his PhD studies at KAIST, Jo did a PostDoc at the Institute for Nuclear Waste Disposal (Institut für Nukleare Entsorgung, INE) of the Karlsruhe Institute of Technology (KIT), Germany, from 2020 to 2022. Research at KIT-INE was mainly focusing on a better description of Nb(V) aquatic chemistry in cementitious environments. Niobium-94 is an activation product potentially present as part of nuclear waste, and a better understanding of Nb aqueous speciation and retention processes in cementitious environments are needed to provide a significantly improved description of Nb(V) mobility in an applied repository context.

Yongheum Jo

After his PostDoc at KIT-INE, Jo worked as a senior researcher at Korea Atomic Energy Research Institute (KAERI) from 2022 to 2023. Starting in 2023, Jo assumed the role of an assistant professor in the Department of Nuclear Engineering at Hanyang University in Korea. His current work focuses on Nb solids solubility in alkaline aqueous solution in the presence of organic materials. The objective of this topic is to establish a comprehensive chemical thermodynamic description of Nb solids solubility in the presence of organic compounds and Nb-organic complexation. In addition, he is developing a chemical model that depicts the chemical interaction between organics and cementitious materials, covering dissolution and precipitation phenomena. Building on his previous work, he is expanding his investigation to explore the ternary M-AnO2-CO3 system in the context of neptunium(VI) to derive chemical equilibrium data. His research group will continue to explore the chemical thermodynamics to unravel the chemical processes of radionuclides in various environments.

Yongheum Jo has an impressive set of excellent scientific knowledge and expertise. This is covering a broad field in the context of actinide and radionuclide chemistry relevant in fundamental research and to assess scenarios in nuclear waste disposal and the back-end of nuclear fuel cycle. Studies on solubility phenomena and the related chemical speciation play a key role in his research profile.

More details at https://iupac.org/what-we-do/awards/franzosini-award/

## ISC's Unlocking Science series wins Digital Communications Award

**The multimedia series Unlocking Science, produced in partnership with BBC StoryWorks, the International Science Council (ISC) Members and other partners, is voted the best in the 'Video Series' category at the prestigious Digital Communications Awards (DCA).**

The Unlocking Science multimedia hub, which uncovers innovative global stories behind the science of sustainability, was lauded by the DCA jury for its compelling and innovative storytelling. These stories feature communities engaging with science and technical innovation to deliver transformation. The series covers researchers out in the world working on practical solutions or shaping our understanding of the problem. One of the most popular films recounts one woman's quest to save Malawi's crops and rethink the future of farming. In another film, a team of researchers weed out discrimination for an inclusive AI world. The stories represent a wide array of science disciplines and take audiences from the outback of Australia to the forests of the Amazon.

https://council.science/current/news/dca-award/

## Richard Hartshorn elected CODATA Vice President

**Held on 27-28 October 2023, in Salzburg and online, the 2023 CODATA General Assembly elected a strong and diverse Executive Committee and approved eight Task Groups and one Working Group. The full summary of the General Assembly, including presentations, results of voting and the recordings can be consulted on codata.org.**

For the first time in CODATA's 57-year history, CODATA has elected a female president, and the overall gender balance is 7-8 (female-male) for the elected members is the best ever. This is also the highest number of Officers/ExComm members nominated by International Scientific Unions in at least the last ten years, which shows a confidence in CODATA mission to engage with data issues from a range of scientific fields. Coming from IUPAC, former Secretary General Richard Hartshorn has been serving as a member of the Executive Committee since 2018 and is now elected

Vice President, together with Daisy Selematsela, nominated by South Africa. Mercè Crosas was elected President, nominated by USA, DDI Alliance, GO FAIR Foundation.

The following CODATA Task Groups were approved:

- Data Systems and Services for Crisis Situations (DSTS-CS)
- Advancing Data Science for Sustainability
- Geographic Indications and Sustainability (GIES-TG)
- Data Ethics Task Group (DE-TG)
- Data-Driven Social Change Towards Society Promoting Cognitively Healthy Aging
- Citizen Generated Data for the SDGs
- Digital Representation of Units of Measure (DRUM-TG)
- FAIR Data for Disaster Risk Research

The CODATA General Assembly took place during International Data Week (IDW), co-hosted by CODATA and the Research Data Alliance (RDA). IUPAC was an active contributor through the involvement of CPCDS and community collaborators. Some highlights are noted below; further summaries of these activities will be forthcoming in *Chemistry International* and other articles.

- IUPAC's WorldFAIR Chemistry project (IUPAC project 2022-012-1-024) was the hosting organizer of two multi-disciplinary sessions at IDW:
- Beyond FAIR: Reusing Chemical Data Across-disciplines with CARE, TRUST, and Openness
- Describing Chemical, Physical and Biological samples digitally: Seeking harmonization

Brief descriptions have been written-up in the recent WorldFAIR newsletter. With thanks to Fatima Mustafa, IUPAC WorldFAIR Chemistry-Project Coordinator, to manage the session organization for these in collaboration with several other WorldFAIR case studies, including Nanomaterials, GeoChemistry and Agricultural Biodiversity, and RDA Interest Groups, including Chemistry Photons & Neutrons and Physical Samples. Other collaborators included PARC (Partnership for the Assessment of Risk of Chemicals), PSDI (Physical Sciences Data Infrastructure) in the UK, and the NFDI4Chem data infrastructure project in Germany. IUPAC colleagues who presented or moderated included Ian Bruno, Stuart Chalk, Jeremy Frey, and Leah McEwen.

The CODATA Task Group on Digital Units of Measure (see also IUPAC project 2022-009-1-100) hosted a session that featured talks from Richard Hartshorn and Stuart Chalk, who are members of the CODATA DRUM group along with Jeremy Frey.


From left to right: Daisy Selematsela, newly elected CODATA Vice President; Mercè Crosas, newly elected President; Richard Hartshorn, newly elected Vice President.

IUPAC is also invited to participate in a new RDA Working Group on "Harmonised terminologies and schemas for FAIR data in materials science and related domains", described in an IDW poster: "Review and Alignment of Domain-Level Ontologies for Materials Science and Chemistry" that references the IUPAC Gold Book.

https://iupac.org/richard-hartshorn-elected-codata-vice-president/

## The IUPAC Periodic Table Challenge Now Available in Nine Languages

**On November 1, IUPAC has launched two additional translations of the Periodic Table (PT) Challenge: German and Romanian.**

The IUPAC PT Challenge dates back to the International Year of the Periodic Table of Chemical Elements (IYPT2019) and the IUPAC centenary in 2019 when an online activity about the Periodic Table of the Elements was launched to celebrate IUPAC anniversary. The PT challenge is targeted at a global audience of young students, scientists and the general interested public, and has had impressive global reach. Since its launch, the PT Challenge has been played more than 130 000 times by players from over 160 countries, from every continent, including Antarctica.

Over the last four years, the PT Challenge has been expanded to include three difficulty levels (beginner,