

Chemistry in Paris and all around the world in 2019!

Paris will celebrate chemistry in 2019,
with the **IUPAC 47th World Congress
from the 7th to the 12th of July 2019,**
and the 51st International Chemistry Olympiad,
from the 21st to the 30th of July 2019.

UNESCO declared 2019 the International Year of the Periodic Table! 1869 is regarded as the year Dmitri Mendeleev discovered the Periodic System. 2019 will be the 150th anniversary of the Periodic Table of Chemical Elements! The International Year of the Periodic Table of Elements will be a worldwide initiative highlighting the importance of the Periodic Table in science, technology, and in the sustainable development of humankind.

**Because chemistry is so important,
the 2018-2019 French school year
will be entitled “The Year of Chemistry,
from Primary School to University”!**

Researchers, engineers, teachers and students will organize a flurry of events and lessons in schools, universities, chemical companies and museums, in order to highlight the role of chemistry, both in academic science and in industry, through its contributions to technological, economic and sustainable development.

Paris, city of science, city of students

Paris is the largest student city in France and the second largest one in the world. Each year, more than 600,000 undergraduates study in the 7 universities located in the centre of France's capital city and in the 10 universities of the Ile-de-France region. Thanks to the attractiveness of the capital, 14 % of the city's students have crossed borders to come and study here. Not only can a quarter of France's universities and its most prestigious schools be found in the Paris region, but also 40 %

of its national research potential, thanks to a high concentration of technology companies (corporate groups, SMEs and start-ups) and internationally renowned competitive clusters.

Two of the 20 most prestigious French Chemistry schools, Chimie ParisTech and ESPCI, have their campus in the heart of Paris. French and foreign students can also benefit from the excellent curricula provided by the École Polytechnique and the École Normale Supérieure.

making science together!

Reference partners

The Foundation of the “Maison de la Chimie”

aims to contribute to the progress of chemical science in all of the academic and industrial fields of research and application in order to facilitate dialogue between the general public, researchers, teachers and industrialists, and to promote the use of chemistry in the interest of people, society and the environment.

<http://www.maisondelachimie.com>

The “Union des industries chimiques”, UIC

is the professional organisation of chemical companies in France. It is active on local, national and European levels and plays a federating role, promoting sustainable growth of the chemical industry and of French industry in general. UIC also promotes the image of chemistry and emphasizes the eminent role chemistry has to play in our complex world.

<http://www.uic.fr>

The French Chemical Society, SCF

brings together thousands of French chemists, including researchers, teachers, industrialists and students. SCF's purpose is to represent French chemists, promote their work, and publish scientific information through its website, its newsletter and its monthly publication called “l'Actualité Chimique”.

<http://www.societechimiquedefrance.fr>

www.icho2019paris.com

Facebook : IChO2019 Paris

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POUR L'ÉCOLE
DE LA CONFIANCE

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Jean-Michel Blanquer
Minister of Education

It is a great honour for France to host the 51st International Chemistry Olympiad, and I am very happy to see the Ministry of Education directing the organisation of this important event. The development of science as a whole, and of chemistry in particular, is an essential step in the technological and social progress of humanity and in the protection and the future of our planet. That is why I place my faith in the younger generation of scientists who, I know, will rise to the challenges of the 21st century, and lead the ecological transition and digital revolution that will ensure a more balanced world. The three hundred and more IChO candidates, from eighty countries on five continents will “make science together”. As well as chemistry connects a variety of scientific fields, such an event also helps to sustain the international scientific community and to build new partnerships that go beyond borders. The 51st edition of The International Chemistry Olympiad will also allow young scientists to discover our capital city and its surroundings, and to meet key players from the French and international chemistry communities. They have worked with the Ministry of Education to ensure the success of this event, and I

want to thank them very warmly for their cooperation. Our steering committee will undoubtedly make IChO in Paris an enriching and truly memorable event. In 2019, Paris will be at the centre of international chemistry. Shortly before the IChO opens, the 47th IUPAC World Congress, will celebrate the centenary of IUPAC in Paris. Furthermore, on the 29th of January 2019 “the International Year of the Periodic Table” (IYPT) will be launched at the UNESCO headquarters to celebrate the 150th anniversary of Dmitri Mendeleev's paper on his periodic system. In honour of these events the French 2018-2019 school year has been declared “The Year of Chemistry, from Primary School to University”. The objectives are first and foremost to encourage pupils and students to discover or explore chemistry but also to introduce chemistry to the general public, to audiences in primary and secondary schools, universities and Grandes Écoles, and through museums or centres of scientific culture. We look forward to participants in the 51st International Chemistry Olympiad experiencing ten remarkable days of science and true cultural exchange in the heart of Paris, the capital of our country, with its proud tradition of warmth and hospitality.





Jean-Pierre Sauvage

Nobel Prize in Chemistry 2016,
Honorary President of the Scientific Committee

International Chemistry Olympiads, July 2019

As the Honorary President of the Scientific Committee of these Olympiads, I am happy to greet you all and to welcome the many participants and their delegations. It is indeed wonderful that such an event can bring together hundreds and hundreds of young people who are full of passion for chemistry and who devote much of their time to this beautiful and important science.

Paris is certainly a very special location when it comes to chemical science. Although it is virtually impossible to rank scientists according to the importance of their contribution to science, it must be recognised that Antoine-Laurent de Lavoisier occupies a special place since he is one of the fathers of modern chemistry. Lavoisier was born in Paris (1743). It is also in Paris that he was beheaded in 1794, just a few years after he published his "Traité Élémentaire de Chimie" ("Elementary Treatise of Chemistry").

This opus was literally revolutionary in the sense that it presents chemistry as a real science, with rules and the quantitative treatment of various phenomena.

Today, chemical industry is everywhere in our surroundings and it plays a crucial role in our everyday life. Major French chemical companies have always played and continue to play an important role today. They have strong international influence in several fields of activity.

There is no doubt that the serious environmental problems that mankind has to face today will have to be resolved in the near future, at least in part. It is with chemistry, along with other sciences and technologies, that these difficulties will be resolved through the new mild techniques that industry is in the process of developing with the help of researchers from various origins and cultures. This multinational and multi-science approach should ensure the essential transition towards environmentally friendly behaviour.

France has a long tradition of advanced teaching and research in chemistry. The dual teaching system involving Universities and "Grande Ecoles" (or Engineering Schools) opens up a wealth of possibilities for motivated students. This diversity of opportunities is reflected in the research orientations of these institutions: often basic-science oriented in Universities, it can use a more applied approach in Engineering Schools.

Finally, I would like to stress that the Olympiads represent an important event directed at you, the young people interested in science. It is indeed reassuring to observe that many young women and men have a rational approach to the world and have a strong respect for science and knowledge, recognising that facts must predominate over opinions.

I would like to wish you all a very pleasant moment in Paris on the occasion of this unifying and important event. It is undeniably a competition but I am confident that it will be a fair and friendly one.



Pierre-Gilles de Gennes High School, host of the two scientific exams

The NSPCB (National School of Physical Chemistry and Biology) is a state school founded in the 1950s that trains laboratory technicians in different scientific fields. The current building situated at the heart of the 13th district of Paris was erected at the beginning of the 1970s and provides a spectacular view of the city. The school became a general and technological high school in 2010: it is now called NSPCB – Pierre-Gilles de Gennes High School. The school welcomes 2000 students divided into two sections: one half at the high school (STL, S, ST2S) and the

other half for post-graduate studies (CPGE, BTS, Professional Degree) with European sections and established partnerships with a number of universities (ENS Cachan, Paris VII). The building is home to a scientific equipment complex that is unique in France, and that houses equipment for engineering science, biology and chemistry (CPG, HPLC, RMN, CPG-SM...) as well as semi-industrial equipment (distillation and 10m high extraction columns, 30 to 50L reactors).

The school was also used as a film location (Hidden, by Michael Haneke).

ICHO France 2019: Programme preview, July 2019



The History of the “ICHO 2019” logo

When non-chemistry students show us
what they think about chemistry!

Rather than hiring a professional graphic designer, the Ministry of Education offered a second-year graphic design class from the Estienne School in Paris the opportunity to work on the IChO France 2019 graphic charter. With the help of their teachers Raphaël Lefeuvre and Sophie Perret, students worked on 20 individual and group projects. After two project reviews, the jury and the DELCOM (Ministry of Education Delegation for Communication) selected the project proposed by Coline Vignaud.

“Chemistry has its own universal language shared by all chemists, a language that brings them together in their work and sets them apart from the uninitiated. The IChO embodies a project built by chemists for chemists, so the decision to select from the chemistry graphic universe for the creation of its logo seemed an obvious one.

The letters of the framed acronym remind us of the periodic table of Mendeleev, one of the fundamental pillars of chemistry. The logo was then associated with a contrasted colour gradient. These gradients come from my own high school chemistry lessons, when I was studying acidity with pH paper sensors! The graphic charter as a whole is based on the pre-existing chemistry graphic, with all of its wealth of meaning.”

This language based on the Periodic Classification of Elements is being honoured in 2019 by UNESCO’s “International Year of the Periodic Table”. The end result is a logo reminiscent of the Classification of Elements but also including images of open windows which mirror one of the goals of the IChO: the successful bringing together and exchanges between the 80 national delegations participating in the event. Stimulating, graphic, clear, this logo can be understood by everybody. Coline Vignaud benefited from a month-long internship at the DELCOM in July 2017 which allowed her to pursue her work and extend it to the communication about the operation “2018-2019: The Year of Chemistry, from Primary School to University”.

The Ministry would like to thank all of the students who participated in this educational project, their teachers Raphaël Lefeuvre and Sophie Perret for their valuable input, and extend hearty congratulations to Coline Vignaud for her crucial and highly appreciated contribution!

