## Announcement of nominations for Union Officers and Science Board and Executive Board Members

This file contains details on the nominees for Vice President, Treasurer, Elected Members of the Executive Board and Elected Members of the Science Board. For each position, the nominees are listed alphabetically, including **short bio** and **expected contribution**. For readability, each nominee's entry starts on a new page.

Short CVs are compiled separately.

## Table of Contents

# Vice-President

## Lidia Armelao

Degree in Chemistry cum laude (1990), Master in Glass Engineering (1991) and PhD in Chemical Sciences (1994) from Padova University (Italy). Post-doc fellow in Paris (UPMC, 1995) and visiting scientist in Canada (University of Western Ontario, 2005–2011). Researcher and Research Executive at the National Research Council (CNR) of Italy (1996–2015) and full professor of Inorganic Chemistry at Padova University (since 2016). At the National Research Council (CNR) of Italy she has been Director of the Institute of Condensed Matter Chemistry and Energy Technologies, and she is currently Director of the CNR Department of Chemical Sciences and Materials Technologies (since 2020). She has been member of the Inorganic Chemistry Division (Division II) of IUPAC since 2014, starting as National Representative (2014 – 2016), Titular Member (2017-2019), Vice-President (2020 – 2021), and President (since 2022). Elected member of the Scientific Board (2024) and representative at IUPAC for Italy since 2019. She is governmental expert in the CapTech Materials and Structures at the European Defense Agency, and component of the Scientific Commission of the Italian Chemical Society (2020 – 2022). She is coordinator of several national and international research projects and committed in various IUPAC projects. She received the EniChem Best Thesis Prize (1990), the Ugo Croatto Prize for young researchers (1995), the Anassilaos Prize (2023), the IUPAC award Distinguished Women in Chemistry and Chemical Engineering (2023). She has been fellow of Istituto Veneto di Scienze, Lettere ed Arti in Venezia (Italy) since 2021. She regularly teaches fundamental and specialistic courses in Chemistry at Padova University where she is also member of the board of directors for the PhD course in Molecular Sciences. She has been invited by the European Commission Directorate General for Translation to give lectures on chemical nomenclature for interpreters. She is strongly committed in networking activities to promote scientific cooperation. Publications include > 250 papers on international scientific journals and > 40 invited lectures at national and international conferences. During the scientific and professional career, she has combined intense research activity with institutional and managerial roles at national and international level with increasing commitment. As a researcher, she has obtained original results, among which significant are those related to the study of luminescent materials for energy applications. In her responsibility and institutional positions, she has worked on multiple scientific, relationship and managerial

levels, including in promoting the positive role of chemical sciences for the humankind and the environment.

**Expected Contribution**

The Union is facing new challenges after over one hundred years of history of great commitment that have made IUPAC the most authoritative international organization in Chemistry. IUPAC is also called to propose timely solutions and give trustworthy responses to the urgent needs and severe issues taking place at global level.

The process of renewing the Union is in progress and a new governance structure has been introduced in 2024. As Division President and elected Science Board member today, with a strong background and long-time service in IUPAC, I will bring the knowledge of the current work and a clear view on the challenges and perspective of the transition. IUPAC should be able to have a functional organization and a pragmatic dialogue with scientific societies, international organizations, decision makers and important companies. In the role as Vice-President, I will be dedicated to achieving these goals.

During my scientific and professional career, I have combined an intense and passionate research activity with institutional, coordination and managerial roles, mainly as Director of the Department of Chemical Sciences of the National Research Council (CNR), the largest public research institution in Italy. I have accomplished these roles with enthusiasm and dedication at national and international level. I had the opportunity to develop a deep knowledge of the international chemical community (academia, research institutions, scientific societies, industries) which I interface constantly and cooperatively with concrete initiatives. In close collaboration with the IUPAC leadership, my main commitment will be to work to make IUPAC an example of a streamlined, inclusive, modern, efficient, authoritative, and society-connected organization.

The key issues about which I will be committed and focused for IUPAC embrace: developing strategic initiatives on emerging challenges in the chemical sciences, including education, digitalization issues and valorization of key IUPAC products; optimizing the Union structure and improving the project system; improving the involvement of younger generation and new geographical areas (as Africa, South America and Asia); improving the funding sources; developing cooperation with scientific institutions and the industrial sector; improving the role as scientific advisor to stakeholders and decision makers; improving reputation and attractiveness through prestigious prizes and lectureship awards; enhancing publications visibility.

## Derek Craston

Derek is a highly experienced scientist and business leader with a broad background in applied chemistry and expertise in leading business activities, in change management, organisational efficiency and design, and in setting and delivering corporate and scientific strategies.

Of scientific note, he has a degree and PhD (Imperial College) in chemistry, was a postdoctoral student in the laboratories of Allen Bard (Texas) and held the prestigious role of UK Government Chemist (a UK statutory position to assist in the arbitration of legal trade disputes in food and pharmaceuticals) for ten years. He has provided scientific leadership of teams in fields as broad as chemical standards and reference materials, food and environmental chemistry, nucleic acid chemistry, measurement science and pharmaceutical development. He has published extensively for someone who has spent most of his career in industry and has presented many keynote lectures.

Of particular significance to this nomination, Derek also has a proven track record in successful commercial and financial management, and in running complex multinational divisions and scientific teams. Although based in the UK, Derek has worked internationally and run operations in the US, Germany and China, and been involved in establishing laboratories in India. During his long career in industry, he assumed several important roles in taking a privatised Government Laboratory to become a highly successful international Lifesciences organisation which employs 1000's of employees across the globe. This included over a decade as an Executive Board member and as Chief Scientific Officer.

Derek has been an active contributor to IUPAC since 2014 and is currently President of the Analytical Chemistry Division and a member of the Science Board. He has been a task group member of several IUPAC projects and contributed to discussions at the General Assembly. As a member of the Science Board, Derek has been a major contributor to drafting documents on strategic priorities, scientific objectives and alternative organisational structures.

**Expected Contribution**

Having recently stepped back from fulltime employment, Derek has indicated his willingness to give 30 hours+ a week of his time to support the running and evolution of IUPAC. Given his knowledge of the work of IUPAC and the requirements of major sectors of

industry, his breadth of technical expertise and his experience and track record in change management, operations, commercial development and organisational design, Derek feels that he can make the following differences if he is elected to the role of Vice President:

1. As a current member of the Science Board, he feels that it is very important that the work to define IUPACs scientific strategy and direction, and to organise IUPAC accordingly is completed and implemented without greatly disrupting current activities and causing resentment amongst the Unions many volunteers. This will need careful navigation, strong communications and listening skills, determination to get all parties aligned with the required changes, and operational design and leadership to ensure smooth implementation. This pathway is very familiar to Derek and is something that he has been involved in several times in his work within industry; thus, he believes that he is ideally placed to steer IUPAC through a time of significant change, to enable it to maximise its impact to the chemistry community

2. IUPAC exists alongside of many industry, governmental and non-governmental organizations (such as NAOs) that contribute to the development of chemistry, and the interactions that chemists increasingly have with other fields of science. Derek feels strongly that IUPAC needs to increase its collaborations and partnerships with other bodies, to both guide its work and to make its outputs more visible to the external world. Working with the other members of IUPAC's Executive and the Executive and Science Boards, Derek would seek to increase the level and depth of engagement IUPAC has with all key collaborators by instituting more regular dialogue. NAOs are, of course, very important stakeholders and would be a particular area of focus. It is important that IUPAC listens to the requirements of all its NAOs, and that NAOs are regularly briefed on IUPACs work and the associated benefits of this work to chemists in industry and academia. Derek would also seek to increase the numbers of NAOs so that IUPAC can more effectively expand its geographic reach

3. Derek is acutely aware of the financial status of IUPAC and that many of its NAOs are experiencing more difficult economic times. If IUPAC is to deliver its work at a high quality in the required timeframes, it must increase the levels of funding available to it. This would be a further priority for Derek if he was elected as VP. Having worked in a commercial organisation with multiple models of doing business with customers and partners, Derek has several ideas of options that IUPAC should explore.

4. IUPAC has staff and many volunteers. These individuals are crucial to the future of the Union, and it is important that they feel valued, and that IUPAC attracts new volunteers to enable it to address key areas of scientific development, and to ensure that it remains vibrant. Derek would seek to involve himself in activities to raise the profile of IUPAC with

chemists across the globe, including those involved with the International Young Chemists Network. He sees himself as a strong team player and would work cooperatively and respectfully alongside of others in IUPAC to achieve change and success. In industry, he had an open-door policy and would seek to do the same virtually in the role of VP. He is prepared to establish a way of working that would make sure he is available in any given week at a time that represents a sociable hour across all geographies. He is particularly interested in engaging with volunteers to understand the benefits they perceive in getting involved in committee and project work, and any frustrations that they have in interacting with IUPAC. Through understanding of these benefits and pitfalls, IUPAC should be able to review its policies in relation to the treatment of its volunteers, and to advertise for the involvement of new talent in a more effective way.

## Christine K Luscombe

Christine Keiko Luscombe is a Japanese-British chemist known for her work in polymer chemistry and organic electronics. Born and raised in Kobe, Japan, she pursued her undergraduate studies at Trinity College, University of Cambridge, earning a Bachelor's degree in Natural Sciences in 2000. She continued at Cambridge for her doctoral research under the mentorship of Professors Andrew Holmes and Wilhelm Huck in the Melville Laboratory for Polymer Synthesis, focusing on surface modifications using supercritical carbon dioxide. Her exceptional work during this period was recognized with the Syngenta Award for the best organic chemistry project. In 2004, she joined Professor Jean Fréchet's group at the University of California, Berkeley, as a postdoctoral fellow. There, she initiated her research on semiconducting polymers for organic photovoltaics, supported by the Lindemann Fellowship and a Junior Research Fellowship from Trinity College, Cambridge.

Luscombe began her independent academic career in 2006 as an Assistant Professor in the Materials Science and Engineering Department at the University of Washington, Seattle. She rapidly advanced through the academic ranks, becoming an Associate Professor in 2011 and the Robert J. Campbell Professor in 2017. During her tenure, she also served as Interim Chair of the department from 2020 to 2021. In 2021, she returned to Japan to join the Okinawa Institute of Science and Technology (OIST) as a Full Professor, where she continues her groundbreaking research and contributes to academic leadership.

Luscombe's research is at the forefront of polymer chemistry and organic electronics. She specializes in the design and synthesis of semiconducting polymers for applications in organic electronics, including photovoltaics and flexible electronics. Her work emphasizes the development of sustainable and efficient synthetic methodologies, such as direct arylation polymerization, to create conjugated polymers with tailored properties. She has published over 150 papers in these areas, significantly advancing the understanding and application of functional macromolecules.

Beyond her research, Luscombe has played vital roles in scientific publishing and professional organizations. She has served on the Editorial Advisory Boards of several

prestigious journals, including Macromolecules, ACS Macro Letters, Polymer International, Advanced Electronic Materials, ACS Applied Materials & Interfaces, Journal of Applied Physics, and Advanced Functional Materials. In 2024, she was appointed Editor-in-Chief of Polymer Chemistry.

Her leadership extends to international scientific communities, where she has been actively involved with the International Union of Pure and Applied Chemistry (IUPAC). She served as Vice President of the Polymer Division from 2016 to 2019, President from 2020 to 2023, and was elected to the Executive Board in 2024.

**Expected Contribution**

As Vice President of the International Union of Pure and Applied Chemistry (IUPAC), I am committed to strengthening the strategic objectives of the Union. My work as a researcher across 3 continents, has afforded me a unique perspective on the importance of maintaining a high standard of scientific integrity, transparency, and inclusivity. I plan to leverage this experience to help shape IUPAC's future and strengthen its impact on the worldwide scientific community.

I have been working with IUPAC since 2012, which is when I joined the Subcommittee of Polymer Terminology (SPT) within Division IV (Polymer Division), and then joining the Subcommittee of Polymer Education the following year. I served as the Secretary for SPT during 2014-2015, and was elected VP of Division IV in 2016. I was one of the first TMs for the Interdivisional Committee on Green Chemistry for Sustainable Development (ICGSD). I served as the President of Division between 2020-2024, where I introduced greater coordination between the Subcommittees starting bimonthly meetings with the subcommittee chairs encouraging greater dialog, and created our Google Scholar page (https://scholar.google.ca/citations?user=5lyTJsEAAAAJ&hl=en&authuser=2) to enable better tracking of the impact of our work. I served as a member of the Evaluation Committee during these years, and am currently chairing the Committee. In addition to the being on the Executive Board, I have been an observer at the Science Board meetings by virtue of being the Chair of the Evaluation Committee. In summary, I have been heavily engaged with IUPAC over the past 13 years, and have been actively engaged in the changes it is currently undergoing.

IUPAC is at a crossroads, facing both challenges and opportunities as it redefines its role in a rapidly evolving scientific landscape with financial constraints. Historically, IUPAC has been the steward of chemical nomenclature and standards, but today it needs to adapt to a world where chemistry is increasingly interdisciplinary, digital, and application-driven. As

the VP of IUPAC, I plan to carry on with the excellent groundwork that Mary Garson has set in establishing the Science Board. Under the next VP, the actual restructuring of IUPAC needs to occur. I hope to use my global experiences and communication skills to navigate the complexity of bringing together the different Divisions and Subcommittees, and guide IUPAC towards a stable future.

## Zhigang Shuai

Zhigang Shuai, PhD Fudan University, Shanghai, 1989. Postdoc and research scientist in University of Mons, Belgium for 12 years. He can speak French fluently. In 2000, he became a Professor in the Institute of Chemistry of the Chinese Academy of Sciences. He moved to Tsinghua University in 2008 as a Changjiang Scholar Chair Professor. And since 2022, he is Chair Professor in the Chinese University of Hong Kong, Shenzhen, and Associate Dean of School of Science and Engineering.

He has been working on theoretical chemistry specialized in theory of excited state structure and dynamics for complex systems. He has published more than 460 papers in scientific journals, with more than google 38000 citations (H-index 106). He has been elected to the International Academy of Quantum Molecular Science in 2008 and served as vice president for 2018-2023; Fellow of the Royal Society of Chemistry; Foreign Member of the Academia Europaea; Foreign Member of the Royal Academy of Belgium.

He served as Deputy-Secretary General of the Chinese Chemical Society for 2006-2017, and was elected as the Vice President in 2018 and re-elected in 2022. For 2010-2017, he was a National Representative for IUPAC CCE. For 2018-2019, he served as AM in Division I. Then for 2020-2023, he served as TM for Division I. He was elected to the Bureau and then to the Executive Committee in 2021 and to the newly established Executive Board in 2023. He has served in the IUPAC Organizational Structure Review Group in 2020. He also served in judge committee for selecting and promoting “Top 10 emerging technologies in chemistry”, an IUPAC centenial initiative. He delivered a plenary lecture for the International Year of Chemistry launch ceremony in UNESCO headquarter on “Chemistry and Civilization: an Example of Ancient China” in 2011. He presented a closing remark for the International Year of Periodic Table for Chemical Elements in Tokyo, 2019.

**Expected Contribution**

Prof. Shuai has a strong background and longtime service in IUPAC. He has served as Chairman for a number of influential international conferences including the International Congress of Quantum Chemistry (2015, Beijing). He is the vice President of the

International Academy of Quantum Molecular Science, a prestigious learnt international organization. He has been responsible for the international affair for the Chinese Chemical Society since 2006. Especially, he has been an active member for the IUPAC Organizational Structure Review Group and committee member for the annual selection of IUPAC top 10 emerging technologies in chemistry. He was elected to the Executive Committee by the Bureau in 2021 and to the Executive Board by Council. With his academic impact and experience in academic organization management, Prof. Shuai will bring his rich experiences both in academia and international services to devote himself to IUPAC's future development, to deepen the cooperation between IUPAC and the chemistry community, and to help to enhance IUPAC's international influences for the developing world. China is an important country, especially for the chemical industry. Global challenges in energy, resources, environment and climate can only be solved through international cooperation. It is expected that China's active participation in international affairs will bring new opportunities to the world with Chinese wisdom of five-thousands years civilization, a precious asset to the world. The Chinese Chemical Society, along with the 130,000 members, strongly supports Prof. Zhigang Shuai to run for the Vice President of IUPAC.

# Treasurer

## Derek Craston

Derek is a highly experienced scientist and business leader with a broad background in applied chemistry and expertise in leading business activities, in change management, organisational efficiency and design, and in setting and delivering corporate and scientific strategies.

Of scientific note, he has a degree and PhD (Imperial College) in chemistry, was a postdoctoral student in the laboratories of Allen Bard (Texas) and held the prestigious role of UK Government Chemist (a UK statutory position to assist in the arbitration of legal trade disputes in food and pharmaceuticals) for ten years. He has provided scientific leadership of teams in fields as broad as chemical standards and reference materials, food and environmental chemistry, nucleic acid chemistry, measurement science and pharmaceutical development. He has published extensively for someone who has spent most of his career in industry and has presented many keynote lectures.

Of particular significance to this nomination, Derek also has a proven track record in successful commercial and financial management, and in running complex multinational divisions and scientific teams. Although based in the UK, Derek has worked internationally and run operations in the US, Germany and China, and been involved in establishing laboratories in India. During his long career in industry, he assumed several important roles in taking a privatised Government Laboratory to become a highly successful international Lifesciences organisation which employs 1000's of employees across the globe. This included over a decade as an Executive Board member and as Chief Scientific Officer.

Derek has been an active contributor to IUPAC since 2014 and is currently President of the Analytical Chemistry Division and a member of the Science Board. He has been a task group member of several IUPAC projects and contributed to discussions at the General Assembly. As a member of the Science Board, Derek has been a major contributor to drafting documents on strategic priorities, scientific objectives and alternative organisational structures.

**Expected Contribution**

While not an accountant, Derek has run large business divisions with annual turnovers of $50-$100m. He is therefore very familiar with financial accounts and has indeed been treasurer of small sport charities in the UK. He is very familiar with budgeting and company accounts, and the importance of effective governance and fiscal control. As treasurer he would seek to:

1. Work closely with the Finance Committee to set realistic budgets, to maximise resource allocation to the delivery of IUPACs output, to oversee and report on income and expenditure and to manage IUPAC's reserves

2. Liaise with NAOs over financial contributions and to provide details of budgets and expenditure and the associated outcomes

3. Work with the Science and Executive Boards to assist them in the allocation of resources and to establish a financial framework (plan) that aligns with IUPACs strategic priorities and objectives

4. Participate in the work of the Evaluation Committee to assess the impact of IUPACs contribution to chemistry.

5. Provide expertise in commercial development and business models to assist IUPAC in generating additional income from other funding sources.

## Tom Kinzel

Dr. Tom Kinzel is an accomplished chemist and innovation leader with over 15 years of experience in scientific and business roles. Currently the Executive Director of the German Chemical Society (GDCh), he has held senior positions at Bayer and Nuvisan. Trilingual in German, English, and Chinese, Dr. Kinzel excels in driving innovation and strategic partnerships globally. He holds a PhD in Organic Chemistry from the University of Göttingen and an Executive MBA from HEC Paris.

**Expected Contribution**

IUPAC's core mission of driving standardization in chemistry is essential for clear, unambiguous, and successful scientific communication. This is necessary for academia, industry, and various institutions globally. Given new developments such as ongoing digitalization in research and AI, this task remains crucial.

The continuous organization and execution of this mission and additional tasks can only be achieved through the judicious allocation of available resources. In the role of treasurer, I would contribute by:

- Ensuring transparent analysis and communication of the budget situation within the board, to provide a sound financial foundation for strategic decision-making, including financial scenario building for different strategic options.

- Implementing strict budget planning, allocation, and control aligned with the strategic guidelines. The goal is to provide as much value as possible while preserving the long-term sustainable development of IUPAC.

- Contributing to the strategic development of IUPAC in accordance with the development of its financial situation.

# Executive Board

## Lidia Armelao

Degree in Chemistry cum laude (1990), Master in Glass Engineering (1991) and PhD in Chemical Sciences (1994) from Padova University (Italy). Post-doc fellow in Paris (UPMC, 1995) and visiting scientist in Canada (University of Western Ontario, 2005–2011). Researcher and Research Executive at the National Research Council (CNR) of Italy (1996–2015) and full professor of Inorganic Chemistry at Padova University (since 2016). At the National Research Council (CNR) of Italy she has been Director of the Institute of Condensed Matter Chemistry and Energy Technologies, and she is currently Director of the CNR Department of Chemical Sciences and Materials Technologies (since 2020). She has been member of the Inorganic Chemistry Division (Division II) of IUPAC since 2014, starting as National Representative (2014 – 2016), Titular Member (2017-2019), Vice-President (2020 – 2021), and President (since 2022). Elected member of the Scientific Board (2024) and representative at IUPAC for Italy since 2019. She is governmental expert in the CapTech Materials and Structures at the European Defense Agency, and component of the Scientific Commission of the Italian Chemical Society (2020 – 2022). She is coordinator of several national and international research projects and committed in various IUPAC projects. She received the EniChem Best Thesis Prize (1990), the Ugo Croatto Prize for young researchers (1995), the Anassilaos Prize (2023), the IUPAC award Distinguished Women in Chemistry and Chemical Engineering (2023). She has been fellow of Istituto Veneto di Scienze, Lettere ed Arti in Venezia (Italy) since 2021. She regularly teaches fundamental and specialistic courses in Chemistry at Padova University where she is also member of the board of directors for the PhD course in Molecular Sciences. She has been invited by the European Commission Directorate General for Translation to give lectures on chemical nomenclature for interpreters. She is strongly committed in networking activities to promote scientific cooperation. Publications include > 250 papers on international scientific journals and > 40 invited lectures at national and international conferences. During the scientific and professional career, she has combined intense research activity with institutional and managerial roles at national and international level with increasing commitment. As a researcher, she has obtained original results, among which significant are those related to the study of luminescent materials for energy

applications. In her responsibility and institutional positions, she has worked on multiple scientific, relationship and managerial levels, including in promoting the positive role of chemical sciences for the humankind and the environment.

**Expected Contribution** [from above, same as VP]

The Union is facing new challenges after over one hundred years of history of great commitment that have made IUPAC the most authoritative international organization in Chemistry. IUPAC is also called to propose timely solutions and give trustworthy responses to the urgent needs and severe issues taking place at global level.

The process of renewing the Union is in progress and a new governance structure has been introduced in 2024. As Division President and elected Science Board member today, with a strong background and long-time service in IUPAC, I will bring the knowledge of the current work and a clear view on the challenges and perspective of the transition. IUPAC should be able to have a functional organization and a pragmatic dialogue with scientific societies, international organizations, decision makers and important companies. In the role as Vice-President, I will be dedicated to achieving these goals.

During my scientific and professional career, I have combined an intense and passionate research activity with institutional, coordination and managerial roles, mainly as Director of the Department of Chemical Sciences of the National Research Council (CNR), the largest public research institution in Italy. I have accomplished these roles with enthusiasm and dedication at national and international level. I had the opportunity to develop a deep knowledge of the international chemical community (academia, research institutions, scientific societies, industries) which I interface constantly and cooperatively with concrete initiatives. In close collaboration with the IUPAC leadership, my main commitment will be to work to make IUPAC an example of a streamlined, inclusive, modern, efficient, authoritative, and society-connected organization.

The key issues about which I will be committed and focused for IUPAC embrace: developing strategic initiatives on emerging challenges in the chemical sciences, including education, digitalization issues and valorization of key IUPAC products; optimizing the Union structure and improving the project system; improving the involvement of younger generation and new geographical areas (as Africa, South America and Asia); improving the funding sources; developing cooperation with scientific institutions and the industrial sector; improving the role as scientific advisor to stakeholders and decision makers; improving reputation and attractiveness through prestigious prizes and lectureship awards; enhancing publications visibility.

## David A Cole

David Allen Cole is the president and CEO of the Science History Institute (SHI) in Philadelphia. Prior to his tenure at SHI, he served as the Executive Director of the Hagley Museum and Library in Wilmington from 2013 to 2020. His principal research interest is in innovation history and theory, and he is the author of The Power of Innovation, an exhibition and catalogue on the history of American invention and the U.S. patent system in the nineteenth century, presented at the National Museum of China (2018). A graduate of Vanderbilt University, he received a master's degree from Harvard University and a Ph.D. in the History of Art and American Studies from the University of Texas at Austin. Dr. Cole has been a Henry Luce Foundation Fellow, a Research Fellow of the Learning Innovations Laboratory (LILA) of Harvard University, and has taught at Harvard University, Rice University, and the University of Texas at Austin. He serves on the boards of the Mid-Atlantic Association of Museums, the Wilmington Children's Chorus, and the Delaware Council for Economic Education.

**Expected Contribution**

Dr. Cole would expect to contribute guidance, stewardship work, fundraising suggestions, and other board fiduciary duties.

## Hemda Garelick

Hemda Garelick is a Professor Emerita of Environmental Science and Public Health Education at Middlesex University, UK.

A current member of the IUPAC Executive Board who has a long and productive involvement In IUPAC as a Division member involved in many projects (19 completed and 15 in progress projects) , officer (Division Secretary, Division President and Division Past President and now an Emeritus Fellow) of Division VI 'Chemistry and the Environment' and a representative of Div VI on COCI and CCE. She has also been an active member of the Bureau 2016-2023.

She was awarded the IUPAC 2025 Distinguished Women in Chemistry or Chemical Engineering award.

She was always involved encouraging and mentoring young scientist, which she considers as a very important part of her role in IUAPC and has been undertaking this through her involvement in project work and the WCLM.

She has a long-term interest in public health, with particular focuses on health and hygiene aspects of water and sanitation systems.

She has led research in the areas of water pollution control and environmental chemistry and microbiology. This involves the investigation of health aspects, fate, sampling and analysis methods of chemical and of microbial pollution.Examples are pharmaceuticals, with a special emphasis on antibiotics, antibiotic resistant microorganisms and antibiotic resistant genes, as well as certain chemical pollutants such as arsenic and microplastics in the water, wastewater and in food. In addition, she also worked on the effects of chemicals from sources such as E-waste.

Her research work and her involvement in IUPAC highlighted the need for professionals in the fields of environmental and public health to understand, confront and tackle complexity and work across boundaries. She therefore has worked with different organisations such as OPCW and with colleagues in different countries both in Europe and beyond such as Bangladesh, India, Kazakhstan (Whom she encouraged and supported through the process of becoming an IUPAC NAO), Nigeria, Russia and Thailand. She

considers working across boundaries' and promoting interdisciplinary collaboration crucial to the implementation of the UNSDG.

As part of her work at the University she has also developed and established a programmes of Masters and Doctorates in Professional Studies (MProf/DProf), equivalent to MPhil/ PhD designed to address the needs of professional at the work place.

**Expected Contribution**

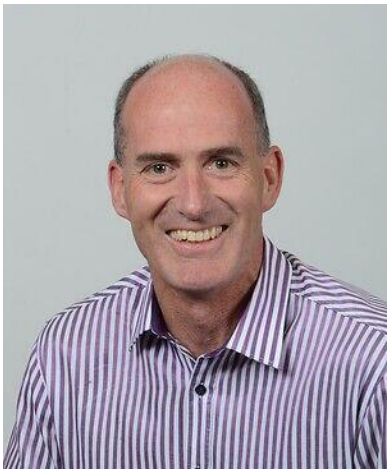
I have a long and productive involvement in IUPAC as both a Division Member involved in many projects, Officer (Secretary, President and Past-President) of Division VI 'Chemistry and the Environment', bureau member, executive board member and an elected and active member of the IUPAC Bureau.

With the changes that IUPAC has undergone in the last two years. there is a need for a stable development in terms of scientific and strategic priorities and future structure.

I plan, using my experience in IUPAC to support further developments.

If elected to the IUPAC Executive Board, I plan to work towards achieving increased interdivisional/inter-committee collaboration and ensure that interdisciplinary work together with pure discipline work is further developed. I hope to work to further support the development of cross organisational collaborations with other scientific, socio/political bodies and industry. I would work towards increasing the membership of IUPAC by attracting new NAOs and other affiliated organisations (e.g. in Industry), Young Chemist networks (e.g. IYCN) as well as affiliated individual members with the aim of sustaining a diverse organisation active in all continents. All the above will need to be fostered through engagement and collaboration with the Science Board, the Divisions and the Committees.

## Richard M Hartshorn



Professor Hartshorn is currently a Professor of Chemistry in the School of Physical and Chemical Sciences of the University of Canterbury, Christchurch, New Zealand. He is a Fellow of the Royal Australian Chemical Institute and a Fellow of the New Zealand Institute of Chemistry. He was Secretary General of IUPAC (2016-2023) and is currently a member of the IUPAC Executive Board. This biennium he returned to activity as a Titular Member in Division VIII, where he was Division President (2010-2013), and has a long history of work in chemical nomenclature, dating back to co-authorship of the 2005 Red Book.

Professor Hartshorn is also Vice President of CODATA, the Committee on Data of the International Science Council, a role which developed from his support of the development of digital standards in Chemistry, and the IUPAC representative on the International Chemical Identifier (InChI) Trust Board.

His research group works in the area of applying the coordination chemistry of dinuclear and heterodinuclear systems to problems in biological chemistry, and he has a long-standing interest in nomenclature and new ways of systematically naming and representing chemical compounds. He has been heavily involved in school and community education, through establishment of a science outreach program at UC, membership of the Trust Board for the National Science-Technology Roadshow (https://www.roadshow.org/index.php), and for many years was a Board member of Science Alive! (https://www.sciencealive.co.nz/).

Professor Hartshorn was a New Zealand U19 cricket representative and is a qualified cricket coach.

**Expected Contribution**

Professor Hartshorn's experience in leadership/governance roles, with both IUPAC and CODATA, and with a range of other organisations, will contribute to ensuring that structural changes approved by the IUPAC Council are implemented as smoothly and effectively as possible. His knowledge of the current statutes and by-laws, together with his long experience of working with IUPAC volunteers, places him in an excellent position to advise

on developing pragmatic and effective governance structures, within which IUPAC work can be conducted. He will continue to be active in IUPAC work in chemical nomenclature and structure representation, and in building international collaboration in the development and sustainability of digital standards in chemistry, through his work with both the InChI Trust and CODATA.

## Miki Hasegawa

Miki Hasegawa received her Ph.D. under the supervision of Professor Dr. Toshihiko Hoshi from Aoyama Gakuin University in 1998. She immediately joined the same university as an Assistant Professor and later established her own research group in coordination chemistry. She was promoted to Associate Professor in 2008 and Full Professor in 2011.

- Beyond her academic roles, she actively contributes to national research initiatives, serving as a senior research fellow at the Ministry of Education, Science and Technology and as a field advisor for JST CREST and PRESTO projects. She leads a rare earth development project in Tokyo Bay, coordinating collaboration among 16 academic and industrial groups for over a decade. Since 2023, she has been an Associate Editor of the Journal of Photochemistry and Photobiology, A, supporting the scientific community from both research and editorial perspectives.
- Her research focuses on the photochemistry of lanthanide coordination compounds, with over 180 scientific papers, 10 review articles, 10 patents, and 11 books. Her 20-year study on helical lanthanide complexes was featured in the 2024 Handbook on Physics and Chemistry of Rare Earths, edited by J.-C. Bünzli. She has received prestigious awards, including the Young Scientist Award (Adachi Award) from the Rare Earth Society of Japan in 2011 and the Shiokawa Award in 2023. She collaborates internationally with researchers from Japan, Korea, Austria, the UK, Germany, France, and Slovakia. With strong leadership, she has mentored over 20 international students, many of whom have secured academic positions worldwide.
- Since 2006, she has organized the International Mini-Symposium on Advanced Materials of Coordination Chemistry, bringing together young Japanese chemists and international speakers for collaboration. Some editions were held abroad during her sabbatical stays as an Invited Professor at the Technical University of Vienna and as a Visiting Professor at Strasbourg University.
- She is passionate about chemistry and science communication. Since 2009, she has been involved in public outreach activities through Division II of IUPAC. She successfully organized symposia for IYPT2019 and the International Year of Glass 2022, each attracting over 500 participants. She has also written science essays for the

general public and children, publishing 50 stories in the Asahi Shogakusei Shinbun during the COVID-19 lockdown.

- In IUPAC, she has actively participated in Division II (Inorganic Chemistry) as a Young Observer (2009-2015), National Representative (2016-2017, 2022-2023), and Titular Member (2018-2020, 2024-2025). Since 2008, she has been on the editorial board of Pure and Applied Chemistry, co-editing a special issue in 2023 honoring Dr. Mary Lowe Good. Her essay Elements in Sports: From IYPT 2019 to Tokyo 2020 was featured in Chemistry International (2020).
- Her extensive contributions to research, education, and international scientific collaboration continue to make a significant impact on the field of coordination chemistry.

**Expected Contribution**

She likes chemistry and periodic table of elements. Division II is one of her active field as a chemist to learn and to exhibit fun of science. Her communication at the international meeting not only IUPAC GA but also scientific communication in meetings plays an important role to make bright relationships between every people. Also, she has various experience to connect between different fields and lead to success both, for example, she directed the special symposium at Science Council of Japan in 2022 for the International Year of Glasses together with two committees. Finally, this symposium, hybrid-style, was succeeded with wonderful six speakers and the joining over five hundred audiences. She also enjoys to write essays to public people and children, and gave fifty stories at newspapers every two weeks during lock-down due to COVID-19 for two years aimed to encourage children in each home not school. Her activity will support the IUPAC activity and enhance public relation toward to peaceful and healthy future by her bright aspects.

## Evamarie Hey-Hawkins

Evamarie Hey-Hawkins was Professor of Inorganic Chemistry at Leipzig University from 1993 to 2023. When she retired, she left the Institute of Inorganic Chemistry and joined the Institute of Bioanalytical Chemistry (BBZ). She previously held positions at universities in England, Australia and Germany as well as various visiting professorships. She has published more than 600 publications and given over 400 lectures worldwide. Her numerous awards include e.g. the IUPAC Distinguished Woman in Chemistry Award, the Nenitescu Medal, two honorary doctorates and the Leipzig Science Prize. She is a member of the European Academy of Sciences and the European Academy of Sciences and Arts in Salzburg. In 2021 she received the Karl Ziegler Prize from the GDCh/Karl Ziegler Foundation. Her scientific interests include in particular medicinal chemistry, especially anti-tumor agents. She is currently Vice President of the German Society on Boron Neutron Capture Therapy (DGBNCT).

**Expected Contribution**

- promote international collaboration, especially with Eastern European institutions and organisations (see e.g. my present appointment at Babes-Bolyai University, Romania, and my strong long-term contacts to scientists from Eastern European countries)

- promote and advertise chemical subjects for the general public to increase interest and acceptance

- enhance networking in medicinal chemistry (see my expertise) and sustainability (see e.g. the EuChemS Workshop on “The Phosphorus Element” in May 2023)

## Bonnie Lawlor

Bonnie Lawlor, retired, spent her entire career in STM publishing, beginning as a chemical indexer at the Institute for Scientific Information (ISI, now Clarivate) ultimately becoming Executive Vice President, Database Publishing (see: garfield.library.upenn.edu/essays/v15p280y1992-93.pdf). She later served as Senior Vice President/General Manager of ProQuest's Library Division (1996-1998), and as Executive Director of the National Federation of Advanced Information Services (NFAIS 2002-2014).

Lawlor has been active in IUPAC since 2010, and has held the following roles:

| | | |
|---|---|---|
| o | Member, IUPAC Executive Board | 2024 - 2025 |
| o | Vice Chair, U.S. National Committee for IUPAC | 2020 - 2023 |
| o | Chair, CPCDS Subcommittee on Publications | 2020 - present |
| o | Chair, Blockchain White Paper Task Force | 2020 - present |
| o | Member, Chemistry International Editorial Board | 2016 - present |
| o | Member, Top Ten Emerging Technologies in Chemistry Initiative | 2018 - present |
| o | Co-Chair, Working Group on Communications | 2022 - 2024 |
| o | Member 2021 & 2023 WCLM Planning Committees | 2019 - 2023 |
| o | Member, Executive Director and interim PAC Editor Search Committees | 2022 |
| o | Member, PAC Strategic Review Committee | 2022 - present |
| o | Member, IUPAC Bureau | 2014 - 2019 |
| o | Member, Committee on Printed and Electronic Publications (CPEP now CPCDS) | 2010 - 2014 |
| o | Chair, Committee on Publications and Cheminformatics Data Standards (CPCDS) | 2014 - 2019 |
| o | Lead for Development of new IUPAC website | 2014 - 2016 |

Lawlor is also active in the American Chemical Society (ACS) serving as a Councilor for the Division of Chemical Information (CINF) from 1992 through 2023 when she was elected to the ACS Board of Directors, as a member of the ACS Committee on Budget and Finance, and in many other capacities. She also serves on the Boards of the Chemical Structure Association Trust and the Philosopher's Information Center. She is both an ACS Fellow and

an NFAIS Honorary Fellow, and currently serves on the ACS Board of Directors as the representative of District III (2024 - 2026).

Lawlor earned a B.S. in Chemistry from Chestnut Hill College (Philadelphia), an M.S. in chemistry from St. Joseph's University (Philadelphia), and an MBA from the Wharton School, (University of Pennsylvania).

**Expected Contribution**

The call for nominations to serve on IUPAC's Executive Board states that IUPAC is seeking motivated candidates with "experience in directing the affairs of a non-profit organization whose work is done primarily by volunteers. Although prior knowledge and experience of IUPAC's structures and modus operandi would be beneficial, IUPAC welcomes nominations from candidates with governance experience in other organizations." My skills and experience meet both criteria.

First, with regards to experience in directing the affairs of a non-profit organization whose work is done primarily by volunteers, from 2002 to 2014 I served as the Executive Director of the National Federation of Advanced Information Services (NFAIS: see https://en.wikipedia.org/wiki/National_Federation_of_Advanced_Information_Services). This was a U.S.-based non-profit institutional membership organization for global publishers and technology providers across all market sectors that supported the information needs/activities of professionals across a spectrum of scholarly and research disciplines. With a staff of three, we had to rely on volunteers to accomplish our goals of providing publications, conferences, workshops, etc., so I am acutely aware of the challenges of recruiting, retaining, and motivating/engaging volunteers. During my tenure I was responsible for re-positioning the organization to match the evolving changes in scientific and scholarly publishing as well as developing new products and services and a new dues structure. My hands-on non-profit experience can provide the requisite expertise that can help IUPAC navigate its own organizational and financial challenges. Ongoing non-profit experience includes 1) serving as a Trustee (1990 to present) for the Chemical Association Trust (CSA), an internationally-recognized, UK-registered charity which offers grants to young scientists researching on the storage, processing, and retrieval of chemical structures, reactions. and compounds; and 2) serving as a Board Member (2006 to present) for the Philosophers Information Center, the non-profit publisher of the Philosopher's Index.

Second, with regards to IUPAC itself I have been an active volunteer for more than a decade, serving in a variety of capacities as noted in my brief biography above which I will not repeat here. I have experience navigating IUPAC, although the organization is not without surprises no matter how long one is involved! The strengths that I bring to the table are on the business side of things and one significant strength is my thirty-plus years in publishing. Why? Because IUPAC's revenue from its publications and databases is absolutely essential to the ongoing sustainability of the organization. I have experience in the development, sales, and marketing of information products and services; in the drafting of licenses and contracts with publishers; and in the establishment of strong publisher and customer relations. These skills will be of value in the current strategic review of Pure and Applied Chemistry and in the development of a new direction for Chemistry International. Also, throughout my career I was very fortunate to add diverse business experiences (through trial and error!) to my portfolio, both academically (via an MBA) and hands-on at every level of the corporate ladder. The lessons learned and skills gained along the way (not without trial and error!) can also benefit IUPAC as it builds and navigates the future with its new infrastructure. Finally, I think that I have proven over the past decade or so with IUPAC that I am not afraid to get my hands dirty and to work tirelessly to meet our objectives.

In closing, my volunteering with IUPAC has been an exceedingly positive experience – especially with regards to the friendships made along the way. If nominated (and ultimately elected) I welcome the opportunity to continue to serve IUPAC on the Executive Board.

## Jean Y Pelin

After graduating from Ecole Polytechnique (Paris) in 1974, I pursued business administration studies at Stanford University (California), obtaining an MBA in 1976. This dual scientific and managerial education shaped the trajectory of my professional career, which unfolded in two major phases.

The first part of my career, from 1976 to 1997, was primarily dedicated to holding several managerial positions in service-to-industry companies, ranging from medium-sized businesses to large corporations. This period included a three-year assignment in Germany (Frankfurt, 1986-1989) as General Manager of an IT service provider with headquarters in France. These experiences allowed me to develop a solid understanding of industrial processes, operational management, and cross border cooperation within a European context.

In 1997, I transitioned to the chemical industry, taking on the role of General Manager of the French Trade and Employer's Association of the Chemical Industry (UIC), a position I held for 20 years until my retirement in 2017. This role placed me at the heart of interactions between industrial actors, public authorities, European institutions, and other stakeholders. I was actively involved in advocacy efforts to promote legislation that balanced industrial competitiveness with regulatory rigor. The REACH regulation, which profoundly reshaped the European chemicals landscape, stands as a prominent example of the kind of legislative framework on which I worked extensively, ensuring that the voice of industry was heard while environmental and safety concerns were addressed.

Upon retiring in 2017, I maintained my commitment to the chemical community by contributing to the organization of the IUPAC World Chemistry Congress and General Assembly held in Paris in 2019, celebrating the Union's centenary. Following this, I became a titular member of the Committee on Chemistry and Industry (COCI), where I have been particularly active in representing IUPAC in international chemical governance discussions. Notably, I participated in meetings related to the Strategic Approach to International Chemicals Management (SAICM), an initiative under the auspices of UNEP. I have closely followed SAICM's evolution into what is now the Science-Policy Panel (SPP), which aspires

to become the third pillar of global risk management, alongside the IPCC (climate change) and IPBES (biodiversity). In parallel, I have contributed to discussions on the Global Framework on Chemicals (GFC), another UNEP initiative aimed at promoting chemical safety and regulatory convergence worldwide.

Beyond these activities, I have been involved in several COCI-led projects, including the Safety Training Program (STP) and the Systems Thinking in Chemical Education initiative. Additionally, I serve as Treasurer of the French National Adhering Organization (NAO), the Comité National de la Chimie, ensuring a continuous link between the Comité's Bureau and IUPAC.

The experience I gained during my years at UIC, where I managed a large non-profit organization connecting various communities—chemical companies (both multinational corporations and SMEs), government bodies, NGOs, trade unions, and international associations—has equipped me with the ability to navigate complex environments and foster constructive dialogue between diverse stakeholders. I am convinced that these skills can be of value to IUPAC, particularly at a time when the Union is both adapting its internal organization and addressing scientific and societal challenges of increasing complexity.

With this background, I am eager to deepen my engagement with IUPAC by joining the Executive Committee. I would be honored to contribute to the Union's mission and to support its efforts to strengthen its global leadership at this pivotal moment for chemistry and society.

**Expected Contribution**

With nearly 20 years of experience leading a complex, multi-stakeholder organization in the chemical industry, I am eager to contribute to the optimization of IUPAC's structure and operational efficiency. My background in managing cross-sector collaborations has equipped me with the skills to enhance IUPAC's engagement with external stakeholders, including policymakers, industry leaders, and representatives from non-scientific and non-academic fields. Additionally, I am committed to fostering a culture of collaboration, transparency, and inclusivity among IUPAC officers, ensuring a dynamic and forward-looking governance structure.

## Bipul B Saha

Dr. Bipul Saha has more than 35 years experience in chemical industry. He was President (Technical) of Vinati Organics and Director – R&D, NACL Industries Limited, India. Prior to this, he was (a) Director in Gharda Chemicals (b) General Manager, Monsanto and (c ) Manager –R&D, Pfizer. He carried out research with Nobel Laureate Prof. Derek Barton and has been awarded Homi Bhabha Gold Medal.

Dr. B. Saha is currently member of IUPAC Executive Board and Secretary of COCI. He is associated with important IUPAC projects as Task Group Co-Chair: "Chemistry Entrepreneurship", "Safety Training Program in Asia", "UNEP Science Policy Panel" and "Global Framework on Chemicals".

Dr. Saha has been promoting IUPAC activities extensively. During 2022-24, he has delivered speeches in the following program: (a) OPCW-IUPAC Workshop on "Artificial Intelligence Assisted Chemistry", The Hague,2022 (b) APCE-CECE-ITP-IUPAC Conference, Angkor Wat, 2022 (Topic: A brief history of IUPAC & Status of microplastics) (c) XV IUPAC International Congress of Crop Protection Chemistry, New Delhi, 2023 (Topic: Activities of IUPAC Division VI) (d) Safety Training Workshop, IUPAC GA , The Hague, 2023 (f) UNEP Women's Major Group. Geneva, 2024 (Topic: Global Women's Breakfast) (g) International Conference on Futuristic Science and Technology, Ujjain, 2024 (Topic: IUPAC and Top 10 Technologies).

As representative of IUPAC COCI, Dr. Bipul Saha contributed in (a) ICCM5 meeting, Bonn, 2023 (b) Science Policy Panel meeting, Nairobi, 2023 and (c) SPP OEWG3 in Geneva, 2024. News about these Conferences have been covered in detail in chemical magazines.

In 2024, Dr. Saha organized "Global Women's Breakfast" events in India which was highest for a single country. Dr. Bipul Saha is a strong supporter of Gender Parity and was invited in the General Assembly of "Gender & Chemicals Partnership" in Berlin in 2024.

Earlier, he organized large number of program to celebrate "IUPAC Centenary" and " IYPT" which were globally acknowledged. He developed cooperation between IUPAC and Industry Associations like Indian Chemical Council.

A webinar was organized in honour of Dr. B. Saha in "Eminent Personality Webinar" in which top level professionals spoke about his contribution (https://www.youtube.com/watch?v=cjrfu4325M4).

Dr. Saha has been Chairman and Invited speaker in various International such as: (a) American Chemical Society's International Workshop to develop "Global Code of Ethics for Chemists", Kuala Lumpur (b) ) IUPAC Workshop on "Developing Global Leaders for Crop Protection" etc.

Dr. Saha has been Visiting Professor in IIT and other reputed Institutes. He has been member of the editorial advisory board of American Chemical Society's "ACS Agricultural Science and Technology Journal", "Agri Business Global, USA", "Farm Chemicals International" and editor of "Indian Society for Environmental Science & Technology Newsletter". Currently, he is Advisor and Professor in Indira Group of Institutes.

**Expected Contribution**

As in previous years of my association with IUPAC, I will devote significant part of my time to promote IUPAC activities. I will actively participate in IUPAC restructuring work and continue my deep involvement in IUPAC projects like "Chemistry Entrepreneurship", "Safety Training Program", "UNEP Science Policy Panel", "Global Framework on Chemicals", "Carbon Sequestration", "Systems Thinking in Chemistry" etc. I will also initiate new projects in the next biennium. Over the years, I have contributed in a major way for the success of GWB, IYPT, and IUPAC 100. All these events have been covered by chemical magazines and I will continue to publicise IUPAC events. I will contribute scientifically in my areas of specialization for IUPAC Projects (I carried out research with Nobel Laureate Professor Derek Barton and have been awarded Homi Bhabha Gold Medal). Apart from IUPAC Executive Board, I have been member of different Divisions and Committees including COCI, CHEMRAWN, Division VI, ICGCSD, I have contributed in many ways and I have good understanding of IUPAC activities as a whole. With my track record, I am confident of making significant contribution to IUPAC in the next biennium.

## Zhigang Shuai

Zhigang Shuai, PhD Fudan University, Shanghai, 1989. Postdoc and research scientist in University of Mons, Belgium for 12 years. He can speak French fluently. In 2000, he became a Professor in the Institute of Chemistry of the Chinese Academy of Sciences. He moved to Tsinghua University in 2008 as a Changjiang Scholar Chair Professor. And since 2022, he is Chair Professor in the Chinese University of Hong Kong, Shenzhen, and Associate Dean of School of Science and Engineering.

He has been working on theoretical chemistry specialized in theory of excited state structure and dynamics for complex systems. He has published more than 460 papers in scientific journals, with more than google 38000 citations (H-index 106). He has been elected to the International Academy of Quantum Molecular Science in 2008 and served as vice president for 2018-2023; Fellow of the Royal Society of Chemistry; Foreign Member of the Academia Europaea; Foreign Member of the Royal Academy of Belgium.

He served as Deputy-Secretary General of the Chinese Chemical Society for 2006-2017, and was elected as the Vice President in 2018 and re-elected in 2022. For 2010-2017, he was a National Representative for IUPAC CCE. For 2018-2019, he served as AM in Division I. Then for 2020-2023, he served as TM for Division I. He was elected to the Bureau and then to the Executive Committee in 2021 and to the newly established Executive Board in 2023. He has served in the IUPAC Organizational Structure Review Group in 2020. He also served in judge committee for selecting and promoting “Top 10 emerging technologies in chemistry”, an IUPAC centenial initiative. He delivered a plenary lecture for the International Year of Chemistry launch ceremony in UNESCO headquarter on “Chemistry and Civilization: an Example of Ancient China” in 2011. He presented a closing remark for the International Year of Periodic Table for Chemical Elements in Tokyo, 2019.

**Expected Contribution**

Prof. Shuai has a strong background and longtime service in IUPAC. He has served as Chairman for a number of influential international conferences including the International Congress of Quantum Chemistry (2015, Beijing). He has served as Vice President of the

International Academy of Quantum Molecular Science, a prestigious learnt international organization, from 2018-2023. He has been responsible for the international affairs for the Chinese Chemical Society since 2006. And he served IUPAC as volunteer at a number of committees/division. He has been an active member for the IUPAC Organizational Structure Review Group and the judge for the annual selection of IUPAC top 10 emerging technologies in chemistry. He was elected to the Executive Committee by the Bureau in 2021 and to the Executive Board by Council in 2023. With his academic impact and experience in academic organization management, Prof. Shuai will bring his rich experiences both in academia and international services to devote himself to IUPAC's future development, to deepen the cooperation between IUPAC and the chemistry community, and to help to enhance IUPAC's international influences for the developing world. China is an important country, especially for the chemical industry. Global challenges in energy, resources, environment and climate can only be solved through international cooperation. It is expected that China's active participation in international affairs will bring new opportunities to the world with Chinese wisdom of five-thousands years civilization, a precious asset to the world. The Chinese Chemical Society, along with the 130,000 members, strongly supports Prof. Zhigang Shuai to run for the position of Member of the Executive Board.

## Supawan Tantayanon

Professor Supawan Tantayanon is a renowned chemist and educator with nearly three decades of experience in scientific research and organizational leadership, both within Thailand and internationally. As a professor in the Department of Chemistry at Chulalongkorn University, she has significantly influenced the development of chemistry education. Over the course of her career, she has designed four curricula focused on application-driven chemistry and science topics, with an emphasis on sustainable chemistry, environmental science, and green technologies—fields that are essential for addressing global challenges.

In addition to her academic achievements, Prof. Tantayanon has demonstrated exceptional leadership in volunteer-driven, non-profit organizations. She has held prominent positions within numerous scientific committees and organizations, managing large-scale projects and fostering collaborations across various sectors, including academia, government, and industry. Her ability to lead effectively in resource-constrained settings showcases her remarkable governance skills and her talent for inspiring and managing diverse teams.

Prof. Tantayanon's leadership extends beyond research and academia. She is deeply committed to educational outreach, aiming to inspire the next generation of scientists both locally and globally. Her initiatives have made a significant impact on science education and have fostered international collaborations, especially between Southeast Asia and other global scientific communities. As a passionate advocate for IUPAC's core values of inclusivity, innovation, and global cooperation, she ensures that scientific integrity and transparency remain at the heart of her work.

In conclusion, Professor Supawan Tantayanon's impressive academic record, leadership in volunteer organizations, and unwavering commitment to chemistry, sustainability, and scientific integrity make her an outstanding candidate for the IUPAC Executive Board for the 2026-2027 term. Her vision, expertise, and dedication would be invaluable in shaping the future of IUPAC and advancing the global chemistry community.

**Expected Contribution**

Professor Supawan Tantayanon brings a wealth of experience and expertise that would greatly benefit the IUPAC Executive Board. With her extensive background in scientific research, education, and organizational governance, she is well-positioned to contribute in several key areas:

1. Strategic Leadership in Sustainability: Prof. Tantayanon's focus on sustainable chemistry, environmental science, and green technologies aligns with IUPAC's goals to promote science that benefits society. Her expertise in these fields would help guide the Union's efforts to address pressing global challenges, ensuring that IUPAC's programs contribute to sustainable development and innovation in chemistry.

2. Educational Outreach and Global Collaboration: As an advocate for science education and a leader in developing curricula focused on sustainable chemistry, Prof. Tantayanon can contribute to IUPAC's educational initiatives. Her experience in fostering international collaborations, particularly between Southeast Asia and other scientific communities, would be invaluable in expanding IUPAC's reach and promoting inclusivity and global cooperation in the chemical sciences.

3. Governance and Organizational Leadership: Prof. Tantayanon's leadership in volunteer-driven, non-profit organizations has honed her ability to manage complex projects and work effectively in resource-constrained environments. This experience is critical for ensuring the fiscal prudence and efficient execution of IUPAC's programs, as she would bring a strong understanding of governance and operational management to the Executive Board.

4. Commitment to Scientific Integrity and Transparency: Her unwavering commitment to scientific integrity and transparency would help maintain the highest standards of ethics and accountability within IUPAC. Prof. Tantayanon's dedication to these values would ensure that the Union's decisions and actions remain aligned with its mission and principles.

In summary, Prof. Supawan Tantayanon's blend of scientific expertise, leadership in education and outreach, and strong governance skills would make her a valuable asset to the IUPAC Executive Board. Her contributions would help drive IUPAC's strategic initiatives while advancing its commitment to sustainability, global collaboration, and scientific integrity.

## Bernard West

Bernard West was born and grew up in England and moved to Canada after graduating. He has and a long and interesting in the Chemical Industry mostly in Canada. He has been active in IUPAC since 2005.He and his family live in Toronto.

Bernard holds BSc and PhD degrees in chemical engineering from the University of Manchester – UMIST, where he was a Lecturer for 6 years. He was CEO of CANSOLV Technologies of Montreal, President and COO, Canada Colors and Chemicals Limited and a member of the Sulco Chemicals Ltd, board. He was Delegue Pays of Rhone-Poulenc Canada and prior to that, he had 20 years of increasingly responsible positions in the chemical industry at Imperial Oil [ Esso] and Polymer Corporation Sarnia, Ontario.

Bernard has also been very active in industry associations and industry-government bodies. He was Chair of the Board of the Canada's Chemical Producers Association [now Chemistry Industry Association of Canada], Chair of The Board of the Chemical Institute of Canada [ which is part of the IUPAC adhering organization along with the Canadian National Research Council where he Chaired the Advisory Board of ICPET ]. He Chaired the Society of Chemical Industry–Canadian Section, Member of the Board of the National Association of Chemical Distributors (Washington, D.C.) He also was a member of the Advisory Board of SGF-Chemie of Montreal.

He Chaired the Board of Ontario BioAuto Council. and was a Founding Co-Chair of the Bioindustrial Innovation Canada / Sustainable Chemistry Alliance, Sarnia.

He was a member of and then Chair of the IUPAC Committee on Chemistry and Industry [COCI] He took over Co-Coordination of the IUPAC Safety Training Programme from Mark Cesa.

He has been involved with Responsible Care since its beginning in 1986 at the CCPA and has championed its development and use in all the companies that he has lead. At IUPAC he sponsored a book on the subject "Responsible Care - a case study" which includes a positive case study based on Sulco Chemical's history in the process.

Bernard is currently President of Westworks Consulting Limited, a member of the Board of Life Sciences Ontario, Toronto and a member of the Board of the Centre for Research and Innovation in the Bio-Economy [CRIBE], Thunder Bay.

He was Chair of the Nominating Committee of COCI for 26/27 and is participating in the project on Systems Thinking in Chemistry for Sustainability.

**Expected Contribution**

As a member of IUPAC Executive is will bring my long-established experience with board and governance to the position. In particular, I will work on the relationship with industry which is limited at the senior level.

IUPAC has had a long relationship with industry and there are many industry people involved with IUPAC Committees, sub-committees and projects. They all do excellent work in these groups. The disappointing thing is that there are very few Company Associates and we are losing CA's each year. For a very long time the CA membership was US$ 450 and a few years ago this was significantly increased to the current level of US$ 2500. As a result, we lost several CA's. COCI has a shared responsibility for "managing" the CA "process" along with the Country Adhering organisations and the IUPAC hierarchy. When I chaired COCI we tried to attract more CA's but the main route was through personal invitations by people who had contacts at the highest levels of the companies.

Something is not right and not working. I want to be part of the Executive to get a better focus on what is happening and what we can do in the future.

We need to ask some fundamental questions and get the individual company views on the issue. One major change from years go is that companies are no longer organised on geographic patterns but global business units often run by people with no scientific background. Also, most of the large companies are in a mature phase and should not be seen as "cash cows". Revenues are large but margins are slim compared to 1919.

I had proposed that a high-level meeting be set up to discuss this with senior industry people, that has not happened. IUPAC cannot make assumptions about what industry a) understands about IUPAC and b) what it might gain from IUPAC. We need to be active listeners and then work together with companies at the highest level if we are to keep the links with industry that the founding fathers of IUPAC established in 1919.

## Malgorzata Witko

Malgorzata Witko, Professor of Chemistry, Professor at Jerzy Haber Institute of Catalysis and Surface Chemistry, Polish Academy of Sciences (since1997); director of ICSC 2002-2022; Member of Polish Academy of Sciences (2007), Member of Academia Europea (2012), Member of European Academy of Sciences(2018); dhc of Technical University in Rzeszow (2016), dhc of Maria Curie-Sklodowska University in Lublin (2024).

- over 170 papers; citations 4394, h=39, 10h=102 (google scholar)
- over 150 lectures at international conferences
- guest editor: J.Mol.Catal., Topics in Catalysis, Appl. Surf. Sci., NATO Science Series; Series II: Math., Phys. and Chem.) Member of Editorial Board of Catalysis Letters and Topics in Catalysis
- organization of over 50 international conferences in Poland and abroad; Chairwoman of 15th EuropaCat in Praha (2023)
- wide international collaboration: Universite de Paris-Sud, CNRS, Orsay, 1977 (3 m) and 1980 (1y post doc),CECAM, Orsay, France 1981 (1 m), FU, Berlin 1981 (1 m), 1982 (3m), 1983 (2m), 1984(1m), 1985(1m), 1986 (1m), CNR, Italy.1989 (1 m visiting professor), Alexander von Humboldt Fellow, FHI, MPG, Berlin 1992 (1,5y) and 1998 (4m)
- Member of Editorial Board of Catalysis Letters and Topics in Catalysis
- Scientific Organizations Member:
    - Polish Representative to EFCATS (European Federation of Catalysis Societies)
    - Member of the Board of Directors of ERIC (European Research Institute)
    - several times Member of PE4 and PE5 of the European Research Council
    - President of the Board of Director of all Institutes of Polish Academy of Sciences
    - Member of the Polish Chemical Society
- Thesis Advisees: 30 MSc and 8 PhD
- Coordinator of 24 polish and international research projects
- Field of activities: theoretical chemistry and catalysis

Main achievements: establishing of the first in Europe group devoted to solving catalysis phenomena by using theoretical methods (quantum chemistry, solid state physics) in heterogeneous catalysis field - explanation of electronic structure of vanadium and molybdenum oxides, alkali-doped systems, oxide systems supported on other materials; clarification of activities of structurally different surface centers; description of surface vacation formation and re-oxidation processes; in homogeneous catalysis field - theoretical modeling of catalytic activity of porphyrins, interpretation of mechanism of interaction of porphyrin with small molecules; elucidation of the mechanism of epoxidation/oxidation of cyclohexene by manganese porphyrin; in enzymatic catalysis field - elucidation of electronic structure/activity of ethylbenzene dehydrogenase (EBDH) enzyme, description of molecular mechanism of ethylbenzene oxidation to (S)-(+)-1-phenylethanol and development of the theoretical multiple regression model coupling experimentally measured kinetic constants to the theoretical parameters.

**Expected Contribution**

Taking into account expertise i.e. field of scientific activities, organization skills, wide international collaborations, management of projects (see CV) and taking into account the global situation in science my involvement in the activities as Executive Board Member of IUPAC will concentrate on:

• Discussion and selection of new projects

• Searching and promoting of new activities important for the world community

• Organization and promotion of the international collaboration between scientists in physical and biophysical chemistry

• Recognition of ethics problem in every day of scientific life (the need of novelty in each publication, output of collaborations, etc).

# Science Board

## Abeer Al Bawab

Abeer Al Bawab is a Professor of Physical Chemistry and the Director of the Nanotechnology Research Center at the University of Jordan (UJ), with over 28 years of academic and research experience. She earned her Ph.D. and Master's degrees in Applied Physical Chemistry from Clarkson University, following a Bachelor's degree in Chemistry from UJ, where she graduated first in her class. Her expertise spans colloid and surface chemistry, nanotechnology, and materials science, with a strong focus on enhancing education, managing scientific research, and leading interdisciplinary projects. Over her career, she has successfully directed more than 50 national and international research projects, securing approximately 5 million JD in funding, and has published over 110 high-impact research papers in prestigious international journals and conferences.

Beyond academia, she has held key leadership roles, including serving as the General Director of the Scientific Research Support Fund (SRF) at the Ministry of Higher Education and Scientific Research, where she played a crucial role in advancing Jordan's research landscape. At UJ, she has served as the Dean of the Deanship of Academic Research and Director of the Hamdi Mango Center for Scientific Research, leading structural reforms, establishing research groups, and initiating major projects in nanotechnology, solid waste management, and manuscript restoration. She has also been instrumental in mentoring young researchers and overseeing specialized research laboratories, including the Materials and Nanotechnology Research Lab and the Animal Research Lab.

Internationally recognized for her contributions, she has represented Jordan in global research initiatives as a liaison, TTO officer, and legal representative for various scientific collaborations. Her work has taken her to over 40 countries, where she has chaired, moderated, and presented at numerous scientific conferences, symposiums, and workshops. She has also played a significant role in professional organizations, serving as the President of the Jordanian Chemical Society, a Board of Trustees member for JUST, and the founder of the Jordanian Chapter of the American Chemical Society. She has received numerous prestigious awards, including the King Abdullah II Medal of Excellence (2022), the IUPAC Award for Distinguished Women in Chemistry (2021), and the Distinguished

Researcher Award from UJ (2011), among others. In addition to her research and leadership, she actively serves as a judge, evaluator, and reviewer for international research grants, awards, and scientific publications, further contributing to the advancement of science and technology in Jordan and beyond.

**Expected Contribution**

As a seasoned researcher and academic leader with extensive experience in scientific project management, interdisciplinary collaboration, and policy development, I am eager to contribute meaningfully to the Science Board. Drawing from my background in physical chemistry and nanotechnology, as well as my leadership roles in national and international research organizations, I will actively engage in shaping the Union's scientific priorities, long-term strategy, and vision. My expertise in research governance, funding allocation, and project evaluation will support the strategic distribution of the science budget, ensuring impactful and sustainable advancements in chemistry.

Having successfully facilitated inter-institutional and cross-disciplinary collaborations, I am well-positioned to strengthen inter-divisional and Standing Committee interactions, fostering joint initiatives that align with the Union's mission. My experience as a former General Director of the Scientific Research Support Fund (SRF) has equipped me with the ability to assess and optimize organizational structures, making informed recommendations to enhance the Union's divisional and committee frameworks. Furthermore, my extensive involvement in organizing international conferences, overseeing research publications, and leading high-profile scientific projects positions me to contribute to the evaluation and enhancement of the Union's core activities, including conferences, publications, and outreach efforts.

With a strong commitment to advancing chemistry in emerging areas, I will leverage my networks and experience to expand outreach efforts, engage underrepresented regions, and promote scientific capacity-building initiatives, particularly in developing countries. Additionally, my history of international collaborations, policy advisory roles, and representation of Jordan in global scientific forums enables me to serve as an effective liaison with external bodies, strengthening the Union's engagement with international stakeholders. Through these contributions, I aim to support the Science Board in executing the Union's strategic objectives and fostering innovation in chemistry on a global scale.

## Pierre Braunstein

Pierre Braunstein obtained his PhD in Inorganic Chemistry from the University of Strasbourg (France), and then spent a year at University College London (1971-72), with Profs. R. S. Nyholm and R. J. H. Clark. After his State Doctorate from the University of Strasbourg, he worked with Prof. E. O. Fischer (Nobel Laureate) at the Technical University Munich as an Alexander-von-Humboldt post-doctoral fellow (1974-75).

He became Research Director Exceptional Class within the CNRS and is now Emeritus Research Director and currently also holds various positions in China.

His broad research interests lie in the inorganic and organometallic chemistry of the transition and main group elements. Focused on synthetic aspects of molecular chemistry, his work has also led to applications, ranging from homogeneous catalysis, to cluster-derived nanoparticles for heterogeneous catalysis and nanosciences.

Among the different research topics that Pierre Braunstein and his group have explored over the years, one can mention the creation of new chemical bonds (in particular metal-metal bonds), of new mono- and poly-nuclear complexes, the elaboration of concepts rationalizing structure-reactivity relationships, diverse applications in homogeneous catalysis (ethylene oligomerization, co-oligomerization olefins/CO and ethylene/polar olefins, transfer hydrogenation of ketones, alkane activation, dehydrogenative coupling of stannanes), the first examples and applications of molecular mixed-metal cluster-derived heterogeneous catalysts (for the carbonylation of organic nitro derivatives to isocyanates). His research achievements also include the synthesis and complexation of polytopic functional ligands, the development of functional N-heterocyclic carbenes ligands, their metal complexes and catalytic applications, the synthesis of new organic quinonoid molecules with delocalized □ systems and their applications in chemistry and physics; the synthesis, characterization, reactivity and catalytic applications of functional enolates and their metal complexes; the synthesis and reactivity of bimetallic silyl complexes (new molecular interactions and catalysis); molecular metal clusters (concepts, synthesis, structures, reactivity, catalysis).

He has received numerous awards and honors from France, China, Germany, India, Italy, Japan, Portugal, Singapore, Spain, The Netherlands and the United Kingdom. He is a member of Academia Europaea (2002), the European Academy of Sciences (2002), Corresponding Member of the Saragossa Academy of Sciences (Spain) (2002), member of the French Academy of Sciences (2005), the German National Academy of Sciences Leopoldina (2005), Foreign Member of the Lisbon Academy of Sciences (Portugal) (2015). He is also Head of the Chemistry Division of the European Academy of Sciences since 2015.

**Expected Contribution**

I was elected to the new Science Board (SB) of IUPAC in 2023 and we have started important discussions concerning the governance of IUPAC and ways to increase its efficiency. This is not an easy process and it takes time to examine all options and reach a consensus. This is why I am prepared to continue working in the Science Board for a second term.

My own experience has provided me with numerous opportunities to interact with chemists from diverse backgrounds, including in editorial functions, and to better understand the challenges faced by chemistry and its key role at the interfaces with other disciplines. Furthermore, the international dimension has always been essential to me, not only in having had the pleasure to work with PhD students and post-docs from many different countries and cultural backgrounds, but also in participating in a number of international panels in Europe, Asia and South America for the evaluation of research projects and of science organisations.

If I am re-elected, I will be pleased to further share my experience with the other members of the SB, with the various governing bodies and members of IUPAC and take advantage of my international network to help promote its actions.

## Evamarie Hey-Hawkins

Evamarie Hey-Hawkins was Professor of Inorganic Chemistry at Leipzig University from 1993 to 2023. When she retired, she left the Institute of Inorganic Chemistry and joined the Institute of Bioanalytical Chemistry (BBZ). She previously held positions at universities in England, Australia and Germany as well as various visiting professorships. She has published more than 600 publications and given over 400 lectures worldwide. Her numerous awards include e.g. the IUPAC Distinguished Woman in Chemistry Award, the Nenitescu Medal, two honorary doctorates and the Leipzig Science Prize. She is a member of the European Academy of Sciences and the European Academy of Sciences and Arts in Salzburg. In 2021 she received the Karl Ziegler Prize from the GDCh/Karl Ziegler Foundation. Her scientific interests include in particular medicinal chemistry, especially anti-tumor agents. She is currently Vice President of the German Society on Boron Neutron Capture Therapy (DGBNCT).

**Expected Contribution**

- promote international collaboration, especially with Eastern European institutions and organisations (see e.g. my present appointment at Babes-Bolyai University, Romania, and my strong long-term contacts to scientists from Eastern European countries)

- promote and advertise chemical subjects for the general public to increase interest and acceptance

- enhance networking in medicinal chemistry (see my expertise) and sustainability (see e.g. the EuChemS Workshop on “The Phosphorus Element” in May 2023)

## Alejandra Palermo


I began my academic journey as a chemical engineer, followed by a PhD in materials science. My independent career started as an Assistant Professor in Argentina before joining Cambridge University under a Royal Society Fellowship. I have published over 50 scientific papers in heterogeneous catalysis and, since joining the Royal Society of Chemistry, contributed to a variety of influential policy reports that have shaped the chemical sciences globally. Throughout my career, I have championed international collaboration. My previous roles included managing RSC's work in India and Latin America and establishing the Pan Africa Chemistry Network, fostering research partnerships and capacity building. In 2017, I led the "Future of the Chemical Sciences" initiative, using scenario planning to guide the RSC's long-term strategy, ensuring the discipline remains dynamic and forward-thinking.

Currently, I lead Global Inclusion at the RSC, overseeing inclusion and diversity (I&D) strategies and international collaborations. A key achievement has been transforming our I&D approach into a research-driven model, exposing systemic inequalities in chemistry and driving impactful interventions. My work resulted in data-led policy reports that have influenced institutional change and secured a £750k UK government grant to support research on LGBT+ inclusion in STEM in the UK and USA. Additionally, I led initiatives such as the Bullying & Harassment Support Line and grant schemes for chemists with caring responsibilities and disabilities.

I also spearheaded race and ethnicity work, leading to the Broadening Horizons initiative, supporting minoritized racial and ethnic groups in pursuing chemistry careers. My contributions have been recognised with two Public Relations and Communications Association awards.

I am honoured to serve as elected IUPAC Science Board member, EuChemS I&D Task Group, Fellow of the RSC, life fellow of the CRSI India, Honorary Fellow of the Chemical Society of Ethiopia and a Board member of Commonwealth Chemistry, actively shaping the future of chemistry globally.

**Expected Contribution**

It is a profound privilege to serve as a member of the IUPAC Science Board, following my election during the 2023 Council meeting. Over the past two years, I have actively contributed to the advancement of IUPAC as a thriving and influential organisation, dedicated to promoting the chemical sciences globally. While significant progress has been made—such as the development of a new vision and proposals for supporting structures—I am steadfast in my commitment to advancing the next steps of these endeavours.

My engagement with IUPAC has been a cornerstone of my career. Beginning with the 2004 Congress in Beijing, I co-led a project that united national chemical societies and research funders to influence national investment in chemistry. This project laid the groundwork for lasting international collaborations, evolving into the Chemical Sciences for Society Summits, which continue today, with the next meeting scheduled for Germany in 2026. Since then, I have been deeply involved in IUPAC initiatives, including speaking at World Leaders Chemistry Meetings (2014 and 2017), supporting the Global Women's Breakfast since 2009, and championing the Royal Society of Chemistry's engagement with IUPAC activities.

As Senior Manager at the Royal Society of Chemistry, I have demonstrated leadership in global inclusion, overseeing the strategy and execution of inclusion and diversity programmes and international engagement. My team's work has driven impactful research that has exposed inequalities and fostered systemic change within the chemical sciences. I remain committed to fostering stronger collaborations between the Global South and Global North and integrating chemistry research globally. My experience in building inclusive international partnerships will serve as a valuable asset to the Science Board as IUPAC continues to refine and implement its strategy.

In 2017, I led the Royal Society of Chemistry's "Futures" initiative, which developed strategic scenarios to guide the long-term trajectory of the chemical sciences. This experience aligns seamlessly with the Science Board's mission to shape IUPAC's scientific priorities.

Looking ahead, IUPAC has an unparalleled opportunity to foster greater global integration among chemists, ensuring its governance transformation and future ambitions reflect its international reach. My leadership in establishing the Pan Africa Chemistry Network and extensive collaborations position me to actively support this vision.

With the endorsement of Dr Helen Pain, Chief Executive of the Royal Society of Chemistry, I am confident in my ability to dedicate my expertise, international profile, and unwavering

commitment to advancing chemistry in an inclusive manner. As a member of the Science Board, I aim to ensure that IUPAC's mission and vision continue to thrive globally.

## Elefteria Psillakis

Elefteria (Elia) Psillakis is Full Professor in Water Chemistry at the School of Chemical and Environmental Engineering, Technical University of Crete. She received her degree in Chemistry from Universitè Montpellier II, France with Summa Cum Laude, and her PhD from the University of Bristol, U.K. In 2007, she received a Fulbright Award and used it at Caltech, USA. Her research activities focus on (i) studying the presence and photolytic fate of emerging pollutants in natural and engineered systems, (ii) advancing the concepts of green and sustainable analytical chemistry, and (iii) the fundamentals and development of novel sample preparation methods. In 2025, Professor Psillakis was awarded the Silver Jubilee Medal from The Chromatographic Society, and in 2021 she featured in the Power List of the magazine “The Analytical Scientist” as one of the Top 100 most influential people in analytical science. To date, her investigations have resulted in six book chapters more than 100 publications in ISI Journals, with > 10000 citations (h-index=52) and six “Top cited article” awards.

She is Editor-in-Chief of “Advances in Sample Preparation”, Elsevier (Q1 Journal with IF=5.2), Specialty Chief Editor of “Environmental Analysis”, Frontiers in Analytical Science (Frontiers) and served as an Associate Editor of the “Journal of Separation Science” (Wiley). Professor Psillakis is also Head of the Sample Preparation Study Group and Network of the European Chemical Society-Division of Analytical Chemistry (EuChemS-DAC), elected member of EuChemS-DAC, and Affiliate Member of IUPAC. In IUPAC she is also Co-Chair of the IUPAC Project: Greenness of official standard sample preparation methods. She is the Founder of ExtraTECH Analytical Solutions, a Spin-Off Company of the TUCrete.

She has received several invitations for plenary keynote and invited talks in major international conferences. She has acted as an expert evaluator in several national and European evaluation panels and was vice-chair of the Chemistry evaluation panel for the EU Marie-Curie excellence fellowships.

From 2014-2016, she was the Deputy Rector of Academic Affairs and Research at the Technical University of Crete and has served twice as Director of postgraduate studies.

**Expected Contribution**

With a career dedicated to advancing analytical and environmental chemistry and developing our community, I am eager to contribute my expertise and vision as a Science Board Member of IUPAC. As a Chemistry professor at a Chemical and Environmental Engineering School Crete, my work spans fundamental and applied research interconnecting science and engineering. My leadership in international scientific communities has provided me with a broad perspective on emerging scientific challenges and opportunities.

In 2019, I envisioned the creation of the EuChemS-DAC Sample Preparation Study Group. At that time, sample preparation was underrecognized for its achievements and the field was not effectively projecting its importance on prominent academic and non-academic platforms. Under my leadership, the Sample Preparation Network was formed, which today counts over 900 members from 58 countries around the world.

Through this network, we have reshaped and redefined sample preparation. In 2021, I envisioned and established the journal Advances in Sample Preparation (Elsevier), the only journal dedicated exclusively to this discipline. Within just three years, the journal achieved an impact factor of 5.2 by Clarivate and was ranked in the Q1 category of analytical chemistry journals— a remarkable achievement.

My research exemplifies a profound commitment to advancing sustainability within analytical chemistry. As a pioneering figure in green analytical chemistry, I have spearheaded transformative efforts that have redefined the field and reignited discussions on sustainability in analytical practices. I envisioned, developed, and led the team that introduced the concept of Green Sample Preparation. Building on this foundation, I took the initiative to introduce AGREEprep the first green metric specifically dedicated to sample preparation. More recently, I introduced the Circular Analytical Chemistry framework, drawing inspiration from the principles of the circular economy. I am one of the co-chairs of the IUPAC project 2021-015-2-500 “Greenness of official standard sample preparation methods” a very active project that aims to break lock-ins in analytical chemistry by bringing sustainability solutions in routine labs. My cross-disciplinary work not only adheres to the highest scientific standards but also embodies the core principles of sustainability, which are essential for the future of analytical chemistry.

Throughout my career, I have been at the forefront of research that not only pushes the boundaries of science but also facilitates the transfer of knowledge across disciplines. My pioneering theoretical work on the effect of vacuum during headspace sampling with solid-phase microextraction (SPME) represented a significant advancement in understanding the dynamic stage of analyte extraction in equilibrium-based sample preparation methods. I successfully translated this pioneering work on vacuum-assisted SPME into commercial

products through my spin-off company, ExtraTECH Analytical Solutions, one of the few companies globally that transfers sample preparation solutions from academia to the market.

In addition to my research and leadership contributions, I am committed to mentoring and supporting early- career researchers, particularly women, and empowering the next generation of scientists. I became a Full Professor at the age of 43, marking me to the best of our knowledge, the youngest female full professor in Greece. I was also the first female Vice Rector at my university, paving the way for more women leadership roles.

If elected, I will actively contribute to IUPAC's mission by advocating for sustainability-driven chemistry, ensuring that emerging methodologies and technologies are aligned with global environmental and societal needs. Drawing on my work, I will contribute champion the integration of sustainability into the core of chemistry's future development. My goal is also to strengthen interdisciplinary collaborations between chemistry and other scientific fields to address complex global challenges. I aim to foster similar collaborations within IUPAC, breaking down silos to solve pressing challenges that span beyond traditional boundaries. I will actively support IUPAC's role in shaping policies that enhance research impact, promote knowledge dissemination, and ensure responsible scientific practices. With my experience in academic and community leadership, and through my spin-off company, I will advocate for policies that facilitate the translation of academic research into real-world solutions while ensuring high ethical standards and robust scientific integrity. Promoting diversity and inclusivity in the chemical sciences, fostering the next generation of chemists and thought leaders will be another target. I believe that a diverse and inclusive scientific community is essential for addressing the challenges of the future.

My background as a scientist, mentor, and leader aligns with the objectives of the Science Board, and I am committed to contributing my knowledge, strategic insight, and network to advance IUPAC's vision. I would be honored to serve and help shape the future of chemistry on a global scale.

## Floris Rutjes

Floris Rutjes received his PhD from the University of Amsterdam in 1993 with profs. W.N. Speckamp and H. Hiemstra and conducted postdoctoral research with prof. K.C. Nicolaou at The Scripps Research Institute (La Jolla, USA). After starting his independent career at the University of Amsterdam, he became full professor in organic synthesis at Radboud University (Nijmegen, The Netherlands) in 1999. His research interests include the design and synthesis of bioactive small molecules extending to natural product total synthesis but also medicinal chemistry, the development of sustainable synthesis methodology (flow chemistry, mechanochemistry, biocatalysis) and research into new click reactions for bioconjugation (the widely used click probes DBCO and BCN originated from Rutjes' lab). He is also keen on translating scientific discoveries into societal applications, which led to various spin-off companies. He was awarded amongst others the Gold Medal of the Royal Netherlands Chemical Society (KNCV, 2002), the AstraZeneca Award for Research in Organic Chemistry (2003), the award for Most Entrepreneurial Scientist of the Netherlands (2008), Chemistry Europe Fellow (2022) and he also received the royal decoration 'Knight of the Order of the Netherlands Lion'. He is elected member of the Netherlands Academy of Engineering, the Academia Europaea and since this year of the Royal Netherlands Academy of Arts and Sciences (KNAW). He was president of the Royal Netherlands Chemical Society (2016-2019), currently immediate past-president of the European Chemical Society (EuChemS, president from 2021-2024) and director of the Institute for Molecules and Materials at Radboud University.

**Expected Contribution**

I feel strongly committed to promoting the role of chemistry and the role of chemists in delivering solutions for the societal problems that we are facing. In a broader sense, this holds for promoting science as a basis to take important and far-reaching decisions aimed at achieving the Sustainable Development Goals. On the one hand this requires transdisciplinary integration of chemistry with other scientific fields, on the other hand also much better communication strategies with society at length. Based on my rather extensive leadership experience, both in academic research and in leading learned

organizations such as the Royal Netherlands Chemical Society, the European Chemical Society, but also my own research institute, I am confident that I can deliver a significant contribution to the IUPAC Science Board. More specifically, this concerns developing a long-term visionary strategy as to how IUPAC becomes future-proof, a strategic scientific mission that allows prioritization of current and new science projects, incorporate and address new scientific developments within IUPAC's divisions, sustain relevant outreach activities and engaging with and actively supporting chemists and chemistry organizations from the Global South.

## David G Shaw

David Shaw holds degrees in chemistry from the University of California at Los Angeles (BS) and Harvard University (AM, PhD) and is Professor Emeritus of Chemistry and Marine Science at the University of Alaska, Fairbanks USA. He has participated in IUPAC activities since the 1970s beginning in the Solubility Data Project (SDP) first through Commission V.8 (Solubility Data) and since 2002 in the Subcommittee on Solubility and Equilibrium Data (SSED) of Division V. At various times he was a TM and Chair of V.8 and Chair of the SSED. More recently he has served as NR, TM, DVP, DP and DPP of Division V.

Professor Shaw's research interests have long centered around the use of trace analysis of organic substances to gain information about the linkage between molecular structure and reaction mechanism and concerning the environmental accumulation, cycling, and fate of contaminant and naturally occurring organic materials in marine systems. These interests have led to research in several related areas including studies of the fate and effects of petroleum hydrocarbons in marine sediments, of the role of acetate in anoxic metabolism in sediments, and of the distribution of pelagic plastic in the Pacific Ocean.

Because of his interest in the partitioning of hydrocarbons between seawater and sediment particles he joined a task group within the SDP preparing a compilation and critical evaluation of solubilities of hydrocarbons with water and seawater. In collaboration with numerous other contributors, this resulted in two volumes (37 and 38) in the Solubility Data Series (SDS). He has continued his involvement in the SDP and has acted as co-editor of 14 volumes. He is currently Editor-in-Chief of the SDS. Recognizing that several IUPAC bodies worked on critical evaluations of data with very little cross communication, he organized an informal meeting during the 2017 General Assembly which brought representatives of Divisions I, II, IV, V and CPCDS together for an exchange of views. This led to the formation of the Interdivisional Subcommittee on Critical Evaluation of Data, which is preparing a series of Technical Reports on best practices for evaluation of chemical data.

**Expected Contribution**

The Science Board is doing vital work reorganizing IUPAC, currently addressing the critical task of reducing the unsustainable cost burden of the present administrative structure. Regardless of outcome of this work, the SB needs to address the issue of how the various bodies within IUPAC function and interact.

As a member of the SB, I would draw on my 45 plus years of IUPAC participation (which has been concerned primarily with long-term efforts to provide critically evaluated chemical data to all users of such data; see biographical sketch for details), and use my analytical skills and results-oriented mindset to contribute to improving the functioning of IUPAC bodies.

An active, productive and focused Union must recruit, support and retain volunteers who accomplish tasks that deliver the best possible well thought-out and coherent program within the financial resources of the Union. Currently our approach to recruitment yields many candidates with at best only slight understanding how to contribute to IUPAC goals. Too few are able to become engaged and leave after one or two biennia. For those who become active in project work, the absence of feedback about the effectiveness their work in contributing to IUPAC goals hinders improvement.

The Union must also develop a prioritized set of goals and a system for allocating its limited funds among them. The current project system, in which bodies receive essentially unrestricted blocks of funding each biennium, has led to too many short term, isolated projects and not enough coordinated and impactful programs of high priority.

These are the areas in which I hope to make a contribution.

## Hiroaki Suga

Dr. Hiroaki Suga is a Professor of the Department of Chemistry, Graduate School of Science in the University of Tokyo. He was born in Okayama City, Japan in 1963. He received his Bachelor of Engineering (1986) and Master of Engineering (1989) from Okayama University, and Ph. D. in Chemistry (1994) from the Massachusetts Institute of Technology. After three years of post-doctoral work in Massachusetts General Hospital, he was appointed as a tenure-track Assistant Professor in the Department of Chemistry in the State University of New York at Buffalo (1997) and promoted to the tenured Associate Professor (2002). In 2003, he moved to the Research Center for Advanced Science and Technology in the University of Tokyo as an Associate Professor, and soon after he was promoted to Full Professor. In 2010, he changed his affiliation to the Department of Chemistry, Graduate School of Science. His research interests are in the field of bioorganic chemistry, chemical biology and biotechnology related to RNA, translation, peptides, and related therapeutic development. He is the recipient of many national and international awards, including Akabori Memorial Award 2014, Max-Bergmann Medal 2016, Vincent du Vigneaud Award 2019, MIT TY Shen Lecture 2022, ETHZ Prelog Medal 2022, Research Award of the Alexander von Humboldt Foundation 2020, Hisayuki Matsuo Award 2022, Wolf Prize in Chemistry 2023, and Japan Academy Prize 2024. He is also a founder of PeptiDream and MiraBiologics in Japan. He served the President of Chemical Society of Japan in 2022–2024. He was appointed a member of Council for Science, Technology, and Innovation (CSTI) in the Cabinet Office of Japanese government.

**Expected Contribution**

Dr. Hiroaki Suga is an internationally and nationally recognized individual as a scientist for academic research and an entrepreneur for innovation. His awards, including proctigious Wolf Prize and Japan Aademy Prize, represent his recognition. He also served for the President of Chemical Society of Japan in 2022-2023 two fiscal years. Moreover, he is currently serving a member of Council for Science, Technology, and Innovation (CSTI) in the Cabinet Office of Japanese government. These experiences what he has would contribute

to the activities of IUPAC from many different angles, and he is able to promote IUPAC to the next level and lead IUPAC as the world chemistry community.