Editors Note: Below you will find the 2017 Newsletter; it was compiled thanks to your kindness to send material. Please keep sending your items, including pictures, or suggested topics for future issues, via email to ohrstrom@chalmers.se. Please circulate this newsletter to your NAO:s and other interested parties. Kindest regards, Lars Öhrström.

Division II Members 2016-2017

President: Reedijk, Jan; Vice President: Öhrström, Lars; Secretary: Leskelä, Markku;
Titular members: Loss, Robert, (Past President) Armelao, Lidia; Ding, Tiping, Karen, Pavel; Rabinovich, Daniel; Walczyk, Thomas; Wieser, Michael
Associate members: Drabik, Milan.; Sakai, Ken; Trendafilova, Natasha; Meesuk, Ladda; Abdul Aziz, Farina; Colón, Jorge
National representatives: Galamba Correia, João; Kalmykov, Stepan; Mathur, Sanjay; Kiliç, Adem; Hasegawa, Miki; Knauth, Philippe; Yoon, Kyung Byung; Diop, Mayoro; Darkwa, James; Leigh, Jeffery

Division II Subcommittees and Commissions currently in operation are the following:
Commission on Isotopic Abundance and Atomic Weights Chair Juris Mejia
Subcommittee on Isotopic Abundance Measurements
Stable Isotope Reference Material Assessment
Subcommittee on Natural Assessment of Fundamental Understanding of Isotopes
Interdivisional Subcommittee on Materials Chemistry Chair Vladimir Gubala

Sao Paolo GA & Division Meeting

The division meeting was slightly less attended than usual because some members didn’t have the freedom to travel due to departmental or family restrictions, and others experienced severe delays because of thunderstorms in Europe. Nevertheless, the division was busy and the minutes will be distributed shortly.

We noted continued fruitful collaborations with Division (VIII) Chemical Nomenclature and Structure Representation, and the Committee on Chemistry Education. We discussed the report from the Commission on Isotopic Abundances and Atomic Weights (CIAAW, http://ciaaw.org) and the the Interactive Periodic Table and the Periodic Table of Isotopes of the Elements website http://www.ciaaw.org/periodic-table-isotopes.htm.

Another important item on the agenda was the names and symbols of the four new elements, subsequently approved by the Council. The approval process may seem trivial, but is in fact highly delicate and the margin for errors is very low. This is the most publicly visible activity of the Union and both the DP and the VDP have spent some considerable time on this and related issues over the last two years.

During the Council meeting, division incoming vice president Javier Garcia Martinez lost the election for IUPAC president 2020 with the most narrow marginal possible. He was subsequently elected to serve in the Executive Committee by the Bureau. Also at the Council meeting, Ken Sakai was voted in as a member of the Bureau.

The Young Observer program during the GA is important for recruiting new talent to the Union. This year a poster session, where the divisions activities were presented, and a speed-dating session, were new successful items on the agenda. The Div. II activity poster, drafted by Daniel Rabinovich, is enclosed at the end of this newsletter.

The Young Observers from the USA share their experiences here: Young Observers Reflect on IUPAC-2017. Javier Vela attended the div II meeting.

Photos from the GA and the World Chemical Congress can be found here.
Scheduled 2018 Off-year Meeting of Division II.
The Division Committee is currently discussing a
meeting in Gaborone, Botswana 2-5 October 2018,
back to back with a one and a half-day symposium
on chemistry and IUPAC.

Project Progress & News
The division currently has around 25 active projects
A few highlights are mentioned here:
2015-039-2-200 The Constitution of Group 3 of
The Periodic Table This project will recommend
the composition of group 3 of the periodic table as
consisting either of Sc, Y, Lu and Lr, or Sc, Y, La
and Ac. Within this project, we have noted a
problem in the Gold Book that states “transition
element: An element whose atom has an
incomplete d sub-shell, or which can give rise to
cations with an incomplete d sub-shell.” However,
incomplete d sub-shells occur in the lanthanoids
and actinoids as well. Chair Eric Scerri.
2013-048-1-100 About the redefinition of the mole,
somewhat convoluted entitled: A critical review of
the proposed definitions of fundamental chemical
quantities and their impact on chemical
communities A Technical report is
available: https://doi.org/10.1515/pac-2016-0808;
Pure and Applied Chemistry 89(7), pp. 951-981
(2017). Juris Mejia has been div. II representative.
2008-040-1-200 Towards a comprehensive
definition of oxidation state has been completed.
The final stage was a comprehensive editing of the
Wikipedia entry, a very important work, as this
page is accessed on average 800 times a day!
Chair Pavel Karen.

New Projects
2017-014-2-200 IUPAC/IUPAP joint working group
to examine the 1991 criteria used to verify claims
for the discovery of new elements, falls under div. II
jurisdiction, but is composed of nuclear scientists.
Chair Sigurd Hofmann. Related to this, IUPAC and
IUPAP presidents, the IUPAC div II DP and VDP,
and The Commission on Nuclear Physics (C12),
chair, has worked on a document entitled
“IUPAC and IUPAP Procedures for Validating
Claims for the Discovery of New Elements and
Naming those Elements” that will subsequently be
published in PAC.’
2016-032-2-020 IUPAC’s role in developing
interdisciplinary/ collaborative work in the
chemistry community and beyond - the focus for
the 2017 WCLM, Chairs Hemda Garelick and
Christopher Ober.
2017-031-1-050 IUPAC100 Periodic Table
Challenge As a part of the 100 years of IUPAC and
the 150 years of the Periodic Table, a sub project is
preparing for The Global Periodic Table
Competition. Division input would be appreciated in
the form of potential questions. “Questions about
the name, chemical or physical properties or
discovery are possible. But more importantly, we
also need you to provide the correct answer
highlighting the role of IUPAC in that particular case
or more broadly.” This activity is about educating
people about the work of IUPAC. Co-chaired by Jan
Apotheker, and Juris Meija. You may also contact
Lars Öhrström or Javier García-Martínez.
In this context, we also note that:
The United Nations General Assembly has
proclaimed 2019 as the "International Year of
the Periodic Table of Chemical Elements". See
IUPAC news 20th December 2017.

Wikipedia and Division II
All division members are urged to read and
encouraged also to edit relevant pages in
Wikipedia, in English or other languages. Div. II is
the only division with a Wikipedia page,
and the daily average number of visitors 2017 has been 3.
The wiki CIAAW page has more visitors, especially
when atomic weights are updated. (See also
Project News).

Div. IV is adding into wikipedia “IUPAC Definitions”.
Following this example gives us both visibility and
the possibility to introduce our perspective in a
simple and effective way.

Division members in the News
Javier García Martínez wrote an article on the
Artificial Leaf in Scientific American. A ChemViews
article, Updated Atomic Weights: Time to Review
Our Table reported on the work of the CIAAW and
their latest updates. Javier was also awarded the
2018 Kathryn C. Hach Award for Entrepreneurial
Success by the ACS.
Jan Reedijk wrote an invited article in Polyhedron:
Row 7 of the periodic table complete: Can we
expect more new elements; and if so, when?

Division II Elections for 2018-2019
The nomination committee consisted of Lars
Öhrström (chair), Kazuyuki Tatsumi, (Japan,
molecules, ex. div.II & IUPAC pres.) Robin
Macaluso, (USA, materials, CCE & Div.VIII, former
div.II YO.), Juris Meija, (Canada, atoms, ICTNS &
Chair CIAAW) and Alessia Bacchi, (Italy, molecules
have been communicated by the Secretariat and
the updated list of members can be found at the
end of the newsletter. Notably Javier García
Martínez was voted in as our division vice
president. Here is an interview with Javier in
ChemistryViews.

We thank the former members who are retiring
or rotating off, for their services to the Union:
T. Ding (China, Beijing); R. Loss (Australia, former
DP); M.I Wieser (Canada); S. Mathur (Germany); A.
Kiliç (Turkey); J. Darkwa (South Africa).

IUPAC Endorsed Conferences
43rd International Conference on Coordination
Chemistry, 30 July- 4 Aug. 2018, Sendai, Japan

The 13th Solid State Chemistry conference
(SSC 2018) will be held during September 16th –
21rd in Pardubice, the Czech Republic.
IUPAC stamp expert and Division II project manager Daniel Rabinovich has notified us about the first appearance of one of the new elements on a stamp. Not surprisingly perhaps: from Japan. Second one seems to be from Armenia.

Dan’s latest article on stamps, *Big Chemistry*, appeared in the Big Data special themed issue of Chemistry International earlier this year.

In addition, Miki Hasegawa has provided us with this unique postmark, only available in one post office in the Nihonbashi district in Tokyo. It also commemorates the 100th anniversary of the national research institute RIKEN.
Inorganic Chemistry Division

Division II

Introduction
The IUPAC Inorganic Chemistry Division (Division II) deals with all aspects of inorganic chemistry, including materials, organometallic, and bioinorganic chemistry, and also with isotopes, atomic weights, and the periodic table. It also advises the Chemical Nomenclature and Structure Representation Division (Division VIII) on issues dealing with inorganic compounds and materials.

Impact and visibility
For the general public, the most conspicuous outcome of the division’s work is the evaluation and advice it provides pertaining to the names and symbols proposed for new elements, which have been approved for addition to the periodic table. For the scientific end educational community, the work on isotopic abundances and atomic weights is of fundamental importance as these numbers are continuously refined and updated.

IUPAC Projects
The scientific work of IUPAC is conducted largely through a formal Project system in which proposals from chemists around the world are peer-reviewed. The records of all current and completed projects are accessible through a searchable database hosted by IUPAC (https://iupac.org/projects/).

General Criteria for Projects
IUPAC projects should address one of the goals listed in the IUPAC Strategic Plan and satisfy at least one of the following key criteria:

- Should be related to the needs of chemists in the world, not just those in a particular country or region.
- Should be related to the role of chemistry for the needs of mankind.
- Should be best approached by an international team of experts, such as those IUPAC can assemble.

Sample Division II Projects

- Project: 2008-040-1.200
  TOWARDS A COMPREHENSIVE DEFINITION OF DEDUCTED STATE
  TGC: Perd Harte (University of Oslo, Norway)

- Project: 2011-040-2.200
  DEVELOPMENT OF A PROCEDURE FOR USING INTERVALS INSTEAD OF FIXED VALUES FOR ATOMIC WEIGHTS, AN EDUCATIONAL EXERCISE
  TGC: Will A. Brand (Max Planck Institute for Biogeochemistry, Germany)

- Project: 2015-030-2.200
  TGC: Norman Holden (Brookhaven National Laboratory, USA)

- Project: 2015-037-2.200
  IUPAC MOLECULAR WEIGHT CALCULATOR
  TGC: Juan Mejia (National Research Council, Canada)

- Project: 2015-039-2.200
  SURVEY OF DEFINITIONS AND USE OF COMMON SOLID STATE CHEMISTRY TERMINOLOGY
  TGC: Robin T. Markides (University of Texas at Arlington, USA)
## Membership of the Inorganic Chemistry Division Committee
### 2018-2019

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<thead>
<tr>
<th>Name</th>
<th>Status</th>
<th>Term</th>
<th>NAO</th>
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<tr>
<td>Prof. Lars R. Ohrström</td>
<td>TM-President</td>
<td>2018-2019</td>
<td>Sweden</td>
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<td>Prof. Jan Reedijk</td>
<td>TM-Past President</td>
<td>2018-2019</td>
<td>Netherlands</td>
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<td>Dr. Javier García Martínez</td>
<td>TM-Vice President</td>
<td>2018-2019</td>
<td>Spain</td>
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<td>Prof. Markku Leskelä</td>
<td>TM-Secretary</td>
<td>2012-2019</td>
<td>Finland</td>
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<td>Prof. Xiangkun Zhu</td>
<td>TM</td>
<td>2018-2019</td>
<td>China/Beijing</td>
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<td>Prof. Lidia Armelao</td>
<td>TM</td>
<td>2016-2019</td>
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<td>Prof. Miki Hasegawa</td>
<td>TM</td>
<td>2018-2019</td>
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<td>Prof. Pavel Karen</td>
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<td>Prof. Annie Powell</td>
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<td>Prof. Farina Abdul Aziz</td>
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<td>Prof. Jorge Colón</td>
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<td>Prof. Thomas Walczyk</td>
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<td>Dr. Ladda Meesuk</td>
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<td>Prof. Daniel Rabinovich</td>
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<td>Prof. Natasha S Trendafilova</td>
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<td>Prof. João D Galamba Correia</td>
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<td>Prof. Mayoro Diop</td>
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<td>Prof. Onder Metin</td>
<td>NR</td>
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<td>Turkey</td>
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<td>Prof. Jeffery Leigh</td>
<td>NR</td>
<td>2016-2019</td>
<td>United Kingdom</td>
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10 TMs, 6 AMs, 10 NRs

Young Observers at the GA in Sao Paolo 2017
Javier Vela (USA)

Emeritus members on the mailing list:
Dr. Norman E. Holden, United States
Prof. Kazuyuki Tatsumi, Japan (past div II president, past IUPAC president)
Prof. Robert (Bob) Loss, Australia (past div II president)