IUPAC Elections for the 2020–2021 Term

Every two years, IUPAC holds an election for its officers and committee members. About 120 individuals are to be elected or reelected either as Titular Members, Associate Members, or National Representatives. Information concerning the voting process and the role of each kind of member is contained in the Union bylaws (see https://iupac.org/who-we-are/organizational-guidelines/)

Any qualified individual who is interested in being nominated is invited to contact his/her National Adhering Organization (NAO) and/or the current committee officers. The election will cover a two-year term that will start in 2020. Every division committees and standing committees will have vacancies. As part of the nomination procedure, NAOs are invited to submit curriculum vitae for each nominee to the IUPAC Secretariat from 15 October 2018, and no later than **31 January 2019**.

Elections for each committee will take place during the second trimester of 2019 and the 2020–2021 memberships for all committees will be finalized during the next IUPAC General Assembly in July 2019.

Individuals interested in becoming IUPAC officers or members of the IUPAC Bureau should contact their NAOs. Nominations for officers have a different timeline can only be made by an NAO. Officers elections will take place at the Council meeting during the next General Assembly in Paris.

Expected duties and qualifications

Each member of an IUPAC body (Division, Standing Committee, or Commission) is expected to become an active participant in the work of the body in helping to decide on the program and in reviewing proposals for projects. These duties require the members to have expertise in the relevant disciplinary area and also to be able to exercise sound scientific judgment. Much of each Committee's work is conducted by e-mail correspondence.

In a concerted effort to improve membership diversity, nominations for well-qualified female chemists, "younger" chemists with the required expertise, and industrial chemists are encouraged. Each nomination for consideration for membership on a Division or Standing Committee or Commission must identify the intended Committee or Commission and must be accompanied by a curriculum vitae. Each nominee will be considered for all vacant positions on the Committee unless otherwise specified. Nominations will only be accepted through the online form to be available 15 October 2018.

Contact information for all NAOs and division and standing committee officers is available on the IUPAC website, or upon request at the IUPAC Secretariat; e-mail <secretariat@iupac.org>; tel.: +1 919 485 8700; fax +1 919 485 8706; www.iupac.org

Mirabbos Hojamberdiev is awarded the 2018 IUPAC Chemrawn VII Prize for Green Chemistry

Mirabbos Hojamberdiev (Uzbekistan) has been awarded the 2018 IUPAC-CHEMRAWN VII for Green Chemistry in recognition of his outstanding contributions to the field of green chemistry.

The semiconductor-based artificial photosynthetic system is one of the most viable and green chemical processes to produce renewable hydrogen energy from water splitting and to remove organic pollutants. To efficiently utilize solar energy in the wide visible range, it is necessary to enhance the visible-light-driven photocatalytic performance of less known photocatalysts and to discover novel visible-light-active photocatalysts. To this end, chemically engineered mixed-anion compounds have great potential photocatalytic applications for energy conversion and environment remediation.

Dr. Mirabbos Hojamberdiev has developed an NH_3-assisted direct flux growth approach to reduce

the density of intrinsic defects in transition metal oxynitrides ($BaTaO_2N$, $BaNbO_2N$, $LaTiO_2N$, etc.), which led to the substantial enhancement in solar water splitting activity. He discovered new Dion-Jacobson phase $CsBa_2Ta_3O_{10}$ and fabricated for the first time two-dimensional oxynitride nanostructures with high crystallinity, less defect density, and high photocatalytic activity of $CsBa_2Ta_3O_{10}$, $KLaTiO_4$, and $K_2La_2Ti_3O_{10}$. His work revealed new insights into why creating a p-n heterojunction using bismuth oxyhalides (BiOCl, BiOI) and doping are important for bandgap engineering and enhancing the photocatalytic activity of less active photocatalysts. He recently described the relationship between solar water splitting activity and a degree of octahedral tilting in perovskite oxynitrides.

The CHEMRAWN VII Prize was first announced in August 2008 and has since been awarded every two years at the IUPAC International Conference on Green Chemistry. The Prize of USD 5000 is granted to a young investigator (less than 45 years of age) from an emerging region who is actively contributing to research in Green Chemistry. The 2018 CHEMRAWN VII Prize was presented to Dr Hojamberdiev at the 8th IUPAC Conference on Green Chemistry held 9-14 September 2018, in Bangkok, Thailand.

The IUPAC CHEMRAWNVII prize has previously been awarded to Noureddine Yassaa (Algeria) in 2010, Rashimi Sanghi (India) in 2012, Vania G. Zuin (Brazil) in 2014, and Ali Maleki (Iran) in 2016.

Standard Atomic Weights of 14 Chemical Elements Revised

The IUPAC Commission on Isotopic Abundances and Atomic Weights (CIAAW) met under the chairmanship of Dr. Juris Meija, at the University of Groningen, the Netherlands, in September 2017. Following its meeting, the Commission recommended changes to the standard atomic weights of 14 chemical elements.

The standard atomic weights of argon and iridium have been changed based on recent determinations and evaluations of terrestrial isotopic abundances. For argon, assignment of an interval for the new standard atomic weight reflects the common occurrence of variations in the atomic weights of the element in normal terrestrial materials. The standard atomic weights of the other 12 elements, all having a single stable isotope, have been revised based on the new assessment of their atomic masses endorsed by the International Union of Pure and Applied Physics.

- aluminium (aluminum): from 26.981 5385(7) to 26.981 5384(3)
- argon: from 39.948(1) to [39.792, 39.963]
- cobalt: from 58.933 194(4) to 58.933 194(3)
- gold: from 196.966 569(5) to 196.966 570(4)
- holmium: from 164.930 33(2) to 164.930 328(7)
- iridium: from 192.217(3) to 192.217(2)
- manganese: from 54.938 044(3) to 54.938 043(2)
- niobium: from 92.906 37(2) to 92.906 37(1)
- praseodymium: from 140.907 66(2) to 140.907 66(1)
- protactinium: from 231.035 88(2) to 231.035 88(1)
- rhodium: from 102.905 50(2) to 102.905 49(2)
- terbium: from 158.925 35(2) to 158.925 354(8)
- thulium: from 168.934 22(2) to 168.934 218(6)
- yttrium: from 88.905 84(2) to 88.905 84(1)

The reported uncertainties of the standard atomic weights are such that the atomic-weight values of normal materials are expected to lie in the given interval with great certitude. There are three broad groups of elements depending on what is the main cause of the uncertainty of their standard atomic weights: (1) well-documented natural variations of isotopic abundances, (2) our ability to determine the isotopic abundances, and (3) our ability to precisely determine the atomic masses of the isotopes. Elements in the first category are distinguished by an interval standard atomic weight. For instance, the standard atomic weight of argon, [39.792, 39.963], indicates that atomic-weight values of argon in normal materials are expected to be from 39.792 to 39.963. For iridium, which falls into second category, the standard atomic weight of iridium, 192.217(2), indicates that atomic-weight values of iridium in normal materials are expected to be from 192.215 to 192.219. For all other elements above the uncertainty of the standard atomic weight is the result of the measurement precision of their atomic mass. As an example, the standard atomic weight of holmium, 164.930 328(7), indicates that the best measurements result in a value from 164.930 321 to 164.930 335.