highlighted the most important aspects in the report: (i) the good media visibility of the 2013 IUPAC press release, (ii) Web presence, in particular Wikipedia and the web-site [ciaaw.org](http://ciaaw.org), (iii) isotope reference materials manuscript, (iv) liaisons between different bodies, and the (v) core activity "Atomic Weights 2013". The project update was made later in paragraph 13.

The project on Redefinition of mole in which CIAAW is involved was briefly discussed. The Task Group meeting was in July and possibly a manuscript draft will be ready at the end of 2014.

Report of CIAAW is in **Appendix 5**.

### **8- Report from the Interdivisional Subcommittee on Materials Chemistry (Drabik)**

Milan Drabik told about a possible new project on Terminology of Nanomaterials and Nanotechnology in Materials Chemistry, which has been discussed with Chris Ober and other members of ISMC. The report is in **Appendix 6**.

Markku Leskelä added that ISMC will have an off-year meeting in connection to the ACS meeting in San Francisco (Aug. 10, 2014). The topics to be discussed there are (i) the ISMC educational website which has been drafted by Ilya Zharov (University of Utah) (<http://iupac-materials.chem.utah.edu/>), (ii) suggestions for invited speakers for the materials chemistry related symposia in 45<sup>th</sup> IUPAC World Chemistry Congress in Korea 2015 ([http://www.iupac2015.org/main/gi\\_topics.htm](http://www.iupac2015.org/main/gi_topics.htm)), and (iii) possible new projects.

### **9 – Reports from other IUPAC bodies and Affiliated Organizations**

Markku Leskelä described briefly the meeting of Committee on Chemical Industry (COCI) in Istanbul. The activities on regulation and safety issues and training program for young chemists from developing countries and projects on Life cycle analysis, and Responsible care are on-going. No information on a possible off-year meeting of COCI was available.

Interdivisional Committee on Terminology, Nomenclature and Symbols (ICTNS) is represented by Milan Drabik. He gave a report on manuscripts he has reviewed. (**Appendix 7**).

Redefinition of mole in connection to Systeme International d'Unites, SI, is waiting for the project results (Paragraph 7).

## **10 - Division newsletter status and planning (Öhrström)**

Lars Öhrström presented briefly the content of recent newsletters. For the next issue the deadline is September 2014 and the 2015 issue will appear in summer. The distribution of the Newsletter was discussed and one suggestion was to also place that on web-page of national chemical societies. For the next issue a report from the Singapore meeting is needed and also a group picture. The task group members of Div II projects will be asked if they have something to report in the Newsletters.

## **11 - Review of Division budget allocations and expenditures (Reedijk)**

J. Reedijk presented the budget and expenditures of all divisions and commissions. He also showed the project expenditures vs. budgets. During 2012-2013 Div II spent 97 % of the total budget (55,200 USD). Expenditure has successfully been held close to the recommended 30/70 ratio for Administration and Project work. 18,050 USD was used for meetings and operation costs and 35,500 USD was used for projects.

J. Reedijk also showed the budget and its allocation for years 2014-2015. For Div II we have USD 48,600 from which USD 14,600 will be used for this meeting.

## **12 - Reports on recent, planned and proposed Division sponsored conferences**

Div II has had in the past supported the conference series: High Temperature Materials Conference. This triennial Conference was last held in 2012 in Beijing, China. No Division member is currently associated with this Conference. Plans for the next Conference in 2015 are unclear.

The last Workshop on Advanced Materials (WAM) was held in Stellenbosch, South Africa in 2005, and WAM IV was originally planned for 2008, but was never held. Efforts to revive this workshop series have thus far proved unsuccessful.

Milan Drabik told about IUPAC sponsored the 11<sup>th</sup> Solid State Chemistry conference (SSC 2014) held in Trenčianske Teplice, Slovakia, July 6-11, 2014. The conference was very successful and a report of the program is in **Appendix 8**. Four IUPAC Young researcher prizes were given in the conference.

Brian Korgel has applied IUPAC sponsorship for the 4<sup>th</sup> International Solvothermal hydrothermal association conference to be held in France Oct. 2014. No further information was available. After the meeting Brian Korgel was contacted and IUPAC sponsorship is still unclear.

Milan Drabik told about a new conference: 25<sup>th</sup> International Conference on Coordination and Bioinorganic Chemistry to be held in Smolenice (Slovakia) in June 2015. The conference is chaired by prof. Milan Melnik. This conference will apply for IUPAC sponsorship.

Jan Reedijk told about IUPAC requirements for conference sponsorship. The invited talks should be published in PAC if possible. Sponsorship/IUPAC label can only be given countries which are NAOs of IUPAC. An example from ICCS was given which for long time has had an IUPAC label, but while it was now in Singapore (non NAO), the IUPAC link has been broken.

Meeting was closed 16.00

Division had a common dinner in restaurant Din Tai Fung in Paragon shopping centre.

## **Friday July 25**

### **13 –Project-by-project review of project status (Rabinovich)**

Ken Sakai who is the Div II contact person presented the situation in project 2009-045-1-200 on luminescence spectroscopy. No money has been used but the project is almost completed. A draft report has been made and submitted to PAC.

Dan Rabinovich made the project-by-project review. He presented the last completed projects from 2013 although no projects have been completed during the last 12 months. Division II has xx projects and the situation in each of them was reviewed. From the 18 on-going projects 7 are marked with red meaning that they are overdue.

See for details **Appendix 9**.

### **14 –Review of new project proposals (Rabinovich)**

Project 2009-028-1-xxx proposal on Compilation and evaluation of isotopic fractional factors for environmental investigations was discussed. No reviews were reviewed by the Secretariat. The proposal will be resubmitted.

Project 2012-016-1-xxx Development of an Isotopic Periodic Table for the Educational Communities (Holden, Mahaffy). The project has been cancelled, reformulated and resubmitted as 2014-024-1-xxx on July 27. Project committee is committed and USD 4000 was approved by Div. II. Also CEC will contribute this amount.

Project 2013-056-1-xxx on Nomenclature of Carbon nanotubes and Related Substances has been submitted and reviewed but and it could be mostly Div. VIII. No information on reviews available.

The project for Terminology of Nanomaterials and Nanotechnology in Materials Chemistry was already discussed in paragraph 8 and appendix 6. ISMC has planned also a new project on Magnetic Information file for Magnetochemistry. **Appendix 10.**

## **15 – Discussion on the generation of future projects**

The following topics were discussed:

- Daniel Rabinovich and collaborators are working on a Periodic Table of Life project. A proposal will be finished during this year.
- Definition of valence. Pavel Karen will be asked about the status.
- Tipping Ding will reformulate the Project 2009-028-1-xxx proposal.

## **16 – Status of the Information Package for new Division members (Öhrström)**

Lars Öhrström presented the Information package content. The present content was considered useful and informative especially for new members. No other division has a similar Welcome package and it has been discussed if it could be modified so that it would suit for all new members of IUPAC. The need of a flyer and pdf for young observers was discussed.

## **16A – Duties of Division members (Reedijk)**

Jan Reedijk went through the list of members and their current duties. The missing representations were completed.

## **17 – Review of Action Item list from this meeting (Öhrström)**

The review of Action Items was made (**Appendix 1**)

## **18 - Report from project group on possible re-naming the IUPAC Periodic Table (Russian request) and reshaping of the current IUPAC Periodic Table (Reedijk Öhrström)**

As mentioned in paragraph 5 no report is available yet about the Russian request. The reshaping of the present IUPAC Periodic Table (18 columns and lanthanides and actinides below it) has constantly be discussed by some people. No changes are planned.

## **19 - Status of planning of the next year Division meeting in South Korea General Assembly**

The meeting will be in the period August 7-11 2015 (2 days). The exact dates will be sorted out at the end of the year.

## **20 – New Elements: status report and naming procedures; 112-118**

Bob Loss explained the naming procedure. No new information from names of the new elements was available.

## **21 – Any other businesses**

Income for IUPAC: possible project to explore methods. It was discussed how to commercialize things, but marketing help is needed. A project will be in pipeline.

Visibility of IUPAC in web (Wikipedia and social networks) was discussed. A project (2013-055-1) is already going on. Lars showed the IUPAC Wikipedia page (it gets 100 visits per day) and Division II page he has made. The work was seen important and Lars was thanked for the efforts. A project proposal will be made on increasing the information in Wikipedia.

IUPAC Facebook is quite quit – most recent activities from 2012.

In LinkedIn the number of members in IUPAC group is not high but small activities are going on all the time.

Composition of the Division after 2015. Drabik , Leskelä, Loss, and Tshuva have the last period as TM and new people have to be elected. Preparations for elections have to be started in autumn.

## **22. Thanks and adjourn**

J. Reedijk finished the general meeting at 13.10 and thanked the participants for an active meeting and Thomas Walzcyk in particular for the hosting of the Division with gentle and warm way.

The farewell dinner was held in Blue Bali restaurant in the Botanical Garden of National University of Singapore.

### Action Items from IUPAC Inorganic Chemistry Division Committee Singapore, July 24 - 25, 2014

1. <http://www.ciaaw.org> needs to mention IUPAC not just the logo [Loss]
2. Ask Brian Korgel about participation in Korea 2015 [Reedijk]
3. Contact task groups chair for newsletter [Öhrström]
4. Project update list for newsletter 1 September [Rabinovich]
5. News items for newsletter 1 September [all]
6. 2007-038-3-200 should be listed as completed [Rabinovich]
7. Send updated welcome pack to secretariat and div. presidents. [Öhrström]
8. Flyer+pdf for Young Observers and other prospective volunteers for the division. [Öhrström]
9. Contact secretariat about people and extension 2009-026-2-200 [Loss]
10. Periodic table of life [Rabinovich]
11. Summary of proj. exp. add column for div. contribution [Reedijk]
12. Update list of duties. [Reedijk]
13. Planning for election and nomination committee [Öhrström]
14. Project to showcase how to use Wikipedia to promote and inform about division activities [Öhrström, Wieser]
15. Add content to division Wikipedia article (notable people etc) [all]
16. Translate Wikipedia article [all]

## Appendix 2

### Membership of Inorganic Chemistry Division Committee 2014-2015

Name	Status	Term	NAO
Prof. Jan Reedijk	TM – President	2014-2017	Netherlands
Prof. Lars Öhrström	TM – Vice President	2014-2017	Sweden
Prof. Markku Leskelä	TM – Secretary	2012-2015	Finland
Prof. Robert D. Loss	TM – Past President	2014-2015	Australia
Prof. Tiping Ding	TM	2014-2015	China/Beijing
Dr. Milan Drábik	TM-2nd term	2014-2015	Slovakia
Prof. Daniel Rabinovich	TM	2014-2015	United States
Prof. Edit Y. Tshuva	TM-2nd term	2014-2015	Israel
Prof. Thomas R. Walczyk	TM	2014-2015	Singapore
Prof. Michael Wieser	TM	2014-2015	Canada
Dr. Javier García-Martínez	AM-2nd term	2014-2015	Spain
Prof. Pavel Karen	AM	2014-2015	Norway
Dr. Adem Kiliç	AM-2nd term	2014-2015	Turkey
Prof. Rose-Nöelle Vannier	AM-2nd term	2014-2015	France
Dr. Joseph Buchweishaija	AM-2nd term	2014-2015	Tanzania
Prof. Ken Sakai	AM	2014-2015	Japan
Prof. Lidia Armaleo	NR	2014-2015	Italy
Prof. Yang F. Abdul Aziz	NR-2nd term	2014-2015	Malaysia
Prof. Amin Badshah	NR	2014-2015	Pakistan
Prof. V. Chandrasekhar	NR-2nd term	2014-2015	India
Prof. João Galamba	NR	2014-2015	Portugal
Prof. Stepan N. Kalmykov	NR	2014-2015	Russia
Prof. Sanjay Mathur	NR	2014-2015	Germany
Prof. Ladda M. Meesuk	NR	2014-2015	Thailand
Prof. Biserka Prugovečki	NR-2nd term	2014-2015	Croatia
Prof. Natasha Trendafilova	NR-2nd term	2014-2015	Bulgaria

10 TMs, 6 AMs, 10 NRs

AM = Associate Member

NR = National Representative

TM = Titular Member

## Appendix 3

### Report of Division President presented in Bureau and Division Presidents Meeting

The IUPAC Bureau meeting 2014 took place in Coimbra (Portugal), from April 11-13. All presidents of the Divisions were present.

Parts of the meetings were split, like a 1:1 of Division Presidents with the IUPAC President, and other parts were more a plenary form; Some 30 people were present altogether. Major items discussed, and presented were:

- a. OFFICE: René Deplanque, IUPAC Secretary General, resigned from this office early this year, and during the Bureau meeting Colin Humphris, UK, was elected Acting Secretary General. Meanwhile also the Secretary, officially: Managing Director, John Petersen who only started his service in 2012 had to quit this office again in September 2013 for health reasons. Currently, a new Managing Director is searched for. The call for applications was published on the IUPAC website (a new MD is meanwhile appointed; see: <http://www.iupac.org/news/news-detail/article/announcement-of-appointment-of-dr-lynn-soby-as-executive-director-iupac.html> . Also Bryan Pearson who was responsible for the IT and web services at the IUPAC Secretariat gave in his notice at the end of last year and left IUPAC right after Christmas 2013. In the meantime the work at the Secretariat had been temporarily supported by the Treasurer, John Corish, and the work in relation to the Secretary is done by the Acting Secretary General, Colin Humphris, and Fabienne Meyers.
- b. Efficiency of the Bureau meeting (against its cost): There will be plans to abandon the separate Bureau meeting in the year of the general assemble, and now integrate it with the GA.
- c. The elections for Divisions (TM.AM.NR) appears to far ahead of the actual strating term. This will now be postponed by some 7-9 months, and will primarily take place in the period of April-June of the year of the GA.
- d. The report of the Div President is attached as **Appendix 3a** (pdf).

## Appendix 4

### Report on the Committee on Chemistry Education for the IUPAC Inorganic Chemistry Division Committee meeting in Singapore July 24 - 25, 2014

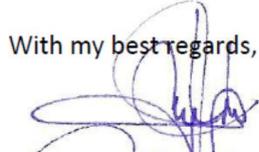
Trenčianske Teplice, Slovakia 9<sup>th</sup>, July 2014

As representative of our Division in CCE, it is for me a pleasure to report on the main activities of this Committee which could be of our interest:

1. Norman Holden presented on the Periodic Table of the Isotopes in the CCE meeting in Istanbul. An article appeared in Chemistry International (vol. 33, n<sup>o</sup> 4, July-August issue, 2011) summarizing the goals, characteristics and main accomplishments of the first release of this Table. [http://www.iupac.org/publications/ci/2011/3304/pp6\\_2007-038-3-200.html](http://www.iupac.org/publications/ci/2011/3304/pp6_2007-038-3-200.html)
2. As a second stage of this initiative jointly led by CCE and our Division, a project proposal has been recently submitted to create an interactive version of the Periodic Table of the Isotopes which will encourage users to interact with each element, understand its isotopic composition and variability, and explore applications in everyday life of that element. The interactive electronic Interactive Periodic Table of the Isotopes (IPTI) will be accompanied by educational resources and interactive learning object. This project proposal has been jointly submitted by Norman Holden and Peter Mahaffy, as co-chairs of the task force, and it is under reviewed.
3. During the CCE meeting in Istanbul, I reported on the status of the PhosAgro/UNESCO/IUPAC research grants in green chemistry and the need for a wide and effective dissemination of the call to get as many good proposals as possible. Over the course of 5 years, the project will offer research grants of up to USD30000 to scientists aged 35 years or less. The Divisions and Committees of the Union will have a major role in providing the technical expertise and evaluation of the proposals received. More information can be found here:  
  
<http://www.iupac.org/news/news-detail/article/phosagrounescoiupac-research-grants-in-green-chemistry-call-for-applications.html>
4. One of the activities that has emerged from my participation in CCE is that I am editing a book on "Chemistry Education" for Wiley-VCH that will be released later this year. The book contains 28 chapters which includes innovative teaching and learning strategies, best practices and the role of new technologies in the future of chemistry education. I am attaching some additional information about the book and its Table of Contents as annexes to this report.

Finally, let me apologize for not being able to join you in this occasion and send you my greeting from Slovakia where I am representing IUPAC at the 11<sup>th</sup> Solid State Chemistry Conference.

With my best regards,



Javier Garcia Martínez  
Professor of Inorganic Chemistry  
University of Alicante, Spain

# Report for the IUPAC Inorganic Chemistry Division

## Commission on Isotopic Abundances and Atomic Weights Report for 2014

Juris Meija, Chair  
Thomas Prohaska, Secretary

Commission on Isotopic Abundances and Atomic Weights (CIAAW) last met in August of 2013 prior to the IUPAC General Assembly. This report provides a summary of the Commission activities since that meeting.

### 1. General Assembly aftermath

Following the IUPAC Council decision, a IUPAC press release was issued on 25-Sep/2013 in regards to the biennial revisions of standard atomic weights. This prompted a significant amount of media enquiries and resulted in wide spread of articles in the global media. Below is a select list of articles:

[in English]

[New Atomic Weights for 19 Elements](#). *The Cornell Daily Sun* (2 December 2013)  
[Revised Atomic Weights](#). *Chemical and Engineering News (American Chemical Society)* (7 October 2013)  
[Atomic Weights Changed for Gold, 18 Other Elements](#). *Huffington Post* (28 September 2013)  
[The Periodic Table puts on Weight](#). *Telegraph* (26 September 2013)  
[IUPAC votes to change standard atomic weights of 19 elements](#). *phys.org* (26 September 2013)  
[Editorial](#). *The Northern Miner* (25 September 2013)  
[Elemental weigh in](#). *Chemistry World (Royal Society of Chemistry)* (25 September 2013)  
[Atomic Weight Changed for 19 Elements](#). *Yahoo! News* (24 September 2013)  
[Chemistry's Biggest Loser: Official Atomic Weights Change For 19 Elements](#). *Popular Science* (24 September 2013)

[non-English]

[Bobot 19 unsure kimia berubah](#). *Tempo (Indonesia)* (1 October 2013)  
[Променят средната атомна маса на 19 елемента](#). *Novini (Bulgaria)* (30 September 2013)  
[Kullasta painavampaa - myös 18 muuta alkuainetta sai uuden atomimassan](#). *Katalous (Finland)* (29 September 2013)  
[Pontosabb atomtömegekkel frissült a periódusos rendszér](#). *Ipon (Hungary)* (29 September 2013)  
[Предложено изменить стандартную атомную массу 19 элементов](#). *Vestni (Russia)* (27 September 2013)  
[Новые значения атомных масс получили 19 элементов таблицы Менделеева](#). *atomic-energy.ru (Russia)* (27 September 2013)  
[Нових значень атомних мас набули 19 елементів таблиці Менделєєва](#). *Osvita (Ukraine)* (26 September 2013)  
[Новые значения атомных масс получили 19 элементов таблицы Менделеева](#). *ТУТ (Belarus)* (26 September 2013)  
[Die offizielle Atommasse von 19 chemischen Elementen wurden soeben geändert](#). *ShortNews (Germany)* (26 September 2013)  
[19 elementin atomik kütle birimi deđiđti](#). *ntvmsnbc (Turkey)* (25 September 2013)

[Układ okresowy pierwiastków do poprawki](#). *Odkrywcy (Poland)* (25 September 2013)

[Άλλαξε επίσημα το ατομικό βάρος 19 χημικών στοιχείων](#). *Real (Greece)* (25 September 2013)

## 2. Web presence

Since April 2013, *Wikipedia* has an article about the Commission. Currently, this entry gathers some 500 monthly visitors. In June 2014, the Commission unveiled a new design for its website at [ciaaw.org](http://ciaaw.org). The new site employs responsive design aimed at enhanced visibility on mobile devices and at enhanced user interactivity. The new website displays significantly more content than previously, and the Commission has plans to further revitalise the site by adding popular electronic calculators such as the molecular weight uncertainty calculator, the isotopic pattern calculator and other graphical data displays. The Commission has set-up a members-only forum on its site ([ciaaw.org/forum](http://ciaaw.org/forum)) and a members-only document sharing platform similar to *Dropbox* ([ciaaw.org/documents](http://ciaaw.org/documents)). Division members are welcome to request access to the [ciaaw.org](http://ciaaw.org) (please contact the Secretary of CIAAW).

## 3. Isotope reference materials manuscript

Following the 2013 CIAAW meeting, the project 2009-027-1-200 was completed with publication “Assessment of international reference materials for isotope-ratio analysis” in *Pure and Applied Chemistry* (PAC). Currently, this manuscript is the most-downloaded article in PAC according to [DeGruyter.com](http://DeGruyter.com). The impact and the quality of this work is also evident from the fact that this manuscript has been officially recognized by the Consultative Committee on the Amount of Substance (CCQM) of the International Bureau of Weights and Measures (BIPM) as definite list of international isotope references during the 20<sup>th</sup> meeting of the CCQM in April 2014.

## 4. Liaison with BIPM-JCGM

Following the 2009 CIAAW meeting in Vienna, a request was sent to the Joint Committee for Guides in Metrology (JCGM) of BIPM for advice on the uncertainty evaluation of standard atomic weights. A reply was received in June-2013 and, subsequently, a IUPAC Project was launched during the 2013 IUPAC General Assembly. This project aims to produce formal guidelines on the said matter. In particular, this project will provide much needed clarity on the matter of interpreting atomic weights – an issue that became apparent only after the introduction of the interval notation. The Task Group met in June 2014 (Delft, Netherlands) under the Chairmanship of Dr. Adriaan van der Veen. Two reports are well-underway, both to be published in PAC: (1) IUPAC Recommendation on the use of atomic weights and (2) the accompanying IUPAC Technical Report with in-depth technical discussions.

## 5. Liaison with ICTNS

CIAAW is involved in the IUPAC Project on the redefinition of the mole through its Chairman. In June 2014, the Task Group has sent out letters to all IUPAC NAOs to request formal opinion on the redefinition of the mole (with consultation of ICTNS, IUPAC

Secretariat, and the Secretary General). The Task Group is meeting in July and expects to have the draft manuscript by the end of 2014.

## 6. Core activities

The “Atomic Weights 2013” report (TSAW-2013) is well-underway and it will be aligned with the upcoming JCGM-CIAAW guidelines. In addition, the Commission is nearing completion of the Isotopic Composition of Elements 2013” (TICE-2013) report. The latter has been revised and updated extensively from the previous TICE-2009 report. In particular, care has been taken to ensure the compatibility between the standard atomic weights and the corresponding isotopic compositions, especially when it comes to the uncertainties.

Currently, the Commission is undergoing research for new and active prospective members to ensure the continuity. In January 2014, the Commission has adopted a new logo as shown below. Also, an informal logotype is used as shown below.



CIAAW Logo



Informal logotype of CIAAW

## 7. Project updates

Project 2009-023-1-200 (Wieser)

No update available. CIAAW would like to request a no-cost extension of the project deadline and ensure the completion of the project during the next CIAAW meeting.

Project 2009-026-2-200 (Berglund)

Due to the inactivity of key Task Group members, with the consultation of the Current Chairman, CIAAW would like to request (1) to change the Chairmanship to J. Meija, (2) remove R. Kessel from the Task Group, and (3) include T. Prohaska in the Task Group. The Commission has discussed the project and is prepared to deliver the project by the next Commission meeting. CIAAW would also like to request a no-cost extension of the project deadline.

Project 2009-027-1-200 (Brand)

The project is near completion. The PAC publication “Assessment of international reference materials for isotope-ratio analysis” has been published. The Task Group Members are meeting in September 2014 at the IAEA (Vienna) for closing of the project.

Project 2011-026-1-200 (Wieser)

No update available

Project 2011-027-1-200 (Schoenberg)

Production of TICE-2013 is well-underway and the project is expected to be completed shortly.

Project 2011-028-1-200 (Zhu)

No update available due to the problems in communication.

Project 2011-040-2-200 (Brand)

The project has been delayed to ensure concerted efforts with the Project 2013-032-1-200. Together with BIPM and JCGM, work is now well-underway to produce manuscript by the end of 2014.

Project 2013-032-1-200 (van der Veen)

See “4. Liaison with BIPM-JCGM”.

### **8. New CIAAW projects**

Project 2014-016-1 (Prohaska) under review by IUPAC

Project 2014-002-1 (Groening) under review by IUPAC

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July-10, 2014

## Appendix 6

### Interdivisional Subcommittee on Materials Chemistry (ISMC)

(Report of Milan Drábik)

Chair of the Committee, Chris Ober, has asked the statements of the chair and representatives of our Division (E-mailed correspondence on April 2014), on the following items related the co-sponsorship by Division II on the project on [Terminology of Nanomaterials and Nanotechnology in Polymer Science](#), specifically:

- 1) Have a project that ISMC can claim as an interdivisional project.
- 2) Get input from Division II since you are experts on nanochemistry.
- 3) If you agree, then we would ask the title to be changed from ..... Polymer Science to .....Materials Chemistry.

The chair of ISMC has expressed the hope that division II can co-sponsor and suggest people to be added to the project.

The replies have comprised: The topics will be put in the Agenda of the off-year meeting of Division II, and suggest:

- a. To agree with the change proposed in item 3).
- b. Minutes from Istanbul list that Milan Drabik will join in **ISMC**, and assuming also young observer Brian Korgel had shown interest to join.
- c. Milan Drabik i) confirms interest to join both the ISMC, and also the mentioned project, ii) agrees and supports the change of the name and scope of project, iii) hopes to bring a proper input to the project in due time.

Chair of the ISMC, Chris Ober, replied (in April) that he is glad and accepts that Milan Drabik is willing to take part. In the mean-time Chris Ober is silent.

## Appendix 7

### Interdivisional Committee on Terminology, Nomenclature, and Symbols (ICTNS)

(Report of Milan Drábik)

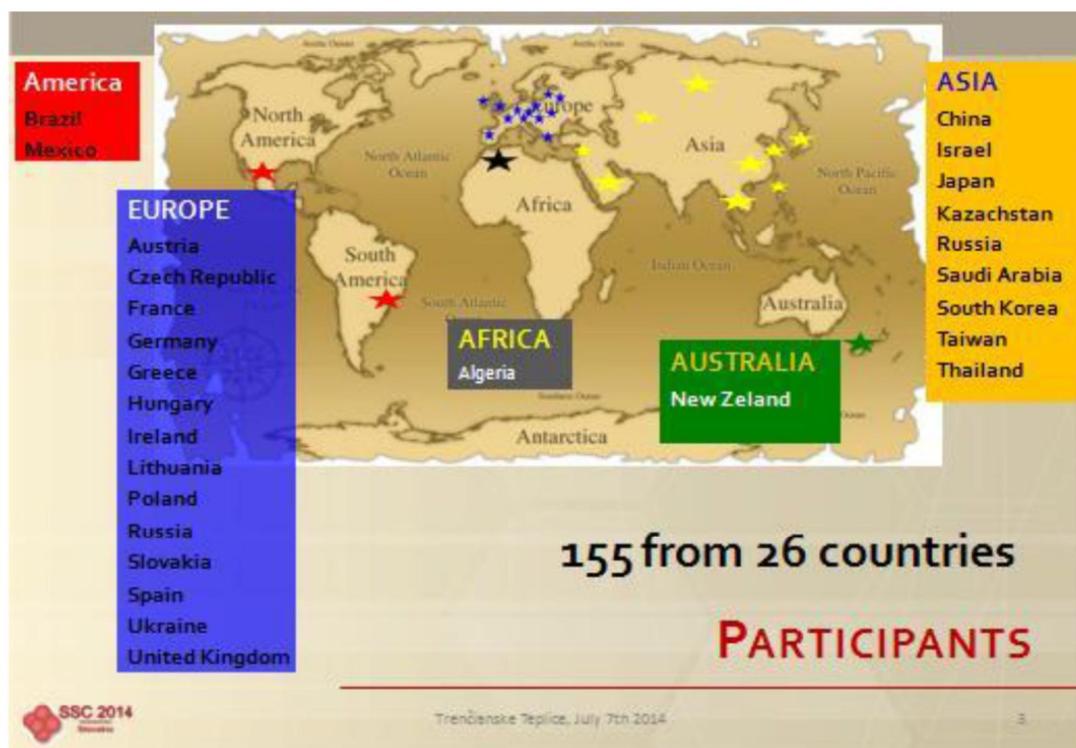
Milan Drábik has received early this year the letters appointing him as the Division Representative for the period 2014 – 2015 and the Associate member for the period 2014 – 2017 of the ICTNS.

As a member of ICTNS I have been invited to review the manuscripts:

- a) **ID PAC-REC-14-02-11 entitled "Terminology on carrier, specific activity, and purities in nuclear and radiochemistry, radioanalytical and radiopharmaceutical chemistry" with Prof. Bonardi as contact author** has been submitted to Pure and Applied Chemistry. This is a Provisional Recommendation that is now available for Public Comment.  
The review basically states: The recommended glossary of terminology on carrier, specific activity, and purities in nuclear and radiochemistry, radioanalytical and radiopharmaceutical chemistry as presented in this proposed Provisional Recommendation will be a valued item of large and practical use within the community of chemists worldwide. Approximately more than half of the terms of glossary have appeared in none of the previous sources. This indicates, at least to a degree, the vitality of developments in the application of nuclear methods to problems of chemical analysis. Both sentences are the statements justified by authors. Related referee's comment & suggestion has been as follows: It might be a helpful guide for readers if authors would distinguish (in any graphical mode) already that terms which "...have appeared in none of the previous sources ...". This change, if done in the manuscript, will make the paper / Provisional Recommendation more "reader-friendly".
- b) **ID PAC-REC-14-06-10 entitled "Nomenclature and graphic representations for chemically modified polymers (IUPAC Provisional Recommendation)" with Prof. Jones as contact author** has been submitted to Pure and Applied Chemistry. This is a Provisional Recommendation that is now available for public comment (invitation received on July 18<sup>th</sup>). Review on this invitation will be completed during July/August.



No. of participants: 155 from 26 countries.



No. of lectures: **69**, of it 5 plenary lectures and 11 key-note lectures.

No. of posters: **99**, of it **25 posters in poster competition (IUPAC sponsored)**. Four young participants / authors (from **Lithuania, United Kingdom, Czech Republic/India, Austria/Slovakia**) received IUPAC Poster Prize Certificate.

Outcomes with the input to the broader audience:

- a) **Special issue of PAC**, with Milan Drabik as Conference Editor:
  - Will comprise papers based on plenary lectures and key-note lectures.
  - Awardees of IUPAC Poster Prize Certificate will be also invited by scientific editor of PAC to contribute to the special issue of PAC.
  
- b) Possible IUPAC project: **Magnetic Information File for Magnetochemistry**, key persons in this stage: prof. Roman Boca, Slovak University of Technology, Bratislava, Slovakia; prof. Javier Garcia Martinez, University Alicante, Spain.

Next in the series: **12<sup>th</sup> Conference on Solid State Chemistry**, will be held in **Czech Republic, in 2016**.

IUPAC Division II - Inorganic Chemistry  
Review of Projects

Dan Rabinovich

Department of Chemistry  
The University of North Carolina at Charlotte, USA



IUPAC Division II meeting, Singapore

25 July 2014

## Outline

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- **Completed** Projects
- Status Report on **Active** Projects (*Continuing and New*)
- Update on **Pending** Proposals: *Peer-Reviewed* (Awaiting Funding)
- Update on **Pending** Proposals: Undergoing Peer-Review
- Update on Proposals in **Preparation**

## Completed Projects

(September 2013 – July 2014)

No projects were *completed*  
during this period

Status Report on **Active** Projects

- **2008-040-1-200**
- TGC: Pavel Karen (University of Oslo)
- TG: McArdle, Takats & Tatsumi
- [Towards a comprehensive definition of oxidation state](#)
- Budget: USD 4,200; spent: USD 0; **balance: USD 4,200.**
- **Div. II monitor: Holden**
- **Updates:**

#### September 2011

The experimental part of the project is finished (the research, analysis, data gathering, calculations, and discussions of about 100 examples among 3 task group members). The write-up of the Technical Report (TR) is currently almost complete and being refined. Write-up of a Recommendation will be started soon. Write-up of a pedagogical summary for *Journal of Chemical Education* will be commenced soon.

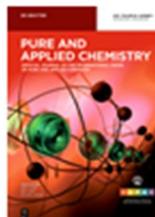
#### June 2013

The intended new TR sections were written and the TR manuscript was published on April 24 at the IUPAC discussion forum. Some aspects were discussed with two division members and the Division VIII Chair, R. Hartshorn. On May 31, the TR manuscript was submitted to PAC. A no-cost extension was requested on 6 June 2013 (new expected end date: 1 March 2014).

(cont...)

#### March 2014

A revised manuscript of the Technical Report was submitted to PAC on 24 September 2013. On 7 January 2014 the manuscript was accepted for publication and is currently *in press* [to be published probably in volume 86, issue no. 4, April 2014].



#### June 2014

Technical Report published (*Pure Appl. Chem.* **2014**, *86*, 1017).

DE GRUYTER	DOI 10.1515/pac-2013-0505	Pure Appl. Chem., 2014, 86(6): 1017–1081
<b>IUPAC Technical Report</b>		
Pavel Karen*, Patrick McArdle and Josef Takats		
<b>Toward a comprehensive definition of oxidation state (IUPAC Technical Report)</b>		

Planned end date: 31 December 2014

- **2009-023-1-200**
- TGC: Michael Wieser (U. of Calgary)
- TG: de Laeter, Hirata & Schönberg
- Evaluation of radiogenic abundance variations in selected elements
- Budget: USD 8,500; spent: USD 3,340; **balance: USD 5,160.**
- Div. II monitor: **Loss**
- Updates:

**September 8, 2012:**

The isotopic abundance variations of the radiogenic elements Re, Os, Rb, Sr, K, Nd, Sm, Hf, Lu, and Ar are being evaluated to determine the variability of the atomic weight. These data will be incorporated in the Commission's Technical Report of the Table of Standard Atomic Weights. The evaluation of Ar is complete and was approved by the Commission at the Calgary meeting in 2011 for incorporation in the Table of Standard Atomic Weights 2011, to be published this year. The reports on the remaining elements are still in progress and will be presented to the Commission for approval at the upcoming Commission meeting in 2013.

(cont...)

**July 2014 (Juris Meija & Thomas Prohaska, CIAAW):**

Commission on Isotopic Abundances and Atomic Weights (CIAAW) will request a no-cost extension and strive to complete the project during its next annual meeting.

**24 July 2014 (Michael Wieser, TGC):**

J.K. Böhmke has authored a report on Ar. The manuscript was submitted to PAC and is *in press*. Literature reviews are complete for Sr and a report is in preparation. Literature reviews for the remaining elements (Re, Os, Rb, K, Nd, Sm, Hf, and Lu) are in progress. The goal is to have this work complete for the next CIAAW meeting and incorporate it in TSAW2015.

Planned end date: **31 December 2013**

- **2009-026-2-200**
- TGC: Michael Berglund (European Commission – DG Joint Research Centre)
- TG: Böhlke, Gröning, Kessel, Loss & Wieser
- [Online evaluated isotope ratio database for user communities \(2011-2014\)](#)
- Budget: USD 6,000; spent: USD 0; **balance: USD 6,000.**
- **Div. II monitor: Loss**
- **Updates:**

**August 2013 (Bob Loss):**

The TGC and a TG member are no longer involved in the project; alternative contributors are currently being sought and will hopefully allow completion of the project in a timely fashion.

**July 2014 (Juris Meija & Thomas Prohaska, CIAAW):**

Due to the inactivity of key TG members, and in consultation with the current TGC, the CIAAW would like to request: (1) change the Chairmanship to J. Meija, (2) remove R. Kessel from the TG, and (3) add T. Prohaska in the TG. The CIAAW has discussed the project and is prepared to deliver the project by its next annual meeting. It would also like to request a no-cost extension of the project deadline.

**Planned end date: 1 April 2014**

- **2009-027-1-200**
- TGC: Willi Brand (Max Planck Institute for Biogeochemistry)
- TG: Böhlke, Coplen, Brand, Gonfiantini, Gröning, Qi & Vocke
- [Assessment of stable isotopic reference and inter-comparison materials](#)
- Budget: USD 9,600; spent: USD 6,149; **balance: USD 3,451.**
- **Div. II monitor: Loss**
- **Updates:**

September 2010 - project announcement published in *Chem. Int. Sep-Oct*, p. 23

**8 August 2013 (Juris Meija):**

Draft manuscript was circulated to all members of the Subcommittee in July 2013. Task group members met during the CIAAW meeting in Aug. 2013 and made considerable progress towards the completion of the project. Completion of the project and publication in PAC is expected shortly.

**20 March 2014:**

Technical report published:  
Brand, W. A.; Coplen, T. B.; Vogl, J.; Rosner, M.; Prohaska, T.  
*Pure Appl. Chem.* **2014**, *86*, 425-467.



(cont...)

**16 May 2014:**

Request from TGC for a no-cost extension to pay the cost of attendance of Haping Qi (USGS) to a meeting on new stable isotope reference materials at the IAEA headquarters in September, 2014.

**July 2014 (Juris Meija & Thomas Prohaska, CIAAW):**

The TG is meeting in September 2014 at the IAEA (Vienna) for closing of the project.

Planned end date: 30 September 2014

- **2009-045-1-200**
- TGC: Hitoshi Ishida (Kitasato University)
- TG: Beeby, Bunzli, Campagna, De Cola, Ford, Gordon, Hasegawa, Hasegawa, Katoh, Keene, McCusker, Nozaki, Sakai, Tobita, Vlcek & Yam
- [Guidelines for measurement of luminescence spectra and quantum yields of inorganic compounds, metal complexes and materials](#)
- Budget: USD 8,000; spent: USD 0; **balance: USD 8,000.**
- **Div. II monitor: Sakai**
- **Updates:**

July 2010 - project announcement published in *Chem. Int.* Jul-Aug, p. 21

- A draft of the report has not been prepared yet but hopefully will within the next 2 months (Beeby, Bunzli & Ishida).
- Workshop at an international photochemistry conference such as the International Symposium on the Photochemistry and Photophysics of Coordination Compounds (ISPPCC) is being planned.

(cont...)

- Updates:

[Ishida e-mail message \(9 August 2013\):](#)

**Re: IUPAC Div II project 2009-045-1-200**

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ishida@sci.kitasato-u.ac.jp

To: Rabinovich, Dan  
Cc: ishida@sci.kitasato-u.ac.jp

Dear Don:

I am so sorry that I have not sent any report and updated information. We actually had stopped the project work, but we have recently discussed on the work and we again recognize it as an important work for the inorganic chemists who measure the emission spectra and quantum yields of inorganic compounds. Actually, I was consulted by such inorganic chemists in the USA, and I and my coworker measured their samples.

I hope we will continue the project, or restart it in near future. Anyway, I will report the update informational.

Best regards,  
Hitoshi

(cont...)

- Updates:

[Ishida e-mail message \(11 March 2014\):](#)

- A draft of the report on guidelines for the measurement of luminescent spectra and quantum yields has been written by Beeby, Bunzli & Ishida and will be circulated among Task Group members in April 2014, then forwarded to all the Division II members.
- Request to hold workshop at the PACIFICHEM 2015 conference (Dec. 2015) was declined and TGC was urged to complete submission of manuscript as soon as possible (by July 1<sup>st</sup>?).

[July 2014 \(Ken Sakai\):](#)

The manuscript has been completed and will soon be submitted to *Pure and Applied Chemistry*. One (last?) no-cost extension will be requested soon.

Start date: 1 May 2010

Planned end date: 31 December 2011

- **2009-046-2-200**
- TGC: Jan Kaiser (University of East Anglia)
- TG: Angert, Berquist, Brand, Ono, Röckmann & Savarino
- Terminology and definition of quantities related to the isotope distribution in elements with more than two stable isotopes
- Budget: USD 6,000; spent: USD 188; **balance: USD 5,812.**
- **Div. II monitor: Rabinovich**
- **Updates:**

September 2010 - project announcement published in [Chem. Int. Sep-Oct](#), p. 23

- Poster presented at the General Assembly of the European Geosciences Union in Vienna (April 2012).
- Talk on the project presented to a meeting of Ph.D. students and supervisors at the Marie Curie Initial Training Network (INTRMIF).

**11 August 2013 (Dan Rabinovich):**

The TG will have another informal meeting during the Goldschmidt Conference in Florence (25-30 August 2013) with the goal of agreeing on a definition of the triple isotope excess.

(cont...)

**24 July 2014 (Dan Rabinovich):**

The TGC gave a presentation on the project at the European Geosciences Union (EGU) meeting in Vienna this year, and continued to discuss our draft definition with colleagues and TG members at an isotope meeting in Tokyo in July 2014. A no-cost extension will be requested in due course.

Start date: 1 July 2010  
Planned end date: 30 June 2014

- **2011-026-1-200**
- TGC: Michael Wieser (U. of Calgary)
- TG: Schönberg, Zhu, Gröning & Meija
- [Full calibration of a new molybdenum isotopic reference material](#)
- Requested budget: USD 10,200; spent: USD 0; **balance: USD 10,200.**
- **Div. II monitor: Loss**
- **Updates:**

**24 July 2014** (*Michael Wieser, TGC*):

An isotopic composition and atomic weight analysis of Mo in the NIST standard solution SRM 3134 was completed and published in the *Journal of Analytical Atomic Spectrometry* (DOI: 10.1039/C3JA50164G). This report was evaluated by the CIAAW in 2013 and is the basis for the new recommended atomic weight of Mo. In addition, the relative isotopic composition of a laboratory Mo solution and Johnson-Matthey metal rod were also reported. Work is now ongoing to incorporate similar determinations in two additional laboratories, as described in the project proposal.

Start date: 1 December 2012  
Planned end date: 31 December 2015

- **2011-027-1-200**
- TGC: Ronny Schönberg (Institute for Geosciences, U. of Tübingen)
- TG: Böhlke, Brand, Berglund, Coplen, De Bièvre, Ding, Gröning, Hirata, Holden, Loss, Meija, Prohaska, Singleton, Walczyk, Wieser, Yoneda & Zhu
- [Evaluated published isotope ratio data \(2011-2013\)](#)
- Budget: USD 19,400 (USD 6,695 from Division II; USD 12,705 from Project Committee); spent: USD 10,130; **balance: USD 9,270.**
- **Div. II monitor: Walczyk**
- **Updates:**

**8 August 2013** (*Juris Meija*):

The Subcommittee on Isotopic Abundance Measurements (SIAM) met in Gebze, Turkey, on August 4-5, and evaluated published isotope ratio data. SIAM made the recommendations to the CIAAW, which were accepted during the 2013 CIAAW meeting. The IUPAC Table of Isotopic Composition of the Elements 2013 will be published in *Pure and Applied Chemistry* in 2014.

**July 2014** (*Juris Meija & Thomas Prohaska, CIAAW*):

Production of TICE-2013 is well-underway and the project is expected to be completed shortly; a no-cost extension will be requested.

Start date: 3 January 2012  
Planned end date: 31 December 2013

- **2011-028-1-200**
- TGC: XiangKun Zhu (Chinese Academy of Geological Sciences)
- TG: Holden, Hirata & Prohaska
- Evaluation of published lead isotopic data (1950-2013) for a new standard atomic weight of lead
- Budget: USD 6,400; spent: USD 0; **balance: USD 6,400.**
- **Div. II monitor: Ding**
- **Updates:**

**8 August 2013** (*Juris Meija*):

The task group chairman presented the draft report to the CIAAW members during the 2011 Calgary meeting. Significant progress has been made in this project and the follow-up progress report was expected during the 2013 CIAAW meeting, however, the task group Chairman was unable to attend the meeting due to visa problems.

**July 2014** (*Juris Meija & Thomas Prohaska, CIAAW*):

No updates available due to communication problems. Division II monitor (Tipping Ding) will contact TGC for updates and to ask him to request a no-cost extension.

Start date: 1 April 2012

Planned end date: **1 Mar 2014**

- **2011-040-2-200**
- TGC: Willi A. Brand (Max Planck Institute for Biogeochemistry)
- TG: Meija, Milton & Wieser
- Development a procedure for using intervals instead of fixed values for atomic weights; an educational exercise
- Budget: USD 7,400; spent: USD 1,300; **balance: USD 6,100.**
- **Div. II monitor: Holden**
- **Updates:**

**8 August 2013** (*Juris Meija*):

The task group members have been working to solicit the wider opinion of the scientific community, in particular, the opinion of several ISO Technical Committees, and that of the JCGM WG-1 (BIPM). Position paper will be formulated after careful consideration of the presented advice and opinions.

**July 2014** (*Juris Meija & Thomas Prohaska, CIAAW*):

The project has been delayed to ensure concerted efforts with Project 2013-032-1-200 (TGC: van der Veen). Together with BIPM and JCGM, work is well-underway to generate a manuscript by the end of 2014; a no-cost extension will be requested.

Start date: 1 April 2012

Planned end date: **1 Mar 2014**

- **2012-036-2-200**
- TGC: Igor M. Villa (Institut für Geologie, Bern, Switzerland)
- TG: De Bievre, Holden & Renne
- [Recommendations for Isotope Data in the Geosciences II](#)
- Focus on four nuclides used in geochronology:  $^{40}\text{K}$ ,  $^{87}\text{Rb}$ ,  $^{176}\text{Lu}$  and  $^{187}\text{Re}$ .
- Requested budget: USD 9,000
- **Div. II monitor:** Walczyk
- **Updates:**



**September 2013** (*Fabienne Meyers, IUPAC*):

The proposal gained support from Divisions II and V and from the Project Committee and was approved shortly thereafter.

*No updates to report*

Submitted: 12 July 2013  
 Start date: 1 October 2013  
 Planned end date: 31 December 2016

- **2012-044-1-100**
- TGC: Pierangelo Metrangolo & Giuseppe Resnati (NFMLab, Milano)
- TG: Aakeröy, Gao, Barbour, Nangia, Ogawa, Öhrström, Guru Row, Rogers, Zaworotko, Bernstein, Hosseini, Seddon, Desiraju, Bacchi, Rissanen & Reutzel-Edens
- [Basic Terminology of Crystal Engineering](#)
- **Div. II monitor:** Öhrström
- **Updates:**
  - Original proposal submitted to Div. II, III & VIII
  - Approved and funded by **Div. I** (USD 10,000)
  - Div. II is interested in contributing to the project [*action item from Istanbul meeting*]



*No updates to report*

Submitted: 1 November 2012  
 Start date: 1 February 2013  
 Planned end date: 31 December 2014

- **2012-045-1-800**
- TGC: Michael A. Beckett (Bangor University, UK)
- TG: Brellochs, Chizhevsky, Damhus, Kennedy, Rabinovich, Venas & Yerim
- [Nomenclature for Polyhedral Boranes and Related Compounds](#)
- Budget: USD 7,205; spent: USD 3,009; **balance: USD 4,196.**
- **Div. II monitor: Rabinovich**
- **Updates:**
  - Original proposal submitted to Div. VIII (Chemical Nomenclature and Structure Representation)
  - USD 1,000 contribution from Div. II [31 January 2013]
  - Funded by **Project Committee**
  - Dan Rabinovich (USA) representative from Div. II and TG member



**April-May 2014 (Beckett, TGC):**

A preliminary Technical Report has been drafted and TG members have been charged with investigating the more challenging aspects of the project. The TG will will during the Imeboron 15 meeting in Prague (24-28 August 2014) and the TGC will present a poster with highlights of the project.

Submitted: 5 November 2012  
Start date: 1 February 2013  
Planned end date: 31 December 2015

- **2012-046-2-800**
- TGC: Hinnerk Rey (Elsevier Information Systems GmbH, Frankfurt am Main, Germany)
- TG: Druckenbrodt, Hartshorn, Damhus, Schenk & Sitzmann
- [Handling of Inorganic compounds for InChI V2](#)
- Requested budget: USD 10,000; approved for USD 5,000
- **Div. II monitor: Mathur**
- **Updates:**
  - Original proposal submitted to Div. VIII (Chemical Nomenclature and Structure Representation)
  - Recommended for funding by the **Project Committee**
  - Sanjay Mathur (Köln) representative from Div. II and TG member
  - \$1,500 co-funding from Div. II



*No updates to report*

Submitted: 15 November 2012  
Start date: 1 March 2013  
Planned end date: 30 June 2015

- **2013-030-1-800**
- TGC: Alan T. Hutton (U. of Cape Town)
- TG: Constable, Laitinen, Nordlander, Powell & Rabinovich
- **Nomenclature for Metallacycles containing Transition Metals**
- Budget: USD 13,720; spent: USD 1,520; **balance: USD 12,200.**
- **Div. II monitor: Rabinovich**
- Updates:
  - Original proposal submitted to Div. VIII (Chemical Nomenclature and Structure Representation)
  - Funded by **Project Committee**
  - Dan Rabinovich (USA) representative from Div. II and TG member
  - Contribution of USD 1,000 from Div. II



**June 2014 (Hutton, TGC):**

TG will meet and discuss the project during the Div. VIII "off-year" meeting, to take place in Bangor, Wales, UK, on 3-4 August 2014.

Submitted: 5 June 2013  
 Start date: 1 July 2013  
 Planned end date: 31 December 2015

- **2013-032-1-200**
- TGC: Adriaan van der Veen (VSL = Dutch Metrology Institute)
- TG: Possolo, Meija & Hibbert
- **Guidelines for the Derivation of Values and Uncertainties from Standard Atomic Weight Intervals**
- Requested budget: USD 5,000
- **Div. II monitor: Wieser**
- Updates:
  - Original proposal submitted to **Div. II**
  - Complementary to 2011-040-2-200 (TGC = W. A. Brand)
  - Interest from Commission I.1 [Kaoru Yamanouchi]
  - 4 favorable reviews [Rev1, V, VIII, Rev2] & 1 unfavorable review [Rev3]
  - No interest from CCE [Mustafa Sözbilir, 8 July 2013]



*No updates to report*

Submitted: 1 July 2013  
 Start date: 1 September 2013  
 Planned end date: 1 October 2015

- **2013-037-1-200**
- TGC: Christopher Ober (Cornell University, Ithaca, NY, USA)
- TG: García-Martínez, Jones, Mathur, Wilson & Zharov
- [Creating Educational Website for Materials Chemistry](#)
- Requested budget: USD 6,000 (\$1,000 from Div. II)
- **Div. II monitor: Mathur**
- **Updates:**
  - Original proposal submitted to Div. I, II & IV
  - Very good internal reviews.
  - External reviews needed/required.
  - 25-July-2014 (*Singapore meeting*): project was been funded.



No additional updates to report

Submitted: 22 July 2013  
 Start date: 1 October 2013  
 Planned end date: 1 October 2016

- **2014-001-2-200**
- TGC: Lars Öhrström (Chalmers U. of Technology, Sweden)
- TG: O'Keefe, Bourne, Proserpio, Blatov, Lah, Eon, García-Martínez, Batten, Hyde & Wiggin
- [Terminology Guidelines and Database Issues for Topology Representations in Coordination Networks, Metal-Organic Frameworks and Other Crystalline Materials](#)
- Requested budget: USD 9,000
- **Div. II monitor: Sakai**
- **Updates:**
  - 25-July-2014 (*Singapore meeting*): project was been funded.
  - Funding: USD 2,000 ea. from Divisions I (Physical and Biophysical Chemistry) and VIII (Chemical Nomenclature and Structure Representation); USD 5,000 from Division II.
  - USD 6,000 also provided by the Samara Center for Theoretical Material Science.



Submitted: 2 February 2014  
 Start date: 12 June 2014  
 Planned end date: 31 December 2016

Update on **Pending** Proposals:  
Peer-Reviewed (Awaiting Funding)

- **2014-002-1-xxx**
- TGC: Manfred Gröning (IAEA, Vienna, Austria)
- TG: Brand, Vogl, Prohaska, Coplen, Wieser, Irrgeher & Wang
- *Assessment of Stable Isotopic Reference Materials [Follow-up to project 2009-027-1-200 (TGC: Willi Brand, CIAAW)].*
- Requested budget: USD 7,100
- Div. II monitor: Loss
- Updates:
  - External reviews collected.
  - Favorable reviews from Divisions II, V (Analytical) and VI (Chemistry and the Environment)
  - Final decision pending (with Project Committee as of 20 June 2014)

*Project Approval Pending*

Submitted: 10 January 2014  
Start date: xx yyyy zzzz  
Planned end date: ???

- **2014-016-1-xxx**
- TGC: Thomas Prohaska (University of Natural Resources and Life Sciences, Vienna)
- TG: Irrgeher, Coplen, Wieser & Vogl
- Generation of a web-based platform for the creation and download of source-specific, tailor-made SNIF (Subcommittee on Natural Isotopic Fractionation) diagrams for selected elements (B, Cd, Mo, Se, Sr, U) after compilation of data published on the isotopic composition of natural and synthetic materials via crowdsourcing”
- Requested budget: USD 9,150
- Div. II monitor: ???
- Updates:
  - Original proposal submitted to Div. II
  - 7 favorable reviews received from Div. II and Div. V (Anal. Chemistry)
  - TGC provided detailed response to minor issues raised by reviewers

*Project Approval Pending*

Submitted: 13 May 2014  
 Start date: xx yyyy zzzz  
 Planned end date: ???

- **2014-024-1-xxx**
- TGC: Norman E. Holden (Brookhaven National Laboratory) & Peter Mahaffy (King's University College, Edmonton, Alberta, Canada)
- TG: Coplen, Walczyk, Wieser, Martin, Apotheker, Hoffman & Tarbox
- Development and Global Dissemination of an IUPAC Interactive Electronic Isotopic Periodic Table and Supporting Resources for the Education Community
- Requested budget: USD 17,920
- Div. II monitor: Rabinovich
- Updates:
  - Proposal submitted to Div. II and CCE
  - Revised version of 2012-016-1
  - Funding requests: \$4K (Div. II), \$4K (CCE) & \$9,920 (Project Comm)
  - Submitted for comments to Div. II (8 July 2014)
  - \$4,000 approved by CCE (Mei-Hung Chiu, 8 July 2014)

*Project Approval Pending*

Submitted: 27 June 2014  
 Start date: xx yyyy zzzz  
 Planned end date: ???

Update on **Pending** Proposals:  
Undergoing Peer-Review

- 2009-028-1-xxx
- TGC: Tiping Ding (Chinese Academy of Geological Sciences)
- TG: Gonfiantini, Zhu, Brand & Groening
- [Compilation and evaluation of isotopic fractionation factors for environmental investigations.](#)
- Requested budget: USD 6,000
- [Div. II monitor: ?](#)
- Updates:
  - Status unknown.
  - Project not listed in the latest Expense Report (17 June 2014).
  - Ty Coplen's Review of Projects 2011:  
The Secretariat received no reviews on this project proposal. The project proposal may need to be rewritten. It certainly needs a revised list of potential reviewers.
- 25-July-2014 (*Singapore meeting*): it was agreed that the proposal will be withdrawn, updated, and resubmitted.

Submitted: 30 July 2009

Start date: xx yyyy zzzz

Planned end date: ???

- **2012-016-1-xxx**
- TGC: Norman Holden (Brookhaven National Laboratory)
- TG: Coplen, Yoneda, Böhlke, Walczyk, Wieser, Mahaffy, Tarbox & Singleton
- **Development of an Isotopic Periodic Table for the Educational Community** [extension to project 2007-038-3-200 (TGC: Holden), which has been completed].
- Requested budget: USD 20,650
- Div. II monitor: ?
- Updates:
  - External reviews collected.
  - Final decision pending. *Proposal under review*
- 25-July-2014 (Singapore meeting): proposal was withdrawn and resubmitted as project 2014-024-1-xxx, which is now pending final approval (see above).

Submitted: 21 January 2008

Start date: xx-yyyy-zzzz

Planned end date: ???

- **2013-056-1-xxx**
- TGC: Elisabeth Mansfield (NIST, Boulder, Colorado, USA)
- TG: Suarez-Martínez, Meyer, Vohlídal & Yerin
- **Nomenclature of Carbon Nanotubes and Related Substances**
- Requested budget: USD 14,000
- Div. II monitor: ?
- Updates:
  - For consideration by Divisions II, IV and VIII.
  - External reviews collected.
  - Final decision pending.

*Proposal under review*

Submitted: 19 November 2013

Start date: xx-yyyy-zzzz

Planned end date: ???

## Update on Proposals in **Preparation**

- **2012-047-1-xxx**
- TGC: Paul Karol (Carnegie Mellon U.)
- TG: ???
- ?????
- Requested budget: USD xxxx
- Div. II monitor: ???
- Updates:
  - Proposal in preparation, to be submitted to Div. II

*Proposal in preparation (?)*

Submitted: xx yyyy zzzz  
Start date: xx yyyy zzzz  
Planned end date: 1-July-2014 (?)

- **2013-xxx-1-xxx**
- TGC: Norman Holden (Brookhaven National Laboratory)
- TG: Coplen, de Bièvre & Wieser
- **Assessment of Fundamental Understanding of Isotopic Abundances and Atomic Weights of the Chemical Elements (2014—2015)**
- Requested budget: USD 5,000
- **Div. II monitor: ???**
- **Updates:**
  - Proposal in preparation, to be submitted to Div. II

*Proposal in preparation (?)*

Submitted: xx yyyy zzzz  
 Start date: xx yyyy zzzz  
 Planned end date: ???

- **2014-xxx-1-xxx**
- TGC (?): Christopher Ober (Cornell University, Ithaca, NY, USA)
- TG (?): xxxx
- **Terminology of Nanomaterials and Nanotechnology in Materials Chemistry**
- Requested budget: USD xxxx
- **Div. II monitor: ???**
- **Updates:**
  - To be submitted to Divisions II and V (?)

*Proposal in preparation (?)*

Submitted: xx yyyy zzzz  
 Start date: xx yyyy zzzz  
 Planned end date: ???

- **2014-xxx-1-xxx**
- TGC (?): Roman Boca (Slovak University of Technology, Bratislava, Slovakia) and Javier García-Martínez (U. of Alicante)
- TG (?): Dunbar, Gómez-García, Clerac & Herchel
- [Magnetic Information File for Magnetochemistry](#)
- Requested budget: USD xxxx
- **Div. II monitor: ???**
- **Updates:**
  - To be submitted to Divisions II and V (?)

*Proposal in preparation (?)*

Submitted: xx yyyy zzzz  
 Start date: xx yyyy zzzz  
 Planned end date: ???

#### Summary: Project Expense vs. Budget

Through 17 June 2014	Actual	Budget	Budget Over/ (Under)	% of Budget	Planned End Date
<b>200-Inorganic</b>					
2007-038-3-200 Holden	11,000	11,000	-	100%	<b>31-Dec-2011</b>
2008-040-1-200 Karen	-	4,200	(4,200)	-	31-Dec-2014
2009-023-1-200 Wieser	3,340	8,500	(5,160)	39%	<b>31-Dec-2013</b>
2009-026-2-200 Berglund	-	6,000	(6,000)	-	<b>1-Apr-2014</b>
2009-027-1-200 Brand	6,149	9,600	(3,451)	64%	30-Sep-2014
2009-045-1-200 Ishida	-	8,000	(8,000)	0%	<b>31-Dec-2011</b>
2009-046-2-200 Kaiser	188	6,000	(5,812)	3%	30-Jun-2014
2011-026-1-200 Wieser	-	10,200	(10,200)	-	31-Dec-2015
2011-027-1-200 Schonberg	10,130	19,400	(9,270)	52%	<b>31-Dec-2013</b>
2011-028-1-200 Zhu	-	6,400	(6,400)	-	<b>1-Mar-2014</b>
2011-040-2-200 Brand	1,300	7,400	(6,100)	18%	<b>1-Mar-2014</b>
2012-036-2-200 Villa	-	9,000	(9,000)	-	31-Dec-2016
2012-047-1-200 Karol	-	-	-	-	1-Jul-2014
2013-032-1-200 van der Veen	-	5,000	(5,000)	-	1-Oct-2015
2013-037-1-200 Ober	-	6,000	(6,000)	-	1-Oct-2016
2014-001-2-200 Ohrstrom	-	9,000	(9,000)	-	31-Dec-2016

Completed projects (9/2013–7/2014): 0  
 Active projects: 18 (10 continuing, 8 new)

### Possible new projects of ISCM

(Report of Milan Drábik)

#### 1. (No? 2014-037-1, Chris Ober – leading person)

An option to claim an ongoing project of division V "Terminology of nanomaterials and nanotechnology in polymer science" as an interdivisional project and re-name it as follows Terminology of nanomaterials and nanotechnology in materials science.

Cf. relevant parts of the Report on ISMC.

Representatives of both divisions agreed the title to be changed from Terminology of nanomaterials and nanotechnology in polymer science to **Terminology of nanomaterials and nanotechnology in materials chemistry**.

Action needed: ?? to confirm this change, to put it in the official file of project, to modify the financial background (? to financially support also from the budget of division II, cf. Chris's suggestion)

#### 2. (under the discussion during SSC2014 conference, among the potential participants also, and in preparation, key persons see below )

An anticipated proposal of new IUPAC project (resulting from the discussions at / and following the SSC 2014 conference): **Magnetic Information File for Magnetochemistry**.

Key persons in this stage: prof. Roman Boca, Slovak University of Technology, Bratislava, Slovakia; prof. Javier Garcia Martinez, University Alicante, Spain.

Rationale: Magnetochemistry is a rapidly growing discipline with important impact to data storage and displaying technique. This discipline is supported by a massive application of several types of magnetometers/susceptometers that are used in data taking worldwide. However, the presentation of data lacks a standardization and the reader is not left to redo the data analysis since only a figure generated by the authors are usually at the disposal. Moreover, a lot of important circumstances are not deposited. This short paragraph is copied from *Inorganic Chemistry (Instruction for authors): Magnetic Measurements*: Fits of magnetic data such as  $\chi(T)$ ,  $\chi^{-1}(T)$ ,  $\chi T(T)$ ,  $\mu(T)$ ,  $M(H)$ , etc., to an analytical expression must include both the Hamiltonian from which the analytical expression is derived and the final analytical expression and fitting parameters. If the value of the exchange coupling constant - J, is given in the abstract the form of the Hamiltonian must also be included. The expressions may be included in the manuscript or, if long and complex, as Supporting Information; if the latter method is used, it should be noted as such in the "Supporting Information Available" paragraph at the end of the manuscript. In addition, how the sample was measured (in a gelatin capsule, Teflon capsule, etc.) and the diamagnetic correction for the sample holder, as well as the diamagnetic correction for the material, must be provided and the manner in which it was calculated (Pascal's constants) or measured stated.

This piece of information is far from being complete and still far from standardization. Therefore a group of scientists will apply for an IUPAC project "Magnetic Information File for Magnetochemistry" that could help in creating useful and almost complete information about the sample characteristic, magnetic data taking and magnetic data processing. As a result, a program generating the \*.mif file will be provided free of charge and the scientists could be encouraged to deposit such a filled file as Supplementary material. This will be an analogue of the \*.cif file that is generally accepted by the scientific community worldwide.

Tentative list of the project participants:

Prof. Dr. Kim Dunbar, Editor of Inorganic Chemistry, Texas A&M University (USA), [dunbar@chem.tamu.edu](mailto:dunbar@chem.tamu.edu)

Prof. Dr. Carlos J. Gómez-García, University of Valencia (Spain), [carlos.gomez@uv.es](mailto:carlos.gomez@uv.es)

Prof. Dr. Rodolphe Clerac, University Bordeaux (France), [clerac@crpp-bordeaux.cnrs.fr](mailto:clerac@crpp-bordeaux.cnrs.fr)

Assoc. Prof. Dr. Radovan Herchel, Palacky University, Olomouc (Czech Republic), [radovan.herchel@upol.cz](mailto:radovan.herchel@upol.cz)

Prof. Dr. Roman Boča, University of SS Cyril and Methodius in Trnava (Slovakia) and Slovak University of Technology in Bratislava, [roman.boca@stuba.sk](mailto:roman.boca@stuba.sk)