



July 26–28/2019  
Saint Petersburg



# 150 MENDELEEV

4th International Conference on the Periodic Table  
endorsed by IUPAC



# Mission

- **To emphasize the importance of chemistry and the advances in research on the Periodic Table of Chemical Elements for sustainable development and the benefit of humankind**
- **To recognize the use of the Periodic Table in such vital sciences as chemistry, physics and biology**
- **To highlight the continuous nature of scientific discovery in different contexts, with a particular emphasis on promoting science education at all levels among youth**

The International Year of the Periodic Table of Chemical Elements in 2019 marks the 150th anniversary of the Periodic Table's creation by the Russian scientist Dmitri Mendeleev, who is regarded as one of the pioneers of modern chemistry.

In 1869 Mendeleev made a breakthrough discovery when he predicted the properties of four elements and their compounds in St. Petersburg. He also left space in the Periodic Table for elements to be discovered in the future.

The year will also be an occasion to pay tribute to the recent discovery & naming of four super-heavy elements of the Periodic Table with atomic numbers 113 (nihonium), 115 (moscovium), 117 (tennessine) & 118 (oganeson) as a result of international collaboration.

# Endorsement



INTERNATIONAL UNION OF  
PURE AND APPLIED CHEMISTRY

IUPAC endorsement means that entry visas will be granted to all bona fide chemists provided application is made no less than six months in advance. If a visa is not granted two months before the conference, the IUPAC Secretariat should be notified immediately by the applicant.

The Organizing Committee provides a customary 10% registration fee reduction for IUPAC Members, Affiliate Members & Fellows.



United Nations  
Educational, Scientific and  
Cultural Organization

In support of



• International Year  
• of the Periodic Table  
• of Chemical Elements

# Organizers



## **Dr. Mikhail Kurushkin**

Initiator, chair, main organizer  
ITMO University, Russia



## **Prof. Eric Scerri**

Initiator, co-chair, conference editor  
University of California, Los Angeles,  
the United States



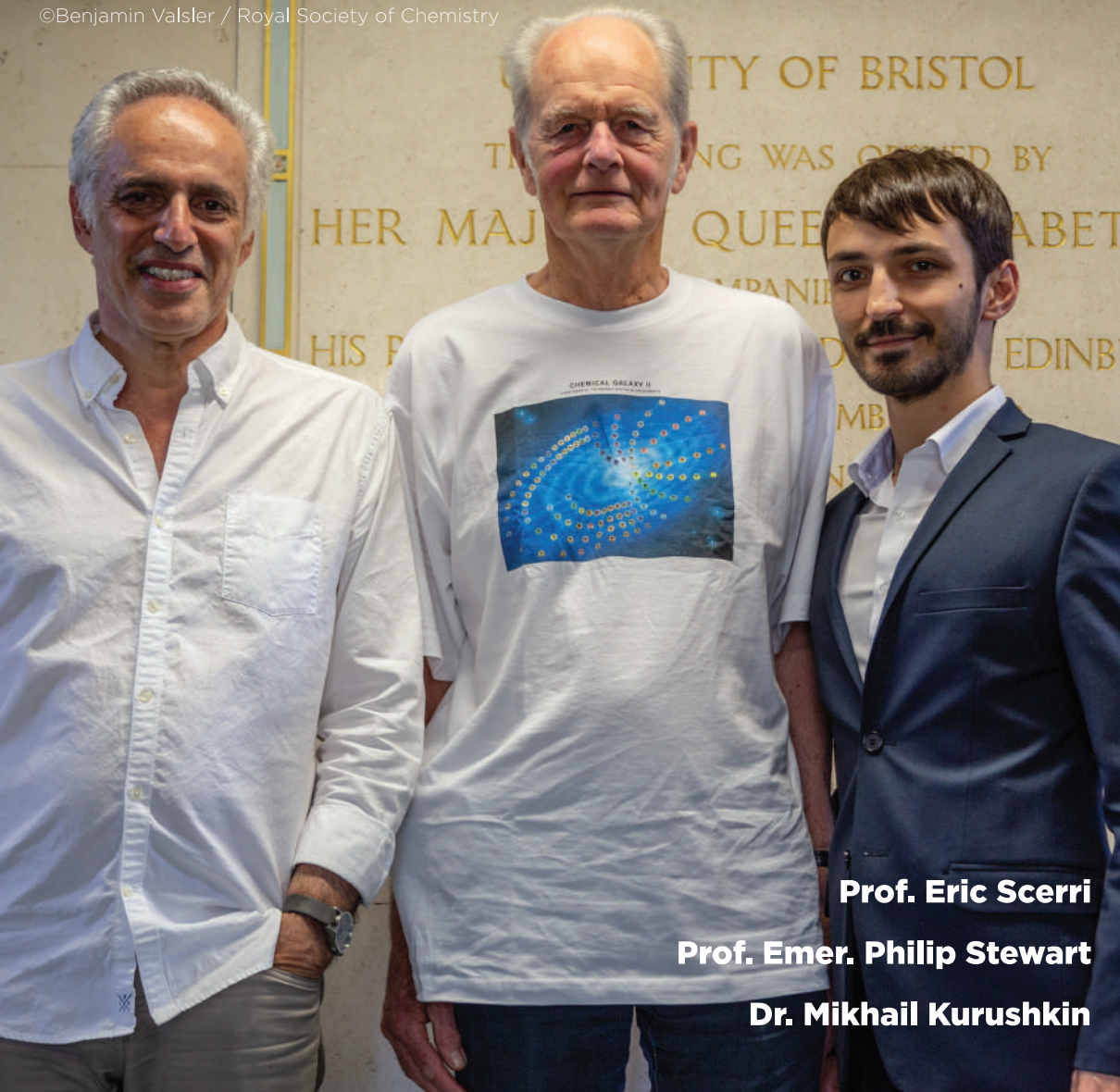
## **Prof. Emer. Philip Stewart**

Co-chair  
University of Oxford, the United Kingdom



## **Prof. David Avnir**

Chair of the Programme Committee  
The Hebrew University of Jerusalem, Israel



**Prof. Eric Scerri**

**Prof. Emer. Philip Stewart**

**Dr. Mikhail Kurushkin**

# The Organizing



**Elizaveta Punchenko**  
Vice Chair



**Alexandra Ignatenkova**  
Brand Director



**Ulyana Alevskaya**  
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**Anna Vanina**  
Content Director



**Daria Rusikova**  
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Chief Operations Officer



**Nadezhda Maksimenko**  
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**Olga Boyarintseva**  
Visa Support Executive



**Sofia Antipova**  
Chief Financial Officer

# Plenary Lectures



**Dr. David Seaborg**

University of San Francisco,  
the United States

**Glenn T. Seaborg's life and  
contributions to chemistry  
and the Periodic Table**



**Prof. Peter Atkins**

University of Oxford,  
the United Kingdom

**The Periodic Table:  
foundations and elaborations**



**Prof. Eric Scerri**

University of California, Los Angeles,  
the United States

**A historical overview of the development of  
the Periodic Table with an emphasis on the degree  
to which it is explained by quantum mechanics**





**Prof. Hideto En'yo**  
RIKEN, Japan  
History of nihonium



**Dr. Viktor Vyatkin**  
Ekaterinburg, Russia  
Periodic Table and the spin-orbital exclusion principle



**Prof. Pekka Pyykkö**  
University of Helsinki, Finland  
The Periodic Table today and tomorrow

# Invited Lectures



**Prof. Natalia Tarasova**

IUPAC, Russia

**A brief presentation about the International Union of Pure and Applied Chemistry**



**Prof. David Avnir**

The Hebrew University of Jerusalem, Israel  
**Chirality, life, and the Periodic Table**



**Prof. Artem Oganov**

Skolkovo Institute of Science and Technology, Russia  
**Novel chemical phenomena at extreme conditions**

**Prof. Shiv N. Khanna**

Virginia Commonwealth University, the United States  
**Superatoms: a new kind of alchemy with potential for novel materials**



**Prof. W. H. Eugen Schwarz**

Tsinghua University, China  
**Physical explanation of horizontal and vertical trends in the Periodic Table of elements**

**Prof. Jun Li**

Tsinghua University, China  
**Relativity-induced periodicity change in chemical bonding of heavy-element compounds**





**Prof. Evamarie Hey-Hawkins**  
Universität Leipzig, Germany  
**Phosphorus: the Devil's element?**



**Prof. Jordi José**  
Universitat Politècnica de Catalunya, Spain  
**Stellar alchemy and the origin of cosmic elements**

**Prof. Daniel Rabinovich**  
The University of North Carolina at Charlotte, the United States  
**Hydrogen to oganesson: a philatelic tour of the Periodic Table**



**Prof. Christopher H. Hendon**  
University of Oregon, the United States  
**Mimicking precious metals with stable core-shell architectures**

**Prof. Elena Ghibaudi**  
University of Turin, Italy  
**Levi's Periodic System vs. Mendeleev's Periodic Table: two engaged visions of chemistry between science and literature**



**Prof. Michelle Franci**  
Vatican Observatory, Vatican City  
**Isotopically enriching the Periodic Table**

**Prof. Eugene Babaev**  
Lomonosov Moscow State University, Russia  
**Periodic Law in chemistry and other sciences**





**Prof. Mei-Hung Chiu**

National Taiwan Normal University, Taiwan  
Promoting public understanding of the  
Periodic Table and chemical elements  
in IYPT 2019



**D.Sc. Naum Imyanitov**

Saint Petersburg, Russia  
Periodic Law: new formulation and  
equation description



**Dr. Mikhail Kurushkin**

ITMO University, Russia  
Alfred Werner and Viacheslav Romanov:  
unrecognized geni of the periodic system



**Prof. Igor Dmitriev**

Saint Petersburg State University, Russia  
"Sublime generalization" (A strange  
history of the strange law)



**Dr. Elena Ginak**

D.I. Mendeleev Institute for Metrology, Russia  
The system approach of D.I. Mendeleev  
to "adjusting measures and weights in Russia"



**Mr. Platon Kachalin**

Pyotr Kapitsa School #1557, Russia  
Chemistry from an astrophysicist's  
point of view

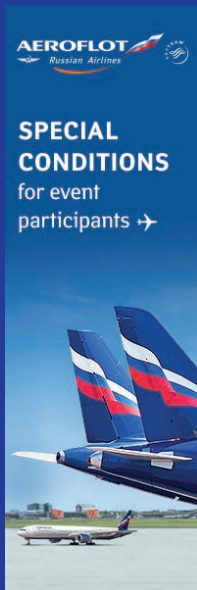


**Miss Veronika Elkina**

School #197, Russia  
The geography of discoveries of chemical  
elements through the prism of  
internationalization of research



# Partnership



# The Programme Committee



**Prof. Kōsuke Morita**

RIKEN,  
Japan



**Dr. Fabienne Meyers**

IUPAC,  
the United States



**Dr. Siegbert Schmid**

The University of Sydney,  
Australia

**Prof. Michael Matthews**

The University of New  
South Wales, Australia





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Netherlands



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National Taiwan University,  
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de México, México



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Universiti Kebangsaan Malaysia,  
Malaysia



**Prof. Tewfik Soulimane**  
University of Limerick,  
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ITMO University,  
Russia



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the United States



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Universidad Nacional de la  
Patagonia San Juan Bosco,  
Argentina



**Prof. Sérigne Amadou Ndiaye**  
Cheikh Anta Diop University,  
Senegal



# Geography





# About ITMO



ITMO UNIVERSITY



SCAMT

***Venue: ITMO University Main Building  
49 Kronverksky Pr., Saint Petersburg, 197101***

## ***Faces:***



**Dr. Alexander Vinogradov**  
Director of  
Biochemistry Cluster



**Dr. Daria Kozlova**  
First Vice Rector



**Anna Veklich**  
Head of Strategic  
Communications Department

## ***Facts:***

**1,810**

***Foreign students  
from 82 countries***

**1st**

***Place in Russia  
in chemistry***

**1st**

***Place in Russia  
in chemical  
engineering***

**170+**

***Partner universities  
around the world***



**[mendelev150.ifmo.ru](http://mendelev150.ifmo.ru)**

**[mendelev150@scamt-itmo.ru](mailto:mendelev150@scamt-itmo.ru)**

**49 Kronverksky Pr.,  
Saint Petersburg, 197101**