IUPAC Celebrates 100th Anniversary in 2019

IUPAC, the globally-recognized authority on chemical nomenclature and terminology, will celebrate its 100th anniversary on 28 July 2019. The anniversary theme is *A Common Language for Chemistry*, and while the celebration will recognize the successes of IUPAC's first one hundred years, its purpose is not to solely dwell upon the past. It will also look what this international community of chemists, working closely together, can contribute in meeting the world's needs, now and in the future, through chemical research.

"For almost a century IUPAC's mission has been to provide objective scientific expertise for the resolution of critical global issues that involve every aspect of chemistry, all of which have had societal impact," said IUPAC President, Natalia Tarasova. "In 2019, we will pause to celebrate our successes and give serious deliberation as to how IUPAC can best continue in the years ahead to serve as an advocate for the free exchange of scientific information for the benefit of humankind worldwide. While this celebration is just one moment in time, we hope that it will have a lasting impact through events that will advocate the value and importance of science literacy to students worldwide, inspire younger generations of men and women to become the innovative chemists of the 21st century and beyond, and have a positive influen e on the public's perception of science in general and chemistry in particular."

Preparations for the celebration have been initiated by the Centenary Planning Committee under the leadership of Professor Mary Garson and Dr. Laura McConnell. Professor Garson noted that "while the Committee has taken the lead in initiating special events, we strongly encourage IUPAC's National and Associate National Adhering Organizations, Associated Organizations, Company Associates, Affil tes, and friends – indeed, the worldwide chemistry community, to participate in this celebration, by becoming involved in events currently in development or by creating their own."

Garson also noted that the celebration will start in early 2018 with the monthly release of a series of stories highlighting the essential IUPAC tools and activities that were developed during the past century and continue to be used by scientists today. Other special events in development include a worldwide online competition for young students centered on the Periodic Table and IUPAC; a global breakfast for women chemists and students who will be "gathered together" in early 2019 via Skype, teleconference, and social media to celebrate the anniversary; a visualization of IUPAC's history and its major contributions; and a summer, inspired by the IUPAC Centenary, for young graduate and post-graduate students from all over the world—in particular from Africa—with a focus on teaching Green Chemistry and its role in sustainable development. The anniversary will also be highlighted during the 47th World Chemistry Congress scheduled to take place 7-12 July 2019 at the Palais des congrès in Paris, France.

For more information on the IUPAC Centenary and the 47th World Chemistry Congress see: www.iupac.org/iupac100 and www.iupac2019.org. For information on how you or your organization can become involved in a particular event, develop your own, or take advantage of sponsorship opportunities that will be announced shortly, contact the IUPAC Secretariat and be sure to visit the IUPAC web site in the coming months for updates.

E-mail iupac100@iupac.org for more information.
Join the conversation on social media using the hashtag #IUPAC100

The Periodic Table at the University of Murcia

The Periodic Table is the most representative icon of chemistry, because it contains all the chemical elements currently known, which constitute the true bricks of the universe. In 1869 the Russian chemist Dimitri Mendeleyev published his first periodic table, placing in order the 63 elements known at the time. On 28 November 2016 IUPAC announced the official names and the symbols of four elements, defining the current Periodic Table with 118 elements.

All the matter that surrounds us consists of the atoms contained in the Periodic Table, and their combinations. These combinations are the molecules that, which as a result of the enormous variety of chemical

transformations, have made possible, among other things, life on this planet.

From its origin, chemistry as a science has been the engine that has allowed humanity to advance, contributing to the continuous improvement to quality of life and life expectancy. The negative perception that society has towards chemistry is fully unjustified. One must remember that at the beginning of the Twentieth Century, the world population was 1.2 billion people and had a life expectancy of approximately 40 years, while today an estimated population of more than 7.4 billion inhabitants have a life expectancy higher than 80 years old in developed countries. Chemistry has provided pharmaceutical drugs to cure diseases, safer and more nutritious foods, clean drinking water, fertilizers and insecticides to improve agricultural productions, fuels, hygiene and beauty products, and many other things. Our quality of life depends entirely and positively on chemistry, and chemistry is called to continue to play a leading role towards solving the great challenges of humanity by providing appropriate solutions based on sustainability criteria in the near future.

In 1940, when the regional economy of Murcia was based almost exclusively on an archaic primary sector of small family farms, Prof. José Loustau y Gómez de la Membrillera, the fir t dean of the Faculty of Sciences, consolidated the implantation of the Degree in Chemistry at the University of Murcia. The school thus became a unique scientific studies program at the university level in the south-east of Spain. This helped the birth and consolidation of many agro-food industries, in particular canning industries, (devoted to the processing the excellent fruit and vegetables *e.g.* Hero, Crown Food, *etc.),* of the Region of Murcia. The Faculty of Chemistry provided the necessary knowledge and expertise. In the same way, in the 1960s, REPSOL implemented its fir t oil refinery in Cartagena (Mu cia) where the graduates in chemistry of the University of Murcia were incorporated. This refinery has continuously grown to become the fir t Spanish refiner , and one of the most important at the European level. It also consolidated an important chemical sector in its surroundings (*e.g.* SABIC), where companies now employ hundreds of graduates.

Since 1940, the Faculty of Chemistry at the University of Murcia has graduated more than 4000 students in all fields of chemistry, chemical engineering, physics, and biochemistry, as well as 500 Ph.Ds. In our classrooms and laboratories, we have trained the excellent professionals who lead or have lead the staff of a large number of industries in our region. These include all sectors, such as food, energy, cosmetics, chemical-pharmaceutical, and more. All these factors contributed to the Government of the Region of

Murcia awarding the Gold Medal of the Region of Murcia to the Faculty of Chemistry at the University of Murcia in 2015. This award, which is the highest distinction of the region, coincided with the 75th anniversary of the fir t graduation of chemists, as a "recognition of the social and economic importance of its training and its role as a reference in the formation of human and scientific capital of the region, as well as for its scientific productivity and contribution to the increase of excellence research at the University of Murcia", as stated in Decree 77/2015, BORM on 15 May 2015. It was the fir t time that the Government recognized and awarded a university centre. Without any doubt, the chemistry and chemical developments in the Murcian industries have decisively contributed to the economic development and the standard of living of Murcia.

In this context, and promoted by the Faculty, this year a consortium of twelve of the most important companies from Murcia, (including AMC Juices Ltd, Tecnological Centre of Marble, Crown Food Spain Ltd S.A., Grupo Fuertes Ltd., Hero Spain Ltd.; Estrella de Levante Ltd; Hidrogea Ltd.; Linasa Ltd., J.J. Albarracin Ltd., Marín Giménez Ltd, REPSOL Ltd. and TAHE Cosmetic Ltd.), also wanted to pay tribute to the Faculty of Chemistry for the important role played in the development of the industrial sector of Murcia. The construction of the giant periodic table has been the aim, made possible by the particular design of the building of the Faculty of Chemistry where the façade is formed by glass windows and walls arranged in bevel. Eduardo Batan, architect of the University of Murcia, provided the technical feasibility. Each of the 118 chemical elements is included on a coloured metal panel (0.75 x 0.75 m), and represented by its symbol, atomic number, and atomic mass. These panels are screwed onto screens located directly on the facade of the Faculty. The surface of this giant periodic table is approximately 150 m^2, likely the largest permanent Periodic Table in the world. This large size allows all the elements to be seen when walking around the perimeter of the University of Murcia campus or even from the tramway.

The artistic ensemble will be finali ed with a 50-seat grandstand. Every year, the Faculty meets students from many high-schools as prospective students in the chemistry program. Usually, we prepare a complete journey for the young students, including a tour of the Faculty, a simple experiment conducted in the lab, and now a seminar about the periodic table using this grandstand as an open-air classroom for their "fir t lesson" at the university.

The periodic table built on the facade of the Faculty of Chemistry at the University of Murcia converges past and future, work and perseverance, training and economic development, science and beauty. This facade is a new icon for chemistry and the city of Murcia, and we encourage all chemists to visit Murcia.

In the Faculty of Chemistry at the University of Murcia, we are extremely proud of the work we have done in these 77 years, and sincerely grateful to the Region of Murcia and its industries for this recognition, which supports us for the important pages of the future that we must write together.

Written and shared by Prof. Pedro Lozano, e-mail: plozanor@um.es, Dean of the Faculty of Chemistry of the University of Murcia. www.um.es/web/quimica/

IUPAC Standards Online

IUPAC and its publishing partner, De Gruyter, are pleased to announce that subscribers to *Pure and Applied Chemistry* (PAC) can purchase the IUPAC Standards Online database at a special discount of 70 % off the list price. This offer is guaranteed until 31 December 2017.

This database is the only digital compilation of IUPAC's internationally-binding standards and recommendations for chemistry and related disciplines. Extracted from the print edition of *PAC*, these standards and recommendations are used worldwide by scientists in industry and academia, patent lawyers, and others who need access to authoritative information on chemical nomenclature, symbols, terminology, and similar scientific onventions.

Why subscribe to the database when you already have a subscription to *PAC*?

Because rather than searching for hours through *PAC* archives, you can use the database to retrieve the specific information you need quickly and easily in a matter of minutes. Updated annually, the database provides granular access to content, while a variety of search options, sorting criteria, and refi - ing fil ers streamline the search and retrieval process. New features for 2017 include an interactive Periodic Table that lets you go directly to the entry of each element, and fact sheets on specific compounds. The database now also uses InChI codes and InChI keys, making it even easier to find specific substances.

To sign-up for a no obligation 30-day free trial, visit De Gruyter website at: www.degruyter.com/dg/page/1455/test-the-database or www.iupac.org/iupac-standards-online/.