

IUPAC

Report on Activities - Year 2019

Lidia Armelao

1. Introduction

In 2019, various initiatives were organized in relation to the IUPAC organization - International Union of Pure and Applied Chemistry. The year 2019 has been proclaimed as the “International Year of the Periodic Table of Chemical Elements (IYPT2019)” by UNESCO and two major anniversaries were celebrated, the Centenary of IUPAC foundation, formally registered as Union in London in 1919, and the 150th anniversary of the Periodic Table of Chemical Elements, discovered in 1869 by the Russian chemist Mendeleev. Both anniversaries represent noticeable milestones for IUPAC and Chemistry and were celebrated all over the world with a variety of dedicated events and initiatives. IUPAC celebrated its Centenary holding its 50th General Assembly and 47th World Chemistry Congress in Paris, France.

2. Main activities carried on by IUPAC during 2019 relevant for Italy and for CNR

IUPAC endorses independently organized conferences and workshops that cover a wide range of topics in chemistry. Endorsement by IUPAC attests to the quality of the scientific program and IUPAC endorsed conferences should be international in the sense that they are intended to attract participants from anywhere in the world. The conference must be located in a country represented in IUPAC by a NAO. In 2019 the reported conferences and schools organized by Italian organizations have been endorsed by IUPAC:

44th International Conference on Coordination Chemistry (ICCC2020)

Conference Chair: Dr. Maurizio Peruzzini (CNR DSCTM)

Conference Secretariat: Dr. Giuliano Giambastiani (CNR ICCOM)

ICCC2020, planned in 2020 in Rimini (4 – 12 July), has been postponed to 2021 (27 June – 2 July) due to COVID-19 emergency.

31st International Symposium on the Chemistry of Natural Products & 11th International Conference on Biodiversity

Conference Chair: Prof. Raffaello Riccio (University of Salerno)

Napoli, 25 – 29 October 2020

Italian-French International Conference on Magnetic Resonance

Conference Chairs: Prof. Marco Geppi (University of Pisa), Dr. Isabelle Landrieu (CNRS)

Conference Secretariat: Dr. Silvia Borsacchi (CNR ICCOM)

The conference, planned in 2020 in Milano (21 – 24 September), has been postponed to 2021 due to COVID-19 emergency.

Post-graduate Summer School on “Green Chemistry”.

School Chairs: Prof. Pietro Tundo, Prof. Fabio Aricò (University Ca' Foscari Venezia).

The School will be held in the planned dates (6 - 10 July 2020) in remote mode.

Topics: exploitation of renewable resources, new reaction pathways, energy saving, food safety, green Chemistry for cultural heritage, climate change damages mitigation.

Appointment of italian members in IUPAC Divisions for 2020 – 2021

By proposal of the NAO CNR Commission the following new components have been appointed:

Prof. Paolo Scrimin, Associate Member, Organic and Biomolecular Chemistry Division – Div. III.

Prof. Luisa Torsi, National Representative, Analytical Chemistry Division – Div. V.

Dr. Michele Saviano, National Representative, Chemistry and Human Health Division – Div. VII.

47th IUPAC World Congress (Paris, 7-12 July 2019).

The following italian division board members attended the world conference in Paris: P. Metrangolo – Div. I, L. Armelao – Div. II, F. Nicotra – Div. III. L. Armelao presented the 2018 activities of the Inorganic Chemistry Division.

3. Activities carried on by Lidia Armelao within the Union during 2019 and impact on the Italian scientific community

Partecipation to IUPAC projects.

Toward a comprehensive definition of valence (Project No.: 2018-030-2-200)

Division Name: Inorganic Chemistry Division

Task group chair: Pavel Karen

Members: L. Armelao, I. S. Butler, D. Rabinovich, V. Tomisic, M. Yamashita

Start date: 21/01/2019 – in progress

IUPAC100 Periodic Table Challenge (Project No.: 2017-031-1-050)

Division Name: Committee on Chemistry Education (CCE)

Task group chairs: J. Apotheker, J. Mejia.

Members: L. Armelao, J. García Martínez, M. Hasegawa, G. J. Leight, P. Mahaffy, F. Meyers, L. R. Öhrström.

1/12/2017 – 15/01/2020

Scientific dissemination activities.

- L. Armelao, M. Peruzzini and M. Malinconico participated to RAI Memex Nautilus television program *Periodic Table of the elements, ordered from 150 years* to explain the naming process of newly discovered elements.
- L. Armelao and M. Peruzzini were invited at the National Geographic Science Festival in the session dedicated to the Periodic Table of Elements (Roma, 12 April 2019).
- L. Armelao was invited by Società Nazionale di Scienze, Lettere e Arti and Accademia Pontaniana in Napoli to give a lecture *The Periodic Table and the name of elements* at the Symposium for the 150^o anniversary of the Periodic Table of the elements and the centenary of the birth of Primo Levi (Napoli, 10 May 2019).
- L. Armelao was interviewed by the Il Bo Live – University of Padova Magazine on the theme: *Behind the Periodic Table: 118 tales di elves, places, asteroids and nationalisms* (Padova, 25 July 2019).

4. Evaluation of the participation in terms of benefits and membership cost

The main advantage of participating to IUPAC is the wider international visibility of the italian scientific community, and particularly of CNR. The number of italian members in apical positions of IUPAC divisions is increased in 2020 – 2021 with the concrete possibility to improve IUPAC endorsement and financial support to italian initiatives.

5. Evaluation of Italians' attendance and how to improve interest and involvement

The Italian participation, with the involvement of CNR, universities, academies, scientific societies and secondary schools, to the initiatives for celebrating the centenary of the IUPAC foundation and the 150th anniversary of the Periodic Table has been very intense and qualified. This has led to an increase in knowledge and awareness, especially for young people and researchers, of IUPAC organization and international role.

6. Italian experts with important roles within the Union or within related Commissions and Programs (if known)

Prof. Francesco Nicotra, outgoing President of Organic and Biomolecular Chemistry Division, was awarded a plaque of recognition for the excellent work performed as chair of Division III. The awarding ceremony was held during the 50th IUPAC General Assembly in Paris (10-11/07/2019).

Division Vice Presidents from Italy elected for the term 2020-2021:

- Prof. Lidia Armelao for Inorganic Chemistry Division (Division II);
- Prof. Pierangelo Metrangolo for Physical and Biophysical Chemistry Division (Division I);
- Prof. Roberto Terzano for Chemistry and the Environment Division (Division VI);

Prof. Francesco Nicotra is appointed Past President of Division III for the term 2020 – 2021.

7. If Union with CNR Commission, short summary about the 2019 CNR Commission activities

The opening meeting of the new designated CNR NAO commission for IUPAC participation was held in Roma, May 2019. The members appointed by the CNR President are: Dr. Maurizio Peruzzini (Chair of the Commission), Prof. Fabio Aricò, Prof. Angela Agostiano (Past President Italian Chemical Society), Prof. Lidia Armelao (Titular Member IUPAC Inorganic Chemistry Division), Dr. Silvia Borsacchi (CNR ICCOM), Dr. Matteo Guidotti (CNR SCITEC), Prof. Francesco Nicotra (President IUPAC Organic and Biomolecular Chemistry Division), Dr. Augusta Maria Paci (CNR DSCTM), Dr. Alessandra Sanson (CNR ISTEC and Scientific Secretary), Prof. Roberto Terzano (Vice President IUPAC Chemistry and the Environment Division), Prof. Pietro Tundo (Chair Interdivisional Committee on Green Chemistry for Sustainable Development). Major aim of the Commission will be to increase the representatives from Italy in IUPAC divisions and bodies, such as interdivisional committees and Bureau, as well as to encourage the submission of projects to IUPAC.

The following CNR NAO official delegation attended the 50th IUPAC General Assembly and the Council Council Meeting in Paris (10/7 – 11/7/2019): Maurizio Peruzzini, Angela Agostiano, Francesco Nicotra, Pietro Tundo, Lidia Armelao, Alessandra Sanson, Matteo Guidotti, Augusta Maria Paci.

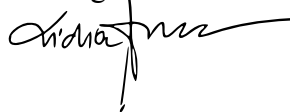
Dr. Peruzzini was invited as plenary speaker at the Congresso Nazionale di Storia della Chimica, Accademia Nazionale delle Scienze, known as XL, to illustrate the historical aspects of the Italian participation to the IUPAC Union and the role played by CNR as reference national organization (NAO CNR). A scientific report of the presentation has been published as: M. Peruzzini, A. Ienco, A. M. Paci *The chemical sciences and IUPAC: historical details, organization and role of NAO CNR-IUPAC*, Rendiconti Accademia Nazionale delle Scienze detta dei XL. Memorie di Scienze Fisiche e Naturali 137^o (2019), Vol. XLIII, Parte II, Tomo II, pp. 1-11.

8. Conclusions

The activities organized and carried out by the national representative Lidia Armelao and the members of the CNR NAO Commission have increased the Italian participation to IUPAC as well as

the IUPAC initiatives in Italy. The continuous CNR action to support the Commission initiatives as well as the participation of young researchers to national and international events organized by IUPAC will lead to strengthening the role of Italy in the Union.

Signature

A handwritten signature in black ink, appearing to be 'Ghidoni', written in a cursive style with a long horizontal stroke extending to the right.

Padova, 25 maggio 2020