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INTERNATIONAL UNION OF PURE AND APPLIED CHEMISTRY

STATEMENT ON BEHALF OF THE INTERNATIONAL UNION OF PURE AND APPLIED CHEMISTRY VICE PRESIDENT AND PRESIDENT ELECT, PROFESSOR CHRISTOPHER BRETT, DELIVERED BY DR JO HUSBANDS, IUPAC FELLOW, AT THE TWENTY-FOURTH SESSION OF THE CONFERENCE OF THE STATES PARTIES

Mr Chairperson, Director-General, Excellencies, delegates, Ladies and gentlemen:

It is a great honour for me, on behalf of its Vice President and President Elect Professor Christopher Brett, to represent the International Union of Pure and Applied Chemistry (IUPAC) here at the Twenty-Fourth Session of the Conference of the States Parties of the Organisation for the Prohibition of Chemical Weapons. It has also been a great honour for IUPAC to be one of the recipients of the 2019 Hague Awards.

IUPAC was founded exactly 100 years ago and this year we are celebrating our centenary as well as the International Year of the Periodic Table of Chemical Elements. The International Year of the Periodic Table has enabled us and society in general to view the chemical elements in a different light, to realise better what are their benefits and important positive applications in our lives and civilisation. IUPAC was founded in 1919, mainly by chemical industry in Europe, to promote a common language and enable easier communication of chemistry and the chemical sciences. This followed two to three decades of preparatory discussions and meetings before the union came into being on 28 July 1919.

Today, IUPAC is a global organisation that provides objective scientific expertise and develops the essential tools for the application and communication of chemical knowledge for the benefit of humankind and the world. IUPAC has a unique and powerful influence in the global chemistry community. At present, we have 55 National Adhering Organisations and over 2000 highly qualified experts who offer their service in a voluntary capacity in IUPAC's scientific and governance bodies and on IUPAC-funded projects. The vision is that IUPAC is an indispensable worldwide resource for chemistry. IUPAC accomplishes its mission by fostering sustainable development, providing a common language for chemistry, and advocating the free exchange of scientific information. At the same time, our core values emphasise scientific excellence, communication, transparency, diversity, and ethical behaviour.

The promotion of the peaceful applications of science is key to both OPCW and IUPAC so it is a natural consequence that the two organisations have collaborated in a number of important areas.

This year's IUPAC centenary has been celebrated with special events and activities, publications and electronic publications. One of these is entitled "IUPAC stories". The most recent of these, from September 2019, concerns the collaboration between IUPAC and OPCW and is entitled "A Partnership of Science and Diplomacy to Eliminate Chemical Weapons", and describes the history of our relationship and achievements.

After the first formal contacts in 2001, following informal contacts since OPCW's inception, IUPAC experts and the OPCW Scientific Advisory Board have organised workshops together to provide scientific input for the OPCW "Review Conference" held every five years, the most recent being in 2018. The earliest was in 2003 and for which IUPAC was asked to prepare a report on the scientific and technological advances that had taken place since the Convention came into force in 1997. Outcomes of these conferences have been published in *Pure and Applied Chemistry*, the IUPAC journal. For the last Review Conference in 2018, a workshop was organised in Rio de Janeiro in 2017 by IUPAC and OPCW together with the US National Academies on emerging technologies relevant to the Chemistry Weapons Convention.

IUPAC has been collaborating with the OPCW on initiatives in the areas of education, green chemistry, and Responsible Care. We have developed and endorsed tools and materials for education and outreach. An IUPAC project has produced teaching modules to inform students about the dual uses of chemicals and to address relevant ethical issues. Symposia and workshops have been organised at international IUPAC conferences in these areas, with active involvement and speakers from both organisations. An excellent example is the IUPAC International Conferences in Green Chemistry held every two years.

Since 2014, a representative of the OPCW Technical Secretariat has served as an ex-officio member of the IUPAC Committee on Chemistry Education, and there is an OPCW Delegate to the IUPAC Interdivisional Committee on Green Chemistry for Sustainable Development. An IUPAC representative has served as permanent observer and contributor on the OPCW Advisory Board on Education and Outreach since it began in 2016. In the same year, the IUPAC and OPCW signed a memorandum of understanding to further cooperate in keeping abreast of developments in chemistry, promoting responsibility and ethics in science, and education and outreach, particularly focussed around the core element from the Hague Ethical Guidelines "Achievements in the field of chemistry should be used to benefit humankind and protect the environment", which IUPAC endorsed in the same year and is consistent with the strategic vision and mission of OPCW and IUPAC. These have been promulgated and disseminated in many conferences and symposia.

Last year, in the Fourth Review Conference, delegates from various IUPAC bodies organised a side event to enable Review Conference participants, especially OPCW Technical Secretariat staff to learn more about IUPAC and activities. This covered both the pure and the applied sides of our chemistry activities. This is already leading to a broader and stronger collaboration in the environmental, analytical, and nomenclature areas, and others are yet to come.

In the future, OPCW and IUPAC can deepen collaboration and include many other areas. In last year's Review Conference, continuous assessment of computational chemistry and Big

Data were listed as part of the advice on the advancement of Science and Technology. IUPAC is actively engaged in the development of tools in this field, e.g. the International Chemical Identifier. In this Twenty-Fourth Conference of the States Parties there is a specific item devoted to engagement with the chemical industry and the scientific community, and another to fostering international cooperation for peaceful purposes in the field of chemical activities. IUPAC is ready to give its expertise and knowledge to help in these endeavours.

Finally, I would like to thank the Technical Secretariat, and all of you, the representatives of the States Parties to the Convention, for your kind invitation to speak at the OPCW Annual Conference.

I would like to request that this statement be issued as an official document of the conference and posted on the public website.

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