FASC Newsletter 1, January 2024

Compliments of the season to all and the wish is for a peaceful and productive time for all chemists residing in Africa. This is the first newsletter for 2024 – and as will be seen there are many conferences and workshops being organised on the continent. Of interest will be the Zoom events as these can be accessed form home countries and in many cases are free. This includes the IUPAC Women's breakfast. Information, on FASC Congress/GM meeting in Senegal is given. Also of note is the information on the ACRISE meeting and on the most recent editions of AJCE, both events falling under the FASC umbrella.
Neil Coville, 2024.

Content

The IUPAC Global Women's Breakfast (South African online edition) 27 Feb 2024; 14h00 SA time; Zoom Chem4Energy
Analitika

- **Zambia**

5th H3D Symposium, 2024

- **West Africa**

IoT4AQ

CONFERENCES/WORKSHOPS (International)
DETAILED CONFERENCE INFORMATION
See adverts at the end of the Newsletter.
See FASC website for data on conferences https://www.faschem.org/

ABOUT FASC

FASC website

Information on the FASC history, the updated FASC constitution, old copies of the newsletter, copies of the African Journal of Chemistry etc., has been loaded onto the site. https://www.faschem.org/

FASC membership and invoices

Payment of fees

Online payment is now available to all Members and Societies
Please email fasc.chem@wits.ac.za and request an online payment link – Note it will be in ZAR. The Equivalent daily rate will be used when the payment link is created. You can enter card details via a safe site.
Mrs Laila Smith
Membership Fees
Please apply online: http://www.faschem.org/contact/membership_application

Advertising in the FASC newsletter

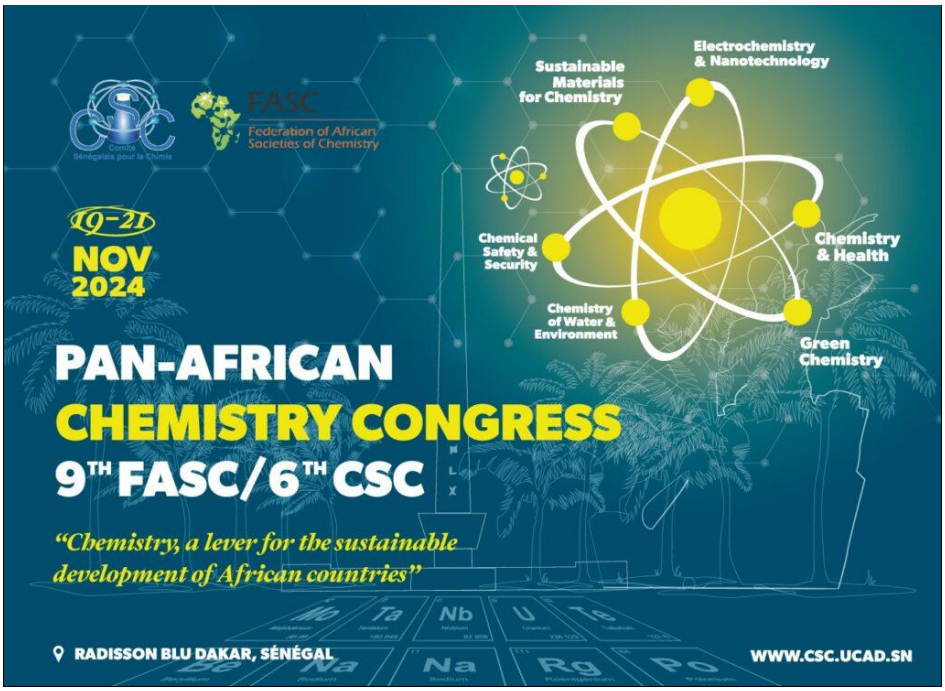
The newsletter will provide a means of getting messages to our member countries. This newsletter thus provides a means of advertising employment opportunities, conferences, and workshops, and even for companies/Universities to promote themselves. We encourage member countries to use the Newsletter for advertising purposes. All conferences and events will be advertised for free; if not a FASC country, there could be a small charge. For advertising costs, contact the FASC office in South Africa: laila.smith@wits.ac.za

CHEMISTRY NEWS

FASC news

i) FASC Congress 2024

Senegal will host the African Chemical Societies for the General Assembly of the **Federation of African Societies of Chemistry** (FASC). It will be held in conjunction with the **Annual Days of Chemistry of Senegal** (Journées Annuelles de Chimie du Sénégal – JACS), the major event of the Senegalese Committee for Chemistry (CSC), from 19 to 21 November 2024 at Radisson Blu Hotel, Dakar Sea Plaza, Corniche Ouest, Dakar, Senegal. The conference is themed "**Chemistry, a lever for sustainable development of African countries** ".



FASC|JACS 2024 will be jointly organized by CSC and FASC along with their partners among which are RSC, ACS, IUPAC, OPCW and West African Society of Chemistry (SOACHIM/Senegal) and in collaboration with Senegalese universities. The aim of this conference is not only to bring together Africa's scientific, technological, and industrial communities, but also to rethink together a structurally sustainable development centered on mankind and its priority investments. Chemistry is heavily involved in solving problems of African societies linked to health, energy, environment, water supply and nutrition, and therefore plays a key role in the sustainable development of African countries.

Prof. Modou Fall; modou.fall@ucad.edu.sn
PO Box 15756, Dakar-Fann, Senegal
Phone: +221775557200

https://csc.ucad.sn (*under* Congrès and FASC|JACS 2024)

ii) ACRISE

Dates and venue for the Education conference organised by FASC has now been determined.
The coming ACRICE meeting will be held on 11th – 13th December 2024 at the Giraffe Hotel, Dar es Salaam, Tanzania'
1. The local organizing committee is already in place.
2. The International Organizing/ Advisory Committee will be placed on the conference website

More information on ACRISE, including online registration will appear shortly.

Dr Clarence Mgina

African Chemical Societies News

i) Morocco

The African Training School on Green Chemistry & Environmental Sustainability (GreenChemAfrica) is a one-week training program dedicated to the latest advancements in sustainable chemistry and processes. The first edition of this training school will take place at Mohammed VI Polytechnic University in **Benguerir, Morocco, from 21st to 27th April 2024**. We extend our warm invitation to passionate and enthusiastic PhD students (later-stage graduate students, e.g., third year and beyond), postgraduates, and early career professors and researchers, as well as industry professionals, from all countries across Africa.

Applications for this exceptional opportunity are now open, and we would like to ask you to share this information with African PhD students and early career researchers within your network. It's worth noticing that this program is highly selective and a limited number of fellowships will be granted enhancing accessibility to this unique program at the scale of our continent.

For further information and application please visit the website:
https://susmat.um6p.ma/greenchemafrica/

SUSMAT Team (Youssef HABIBI <Youssef.Habibi@um6p.ma)

ii) Senegal

Senegal will host the African Chemical Societies for the General Assembly of the Federation of African Societies of Chemistry (FASC), It will be held in conjunction with the Annual Days of Chemistry of Senegal (Journées Annuelles de Chimie du Sénégal - JACS), the major event of the Senegalese Committee for Chemistry (CSC), from 19 to 21 November 2024 at Radisson Blu Hotel, Dakar Sea Plaza, Corniche Ouest, Dakar, Senegal. The conference is themed "Chemistry, a lever for sustainable development of African countries" (see above for more details).

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iii) The Gambia

The CHEMICAL SOCIETY OF THE GAMBIA was officially launched on Thursday, 25th January 2024 at The University of the Gambia, Kanifing. A full report will follow later. For any enquiries, please contact chemsocietygambia1@gmail.com

iv) Kenya

Direct-air-capture (DAC) technology

JANUARY 8, 2024 | CEN.ACS.ORG | C&EN 20-21

Can Kenya become a direct-air-capture hub? Start-up Octavia Carbon says the country has all the attributes to make it happen

Octavia Carbon, a Kenya-based start-up, has an audacious goal. It wants to become the first company to deploy direct-air-capture (DAC) technology—a method of removing carbon dioxide from the atmosphere—outside the US and Europe. The hurdles are high. The technology is new and is being used commercially at only two sites in the world. And Octavia needs more R&D before it can advance its process from pilot to commercial scale. Moreover, the technological infrastructure in Kenya is less robust than that of higher-income countries, to say nothing of the financial infrastructure needed to service a DAC venture. But Martin Freimüller, Octavia's CEO and founder, says he's confident the firm will overcome the infrastructure constraints. He's counting on Kenya to deliver three unique attributes: abundant renewable energy, a local geology that is well suited to the project, and a talented human resource pool that makes the country a competitive place for developing DAC. With a team of 47 employees, Octavia says it's the fourth-largest DAC company in the world. The start-up is currently conducting CO_2 removal tests using three machines it has built. If all goes according to plan, the firm will install more than 100 machines in 2024, Freimüller says. The goal is to scale the machines' capacity as DAC technology advances. For example, Octavia's first machines will be capable of removing 100 metric tons (t) of CO_2 per year; a 1,000 t model will follow. Octavia will build the DAC machines, and another start-up—Cella Mineral Storage— will be responsible for storing mineralized CO_2 underground. "We aim to ramp this capacity in the coming years by deploying more machines," Freimüller says. Octavia's longterm target is to permanently remove CLIMATE CHANGE Can Kenya become a direct-air-capture hub? Start-up Octavia Carbon says the country has all the attributes to make it happen GEOFFREY KAMADI, SPECIAL TO C&EN 1 million t of CO_2 from the atmosphere by 2030. Before setting up Octavia, Freimüller, an Austrian national, worked in the Nairobi, Kenya, office of the consulting

firm Dalberg Advisors, where he gained expertise in CO_2 removal as the firm's global expert in carbon markets. Freimüller's stay in Kenya has convinced him that the country has the right attributes to develop a DAC project. Top on Freimüller's list is Kenya's abundant renewable energy resources, which are the source of over 90% of the country's energy. The country is the leading geothermal power producer in Africa and the seventh largest in the world, but it uses only about 10% of its power capacity. The amount going untapped, Freimüller says, is enough to power Octavia's DAC plants to mega–metric ton scale. Although Octavia will use some geothermal electricity, it has tailored its DAC technology to rely largely on unused geothermal heat, according to Diana Maranga, business development lead at the company. "And in so doing, the company's DAC electricity requirements are lowered by approximately 85%, meaning geothermal electricity will be needed for only 15% of the DAC operations," Maranga observes. The world's first large-scale DAC facility, operated by Climeworks in Iceland, removes 4,000 t of CO_2 per year, at a cost of $600–$800 per metric ton. The CO_2 is CREDIT: OCTAVIA CARBON (BOTH) JANUARY 8, 2024 | CEN.ACS.ORG | C&EN 21 stored underground, where it reacts with basalt, creating carbonate minerals. Just as Octavia plans to do, Climeworks uses geothermal power and waste heat, meaning its operations have a net-zero carbon output. Successful CO_2 sequestration using basalt has also been demonstrated by the Wallula basalt sequestration pilot project in the US. It so happens that the geology in Kenya's Great Rift Valley offers CO_2 storage characteristics similar to those in Iceland. The Rift Valley is also the location of the country's geothermal plants. Maranga says Kenya's talent pool has been instrumental in developing the technology at a faster rate than Octavia's DAC-industry peers. All of Octavia's staff members, except Freimüller, are Kenyan. Two staffers have specific experience with DAC developed during study for their engineering degrees. The rest of the engineering staff is composed of professionals with degrees in fields such as chemical analysis and mechanical and electrical engineering. Freimüller hasn't disclosed much about Octavia's technology, saying the firm is in the process of obtaining patents. He does say that it traps CO_2 with a solid amine sorbent developed by Octavia's R&D team. Experts say the most advanced DAC processes are based on either solid sorbents or liquid solvents. Climeworks and the start-up Global Thermostat use solid sorbents, which consist of a high-surface-area support material featuring amine groups that adsorb CO_2 through a reversible chemical interaction, explains Alex Crutchfield, an associate research analyst at the consulting firm Cleantech Group. Amines, usually dissolved in water, are already used industrially to remove CO_2 and hydrogen sulfide from natural gas. Another prominent DAC firm, Carbon Engineering, uses a liquid-solvent-based approach that relies on the conversion of potassium hydroxide to potassium carbonate. Despite Octavia's energy-saving innovations, the cost of the project remains a challenge. Freimüller says the investors that fund climate technologies like DAC usually look to companies in the US and Europe. Unlike the US, whose government is pouring money into financing DAC projects, Kenya is still formulating the necessary financial framework to support engineered carbon removal. Even so, Freimüller says, Octavia has raised $450,000 from investors so far and is on track to generate over $1 million in revenue from the presale of the carbon offsets it will generate by capturing CO_2 in the first quarter of this year. At the moment, about 10 angel investors and venture capital firms are involved in Octavia, which is in the process of raising $6 million in seed money. And a number of entities—including the Milkywire Climate Transformation Fund, Klimate, and Terraset—have pledged to purchase carbon offsets generated by the project. Interest in developing and deploying DAC technology is undeniable. Still, some climate technology experts feel that proven, low-tech solutions should be getting more attention. Josh Knauer, who served as the science and technology adviser for President Barack Obama and is currently an adjunct professor at Carnegie Mellon University and adviser to the New York State Energy Research and Development Authority, says natural,

agricultural methods of CO_2 removal are well suited to doing the job. “Mechanical carbon capture is enormously expensive and still proving its ability to scale,” he says, whereas “good old-fashioned photosynthesis” has been used for millennia for carbon removal. Knauer cofounded a company, ReSeed, that helps small farmers store carbon with regenerative farming techniques. The Intergovernmental Panel on Climate Change estimates that anywhere from 100 billion to 1 trillion t of CO_2 needs to be removed from the atmosphere to avoid the worst climate impacts. “At scale, photosynthesis is already doing this, overseen by the globe’s 2 billion smallholder regenerative farmers,” Knauer says. He says 60 million hectares (ha) of farmland could remove the same amount of carbon if they are farmed using regenerative agricultural techniques. And this goal could be reached by enlisting a small fraction of the world’s smallholder farmers, each of whom owns an average of 3 ha of farmland. In contrast, Knauer argues that when fully commercialized, DAC plants will capture 4,000 t per year of CO_2 at a cost per plant of as much as $500 million. Some 300,000 of these plants will be needed to remove a mere 1.2 billion t of carbon from the atmosphere. Another challenge for DAC is that other emerging high-tech CO_2 removal approaches may prove to be more effective. Crutchfield points to ocean alkalinity enhancement, a method of adding alkaline minerals like olivine and basalt to the oceans to enhance their ability to absorb CO_2 and convert it into carbonate and bicarbonate salts. Crutchfield says the technology could dethrone DAC because it is less resource intensive and doesn’t need to compete for land. Meanwhile, civil society groups in Africa are concerned that advancing geoengineering technologies—be they on land or in the ocean—will negatively affect commitments to large CO_2 emission cuts. During the African Ministerial Conference on the Environment in 2022, more than 30 groups issued a letter stating that such advances offer a technological fix that will allow countries to continue relying on fossil fuels in the face of an ongoing climate emergency. Freimüller insists that Octavia will never collaborate with the fossil fuel industry, because the goals of the industry are not aligned with climate targets. He cites an investigation by the Guardian newspaper that showed that 94% of carbon credits purchased by the oil and gas industry were fake. “That could never happen with DAC, because we are closely quantifiable, very easily verifiable, and very durable as a storage mechanism,” Freimüller says.

Geoffrey Kamadi is a freelance journalist based in Kenya.

IUPAC – Dr Keinan, new IUPAC President

i) Ehud Keinan Becomes New IUPAC President

Data taken from ChemistryViews; **Published On:** January 1, 2024; **Copyright:** Wiley-VCH GmbH

The General Assembly of the International Union of Pure and Applied Chemistry (IUPAC) has elected Ehud Keinan, Benno Gitter and Ilana Ben Ami Professor of Chemistry, Technion, Haifa, Israel, President of the Israel Chemical Society (ICS), and Editor-in-Chief of the *Israel Journal of Chemistry*, President for the 2024–2025 biennium. He succeeds Javier García-Martínez, Professor of Inorganic Chemistry at the University of Alicante, Spain.

Ehud Keinan studied chemistry at Tel Aviv University, Israel, and received his M.Sc. from Ben Gurion University of the Negev, Israel, in 1972, and his Ph.D. from the Weizmann Institute of Science, Rehovot, Israel, under the supervision of Yehuda Mazur in 1977. After a postdoctoral period at the University of Wisconsin, Madison, USA, with B. M. Trost from 1977 to 1980, he held a position as Associate Professor of Organic Chemistry at the Weizmann Institute from 1980 to 1989. He has served on the Technion's faculty since 1989. From 1991 to 2013, Keinan served as an Adjunct Professor in the Department of Molecular Biology and at the Skaggs Institute for Chemical Biology, The Scripps Research Institute, La Jolla, CA, USA. He became Professor of Chemistry at Technion in 1995.

Ehud Keinan was Dean of the Faculty of Chemistry at Technion in 2004–2005. He is the Founder and first Head of the Institute of Catalysis Science and Technology (ICST) at Technion and founded two startup companies. Keinan served as Pro-Vice-Chancellor and Dean of Sciences, GTIIT, Guangdong, China, in 2015–2016, and holds a Distinguished Visiting Chair at the Academia Sinica, Taiwan, since 2020. He was a Member of the Executive Board of EuChemS from 2012 to 2015.

Ehud Keinan's research interests include biocatalysis with antibodies and synthetic enzymes, organic synthesis, molecular computing, supramolecular chemistry, peroxide-based explosives, and drug discovery. He also is a writer and activist focusing on science education, higher education, public policy on energy, and the chemical industry.

Among many other honors, Keinan received the New England Award for Academic Excellence in 1990, the NIH Shannon Award in 1992, the CapCure Award in 1995, the Hershel Rich Innovation Award in 2001, the Technion Prize for Security Technologies in 2004, the Henri Taub Prize for Academic Excellence in 2006, and the 2020 Award of Service from EuChemS. Since 2010, he is a Fellow of the American Association for the Advancement of Science (AAAS), and since 2021, a Fellow of the American Chemical Society (ACS).

Royal Society of Chemistry News

ii) **PACN meeting in Kenya**.

This meeting will now take place in late 2024. More information will be available later in the year.

African Journals of Chemistry

African Journal of Chemical Education (FASC)

iii) AJCE Vol. 13, Number 4, December 2024 (Special Edition)

EDITORIAL

The Systemic Approach in Teaching and Learning (SATL): 25th Anniversary ; **AJCE Editorial Team**

RESEARCH PAPERS

A 25th anniversary with SATL in chemistry education: Systemic approach to teaching and learning (SATL), systemic assessment (SA) and systemic thinking (ST) Amin Farouk Mohamed Fahmy

Systemic approach for teaching and learning green chemistry (SATLGC) Boshra M. Awad

A solution to decipher SATL approach for teaching "solutions" in chemistry, Iftikhar Imam Naqvi, Kanwal Zahid, Shazia Nisar and Nasreen Fatima

Chemistry teachers' opinions on and attitudes to the implementation of systemic tasks into teaching in Slovakia, Mária Ganajová, Ivana Sotáková

Systemic assessment questions for systems thinking development and evaluation in organic chemistry domain: a review of applications and future prospectives, Tamara N. Rončević, Saša A. Horvat and Dušica D. Rodić

iv) AJCE Vol. 14, Number 1, January 2024

EDITORIAL

RESEARCH PAPERS

The steady state in chemical kinetics: characterization in terms of the first and second steady-state rate laws, Mark Fungayi Zaranyika

Combinatorial chemistry in the undergraduate laboratory, Bogdan Doboszewski and Edmilson Clarindo de Siqueira

Teachers' perceptions and implementation of inquiry-based learning in rural schools, Mandina Shadreck

Assessment of water quality parameters in Nyambai, Brikama, The Gambia, Oladele Oyelakin, Mandalena Mendy, Lamin B.S. Dibba, Badou Saine, Matarr Gaye, Omar Touray, Serigne Modou Nyang, and Kaddy Saidy

Essential nanoscience in graduate education: an outline, B.H.S. Thimmappa

Enquiries and manuscripts should be addressed to the Editor-in-Chief: email **eic@faschem.org**, PO Box 2305, Addis Ababa, Ethiopia.

Dr. Temechegn Engida e-mail: temechegne@faschem.org

See the FASC website for a list of Journals published in Africa.

CONFERENCES/WORSHOPS (AFRICA)

See the FASC webpage for more details on the conferences listed below.

North Africa

Morocco

- ***African Training School on Green Chemistry & Environmental Sustainability (GreenChemAfrica)*** 21-27 April 2024, Mohammed VI Polytechnic University in Benguerir, Morocco, from 21st to 27th April 2024.

Southern Africa

South Africa

- ***The IUPAC Global Women's Breakfast (South African online edition)*** will take place on 27 Feb 2024; 14h00 SA time; Zoom). Sadhna Mathura; Chair: Chemists for Diversity and Inclusivity; South African Chemical Institute
- ***SACI Inorganic and Carman 2024*** **4**-6th June 2024, Drakensberg Mountains, South Africa
- ***Analitika 2024*** 10-14th March, 2024, Drakensberg Mountains, South Africa
- ***Chem4Energy*** 20-24th March 2024, MuldersDrift, South Africa

Zambia

- 5th H3D Symposium, 2024 "Emerging Treatments for Drug Resistant Infections of Bacterial and Mycobacterial Origin Radisson Blu Mosi-Oa-Tunya Livingstone Resort in Zambia, Zambia; 21-24 May

West Africa

Senegal

- **IoT4AQ workshop** was announced *14th and 15th of March 2024 at the Alioune Diop University, in Senega*l

Conferences/Workshops (International)

see FASC website.

Conferences/Workshops details


UM6P
SUSMAT
African Training School on Green Chemistry And Environmental Sustainability
(GreenChemAfrica 2024)
Green Chem Africa
Application for the African Training School on Green Chemistry And Environmental Sustainability (GreenChemAfrica) is open now. We invite top-ranked African students, early career researchers, and professionals to participate in this cutting-edge research initiative in Morocco.
Courses
Introduction to Green Chemistry
Renewable feedstock and recycling
Greening organic synthesis
Greening inorganic synthesis
Greening solvents and media
Greening Processes
Life Cycle, Sustainability Assessments and Modeling
Eligibility
The GreenChemAfrica is open to scientists and industrials. The applicants need to check their eligibility depending on their current position.
Fees
Participant
Fees*
PhD Students, Postgraduates, Early Career Professors
Fellowships will be granted for selected candidates
Industry professionals
To be communicated later
*Please visit the website for updates
Deadlines
- Applications are due by 11:59 p.m. CET, January 31, 2024.
- Applicants will be notified of acceptance by February 14, 2024.
- Payments are due by 11:59 p.m. CET, March 15, 2024
For more information and application check our website:
www.susmat.um6p.ma/greenchemafrica


The South African Chemical Institute
Promoting chemistry, chemists, the chemical industry and chemical education in South Africa
Chemists for Diversity and Inclusivity
FORUM OF THE SOUTH AFRICAN CHEMICAL INSTITUTE
SAVE THE DATE
GI global
Wo women's
Br breakfast
https://iupac.org/gwb/
FEBRUARY 27 2024
Time: 14h00-15h30 SAST
Venue: ONLINE
All early-career and students interested in chemistry careers are invited
CONTACT
SACI.CHEM@WITS.AC.ZA

FIRST ANNOUNCEMENT

2024 SACI INORGANIC AND CARMAN CHEMISTRY CONFERENCE
CHAMPAGNE SPORTS RESORT, CENTRAL DRAKENSBERG
KZN, SOUTH AFRICA
2 – 6 JUNE 2024

REGISTRATION FEES INCLUDES ACCOMMODATION

Category of Participant	Early Bird 19 Jan 2024 – 31 March 2024	Late Fees 1 April 2024 – 15 April 2024
SACI Member	R14500	R16500
SACI Student Member (sharing)	R12000	R14000
Non-SACI Member	R16000	R18000
Non-SACI Student Member (sharing)	R12500	R14500
Accompanying Person	R10000	R10000

IMPORTANT DATES

22 January 2024	First Announcement
22 January 2024	Early Bird Registration (online)
22 January 2024	Abstract Submission
19 February 2024	Second Announcement
31 March 2024	Deadline for Abstract Submission
31 March 2024	Deadline for Early Bird Registration
1 April 2024	Start Late Registration (online)
15 April 2024	End of Registration
5 May 2024	Notification of Abstract Acceptance

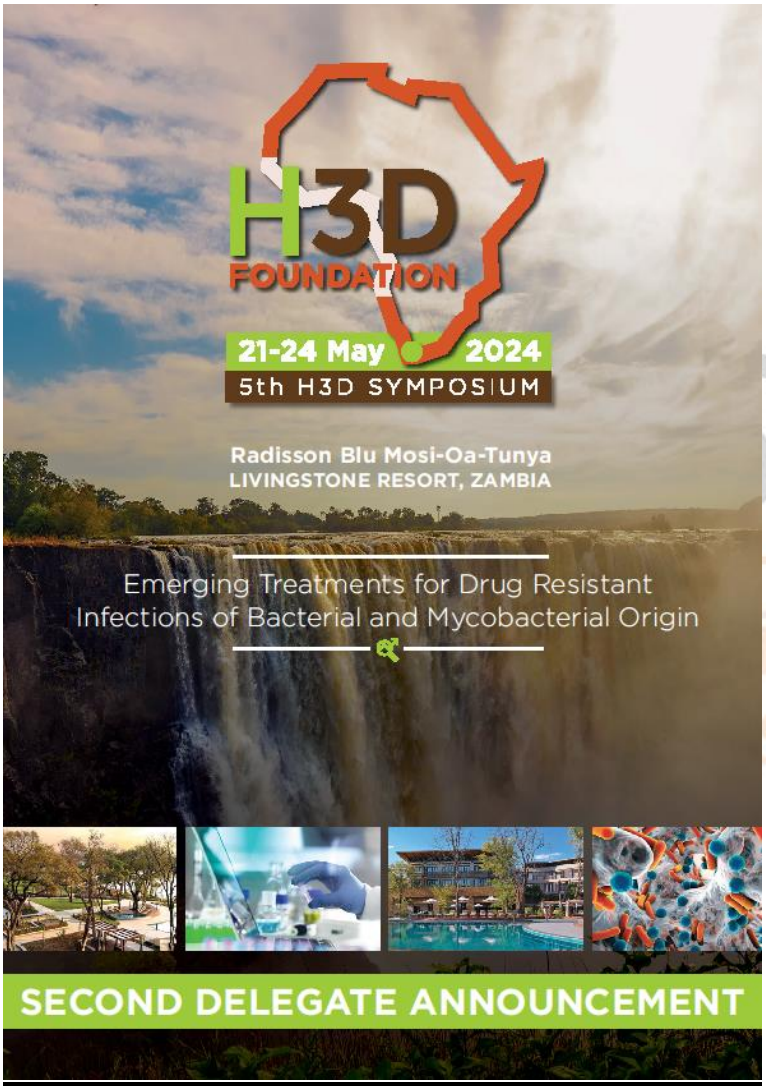
Registration:
https://www.saci.co.za/INORG2024/registration.html

Abstract submission:
https://www.saci.co.za/Scripts/Submissions/

Or contact the chairperson: singht1@ukzn.ac.za

TOPICS

Inorganic Chemistry
Supramolecular Chemistry
Materials Chemistry
Reaction Kinetics
Organometallic Chemistry
Coordination Chemistry
Bioinorganic Chemistry
Green Chemistry
Theoretical Chemistry
Industrial Chemistry
Catalysis
Crystallography
Thermodynamics
Electrochemistry
Physical Chemistry



10 – 14 March 2024
Champagne Sports Resort, Central Drakensberg

Analitika Conference 2024

REMINDER TO REGISTER

Early Bird Registration deadline: 16 January 2024

Visit the conference website for information and to register

Confirmed Speakers

Prof Deirdre Cabooter

Deirdre Cabooter is a tenured research professor at the Department of Pharmaceutical and Pharmacological Sciences at the University of Leuven (KU Leuven) in Belgium. She obtained a PhD in Chemical Engineering under supervision of Prof. Gert Desmet in 2009 and was a post-doctoral fellow at Stellenbosch University in 2010-2011. Her current research focuses on a deeper understanding of mass transfer phenomena in liquid chromatography, the performance evaluation of novel supports in liquid chromatography, the analysis of complex samples in pharmaceutical, environmental and clinical applications using one- and two-dimensional liquid chromatography, retention modelling and solutions for automated method development based on artificial intelligence. She has published 128 peer-reviewed papers and book chapters, and is currently the promoter of 3 post-docs, 5 PhD students and 3 Master students. She received the LCGC Emerging Leader in Chromatography Award in 2017, the Jubilee medal of the Chromatographic Society in 2020, the JFK Huber Lecture Award of the Austrian Society of Analytical Chemistry in 2023, and is an editor of Journal of Chromatography A since 2018

Dr Steve Lancaster

Steve leads the Analytical Sciences team at Domino Printing Sciences, part of the Brother Group of companies in the United Kingdom. He specialises in chromatography, mass spectrometry and process analytical chemistry. He obtained his PhD in analytical chemistry from the University of Hull and has worked in petrochemicals and ink development. Steve has served on several RSC committees including the Atomic Spectrometry Group, the Molecular Spectroscopy Group and the North East Region Analytical Division. He has served two terms of office as an elected member of the Analytical Community Council where he headed the International Strategy Group. He is currently leading the industrial input to the IUPAC Working Group on analytical education. He is one of the Royal Society of Chemistry's 175 Faces of Chemistry, commemorating 175 years of the RSC in 2016 and was awarded an Inspirational Members award in 2020. He is founder of the charity, Foundation for Analytical Science and Technology in Africa and has developed and delivered the Royal Society of Chemistry/ Pan Africa Chemistry Network GC-MS Workshops across Africa for the past 16 years, reaching many hundreds of scientists. He has completed several charity cycling events to raise funds for the African analytical education project, including the French Alps, London to Paris, Loire valley, and the Coast to Coast

Prof Len Barbour

Professor Len Barbour's research interests include various solid-state phenomena, with particular emphasis on the design and characterisation of porous materials for inclusion chemistry, e.g. chemical separations, gas sorption. Prof Barbour obtained his PhD from the University of Cape Town, where he investigated thermodynamic and structural aspects of solvate formation and decomposition. He completed a Postdoctoral Fellowship at the University of Missouri where he was later appointed Research Assistant Professor. In 2003 he established a laboratory at Stellenbosch University to investigate various aspects of solid-state supramolecular chemistry and was later awarded a Tier 1 South African Research Chair in Nanostructured Functional Materials. Prof Barbour has published over 230 articles in peer-reviewed journals, including Nature and Science and has served as associate editor of the nine-volume major reference work Comprehensive Supramolecular Chemistry (2nd Edition, 2017) and the New Journal of Chemistry. Awards his work has garnered include the South African Chemical Institute's Gold Medal and Stellenbosch University's Chancellor's Award for Research.

Prof Perdita Barran

Professor Barran holds a Chair of Mass Spectrometry in the Department of Chemistry and is the Director of the Michael Barber Centre for Collaborative Mass Spectrometry and a member of Manchester Institute of Biotechnology, The University of Manchester, UK. She is the deputy chair of the Infrastructure and Capital Advisory Group for the Medical Research Council, UK. Her research interests include: Biological mass spectrometry, Instrument and technique development, Protein structure and interactions, Dynamic and Disordered Systems, Parkinson's disease Diagnostics, HDX-MS, Proteomics, and Molecular modeling. She is a Fellow of the Royal Society of Chemistry and was awarded the Theophilus Redwood Award from the RSC in 2019, Researcher of the Year 2020 from the University of Manchester and the ACS Measurement Science Lectureship 2021. In 2020 she initiated the COVID-19 Mass Spectrometry Coalition and was appointed as Chief Advisor to the UK Government on Mass Spectrometry as part of their pandemic response. Perdita has had the privilege to mentor 35 graduate students through the successful completion of their PhD's. as well as 16 postdoctoral fellows. Perdita has authored over 200 publications in peer reviewed journals which have been cited over 4000 times, by people other than her. In 2021 Perdita founded the company Sebomix Ltd. to exploit sebum as a diagnostic biofluid with a focus on Parkinson's Disease