

Matters approved by the Executive Council by Email

Post C&CC meeting in October 2016

9 December 2016

The Council agreed on the terms of reference (ToR) for an IUPAC/IUPAP Joint Working Group to Examine the Criteria used to verify claims for the Discovery of New Elements. On implementing the ToR, IUPAP will:

- encourage the JWG to propose a physicist as its Chair
- dissolve the JWG when its report is final
- publish the membership of the JWG on the websites of both Unions
- publish a listing of the submissions to the JWG on the websites of both Unions

Terms of Reference for a IUPAC/IUPAP Joint Working Group to Examine the Criteria used to Verify Claims for the Discovery of New Elements

Rationale and purpose:

Some twenty-five years have now elapsed since the criteria that are currently used to verify claims for the discovery of a new element were set down. The recent completion of the naming of the one-hundred and eighteen elements in the first seven periods of the Periodic Table of the elements provides a natural opportunity for a necessary expert review of these criteria in the light of the experimental and theoretical advances in the field. It is proposed to set up a IUPAC/IUPAP Joint Working Group (JWG) to examine these criteria under the terms of reference set out below.

This JWG is set up for the specific task of reviewing and, if necessary, updating these criteria, and is distinct from the IUPAC/IUPAP Joint Working Parties (JWP) which have and which will evaluate claims to have discovered new elements. Should the JWG recommend any changes to these criteria it will include in its report a recommendation on whether a JWP needs to be appointed to re-examine priorities assigned to any of the recently discovered elements based on these new criteria.

If, and when, new claims for the discovery of new elements appear in the literature, a JWP will also be appointed; this later JWP should also examine any assignments made for earlier elements that may have been challenged.

Composition and Establishment of the JWG

The JWG will be established following the guidelines bellow:

1. The Presidents of IUPAC and IUPAP will appoint by mutual agreement a Joint IUPAC/IUPAP Working Group of six members with relevant expertise in the Discovery of New Elements, three to be nominated by the President of IUPAC, with advice from the Division of Inorganic Chemistry; three to be nominated by the President of IUPAP, with advice from the Commission for Nuclear Physics.
2. Appointments are made respecting the importance of continuity and new experience in the process of discovering new elements.
3. The Joint Working Group will elect a Chair and a Vice Chair, subject to the approval of the Presidents of IUPAC and IUPAP.

Clearly the restriction excluding the appointment of members from a claimant laboratory which applies to Joint Working Parties will not apply to this Joint Working Group, which is not evaluating any claims.

Terms of Reference:

The JWG will review and, if necessary, make recommendations for the revision of the criteria originally set down for determining the discovery of a new element and given by the Transfermium Working Group in 1991 [Wapstra et al "Discovery of the Transfermium Elements"(Pure and Appl. Chem, Vol.63, No. 6, p.p.879-886 (1991))].

The JWG will report using the procedures laid down below

1. The Joint Working Group shall report within 12 months on the progress of its work to the Presidents of IUPAC and IUPAP.
2. The Joint Working Group shall also report to the Presidents of IUPAC and IUPAP when there are new developments which it feels should be reported, when a report is requested by the President of one of the Unions.
3. A copy of the draft report as sent for technical review will be provided to Presidents of IUPAC and IUPAP.
4. A copy of the report of the Joint Working Group as submitted for publication will be provided to the Presidents of IUPAC and IUPAP.

The JWG report will be approved following the procedure laid down below:

1. The report, as it is to be published shall be approved by the Presidents of IUPAC and IUPAP, on the advice of the Division of Inorganic Chemistry and the Commission for Nuclear Physics respectively, and published as a provisional report in Pure and Applied Chemistry.
2. The provisional report is open for comment for five months. Comments will be forwarded to the Presidents of IUPAC and IUPAP, who will, with advice from the Division of Inorganic Chemistry and the Commission for Nuclear Physics, respectively, decide whether to make the report final, or on what other action should be taken.

The public release of the findings of this Joint Working Group shall be made jointly in the name of both Unions, by joint press release or by any other means.

13 February 2017

The Council of the International Union of Pure and Applied Physics (IUPAP) makes two statements about the *executive order: border security and immigration enforcement improvements*.

1. Council points out that any bans on entry to the US of citizens of any country which are in place in October 2017 when IUPAP determines which conferences it will support in 2018, the IUPAP Policy on Free circulation of Scientists will require IUPAP to refrain from supporting any conferences in the US.

Statement 1: Conferences

The Council of International Union of Pure and Applied Physics (IUPAP), which represents physicists from 60 countries, is concerned that the continued application of the ban on entry of citizens of Iraq, Syria, Iran, Sudan, Libya, Somalia and Yemen, or indeed a ban on entry of citizens of any country to the US, will require IUPAP to refrain from supporting any conferences in the US until any such ban is lifted.

Noting that physics is inherently an international discipline, and that the success of physics in all countries depends on the ability of physicists to freely collaborate and work with scientists from all other countries, at its 27th General Assembly in 2011 the International Union of Pure and Applied Physics adopted the [IUPAP Policy on Free circulation of Scientists](#).

To quote the relevant part of this policy:

“In pursuing its objectives with respect to the rights and responsibilities of scientists, the International Union of Pure and Applied Physics (IUPAP) actively upholds this principle, and, in so doing, opposes any discrimination on the basis of such factors as ethnic origin, religion, citizenship, language, political stance, gender, gender identity, sex, sexual orientation, age or disability. IUPAP should only sponsor conferences and events at institutions and in countries that uphold this principle. If scientists are excluded from attending IUPAP-sponsored international conferences by a host institution or country on the basis of any of these factors, IUPAP should register its concern at the highest level of that institution or country, and should not sponsor any future events in that country until such exclusions have been eliminated.” Should any bans on entry to the US of citizens of any country be in place in October 2017 when IUPAP determines which conferences it will support in 2018, the IUPAP Policy on Free circulation of Scientists will require IUPAP to refrain from supporting any conferences in the US.

2. Noting that the Executive Order has negative consequences for physics in the US and around the world, and noting the IUPAP Resolution on the Universality of Science, adopted in 2011, and Statute 5 (the Principle of Universality (freedom and responsibility) of Science) of the International Council of Science, the IUPAP Council respectfully requests that the Executive Order be revoked, that no similar bans on the movement of people based on nationality be implemented, and that the legitimate concerns about the access of terrorists to the US be addressed through more focussed and thus more effective measures.

[Statement 2: Free Circulation of Scientists](#)

The Council of International Union of Pure and Applied Physics (IUPAP), which represents physicists from 60 countries, is concerned that bans on movement of people based on nationality will have adverse effects on physics in the US and worldwide. The Executive Order: Border Security and Immigration Enforcement Improvements has negative consequences for physics in the US and around the world. Graduate students and post doctoral fellows are the workers in scientific research, and they are a very mobile group, going to the countries where their research is best supported and where they can lead productive lives. Physics research around the world relies on their dedicated work to fuel its progress. The restrictions placed on the free circulation of scientists by this Executive Order will have unintended consequences on the quantity and quality of physics research done in the US. And because many of the students when they graduate, work in US industry, the quality of industrial innovation, especially in high-tech industries will also be adversely affected. It is not in the interests of the US to impose a ban on movement of scientists on nationality or other very broad criteria. The free movement of scientists around the world has been an important driver in the progress of science and technology for the last two millennia, and has always been to the great benefit of the nations with the strongest science at the time. Continuation of the immigration bans based on nationality is both an assault on the

[IUPAP Policy on Free circulation of Scientists](#), and the policy of our “mother organisation”, the International Council of Science (ICSU) expressed in its Statute 5 —

The Principle of Universality (freedom and responsibility) of Science

“the free and responsible practice of science is fundamental to scientific advancement and human and environmental well-being.”

Such practice, in all its aspects, requires freedom of movement, association, expression and communication for scientists, as well as equitable access to data, information, and other resources for research. It requires responsibility at all levels to carry out and communicate scientific work with integrity, respect, fairness, trustworthiness, and transparency, recognising its benefits and possible harms. And it is an assault on the progress of physics in the US and around the world.

For these reasons, the IUPAP Council respectfully requests that the Executive Order be revoked, that no similar bans on the movement of people based on nationality be implemented, and that the legitimate concerns about the access of terrorists to the US be addressed through more focussed and thus more effective measures.

19 February 2017

India to increase shares

Council approves the request from India to increase its shares from 8 to 15, subject to ratification by the 28th General Assembly. This increase takes effect in 2017. On ratification, it gives India 5 votes at the General Assembly.

17 March 2017

Singapore to increase shares

The request from Singapore to increase its shares from 1 to 2, received on 23 July 2015 was inadvertently not referred to the October 2015 C&CC meeting. It has now been approved by Council effective from 1/1/2016, subject to ratification by the 28th General Assembly. The number of votes for Singapore will increase from 1 to 2.

31 March 2017

Ruling on retiring commission members

Council approves the ruling that, when a member retires from a Commission during a term and is replaced, if the replacement member serves more than half of the term, they are counted as a member for that term in determining terms of service. If the replacement member serves less than half of the normal term, that service shall be disregarded in determining terms of service. This ruling will be submitted to the General Assembly for ratification

24 April 2017

Setting up WG15 – Working Group on Soft Matter Physics

Council approves the setting up of WG15, the interim working group on Soft Matter Physics.

It has decided to approve:

- A. the appointment of **Michael Rubinstein**, John P. Barker Distinguished Professor in the Department of Chemistry and Department of Applied Physical Sciences, and a Fellow of the American Physical Society as Chair of WG15, the interim working group on soft matter physics
- B. the mandate of the interim working group, to
 - Advise the IUPAP on how it should best cover the activities of soft matter physicists, by
 - Establishing a Commission for Soft Matter Physics, or
 - Establishing a Working Group on Soft Matter Physics
 - Propose the mandate for the new Commission/Working Group
 - Proposing the initial members of the Commission/Working Group
- C. to delegate to Michael and the President the responsibility of appointing the members of the Interim Working Group, reporting them to Council

1 May 2017

IUPAP to support the 2022 – International Year of Basic Sciences for Development (IYBSD)

Council agreed that IUPAP should proceed to develop a proposal to submit a concept plan for 2022 – International Year of Basic Sciences for Development to the International Basic Sciences Programme (IBSP) of UNESCO, and to seek the formal support of ICSU, IUPAC, ICTP, EPS and CERN for this proposal.

The IUPAP members, will be informed of this action and this proposal will be submitted to UNESCO subject to the agreement of the General Assembly in São Paulo.

As these initiatives proceed, IUPAP will proceed to formulate the budget for its contributions to the IYBSD and seek support from appropriate bodies. The proposal is envisioned to develop along the following timeline:

2017	Formal endorsement of 2022 – International Year for Basic Sciences for development by IUPAP 29 th General Assembly.
2017	Formal recommendation of IBSP for 2022 – International Year for Basic Sciences for development
2018	General Preparation (Governance, communications); Approval by the UNESCO Executive Committee (April or November)
2019	Formal approval by the General Conference of UNESCO (November)
2020	Approval by the UN General Assembly (December)
2021	Detailed Preparation of Regional and International events
2022	International Year of Basic Sciences for Development

23 June 2017

WG15 advises Council on its members

President, Bruce Mckellar and WG15 Chair, Michael Rubinstein appointed the members of the WG15. The below members have now agreed to serve on WG15:

America:

1. Dave Weitz (Harvard)
2. Seth Fraden (Brandeis)

Europe:

1. Tom McLeish (Durham, UK)
2. Gerhad Gompper (Juelich, Germany)

Asia:

1. Sriram Ramaswamy, FRS (IIS, Bangalore)
2. Hajime Tanaka (Tokyo)