

of Technology, Gliwice, Poland for the poster entitled “Alginate composite membrane filled with silver and nickel nanowires—characteristic and application in pervaporation dehydration of ethanol”; and to Patrick Imrie, The University of Auckland, Auckland, New Zealand for the poster entitled “Direct-ink-write 3D printing of “living” polymer hydrogels via type I photoinitiated RAFT polymerization.”

The **POLY-CHAR Awards for the best poster presentations from students and young scientists** were awarded to Lakshmi Mukundan, Indian Institute of Technology Kharagpur, Kharagpur, India for the poster entitled “Polycaprolactone encrusted bioactive glass antibiotic nanohybrid through drug mediated surface initiated polymerization: An overcoat approach for modulated burst release”; to Krishnendu Nath, Indian Institute of Technology Kharagpur, Kharagpur, India for the poster entitled “Facile preparation of light-weight biodegradable and electrically conductive polymer-based nanocomposites for superior electromagnetic interference shielding effectiveness”; and to Devon Bryant, The University of Auckland, Auckland, New Zealand for the poster entitled “Novel conducting polymer sensor for the detection and analysis of biothiols.”

This year, there have been additional **POLY-CHAR [Auckland] 2023 awards for the best poster presentation from students and young scientists, sponsored by The University of Auckland**, that were awarded to Liam van Mechelen, The University of Auckland, Auckland, New Zealand for the poster entitled “Harakeke Reinforced Furan Bio-Composites”; to Danny McDougall, The University of Auckland, Auckland, New Zealand for the poster entitled “What makes mussels stick?”; and to Mahdiah Ghofrani, Victoria University of Wellington, Lower Hutt, New Zealand for the poster entitled “Towards the methylation analysis of heparan sulfates”.

The approaching POLY-CHAR conference, “POLY-CHAR [Madrid] 2024: Polymers for our Future”, will take place in Madrid, Spain, 27-31 May 2024.

Sustainability and Inclusivity: An Interdisciplinary Conversation

by Liana Vaccari, Kristin A. Bennett, Ana Ferreras, Danniebelle N. Haase, Jennifer E. Lansford, A. Ester Sztejn, and Vivian U

No individual discipline alone can solve the issues of sustainability and inclusivity. These are complex interconnected problems with both physical and societal

implications around the globe. For the 2023 IUPAC Global Women's Breakfast (GWB) and in recognition of the International Year of Basic Science for Sustainable Development, the National Academies of Sciences, Engineering, and Medicine of the United States hosted on 14 February an interdisciplinary conversation to build connections across fields and share best practices in support of progress towards sustainability and equity, particularly for women. This event, coordinated by the National Academies' Board on International Scientific Organizations, consisted of a panel with representatives of four fields and U.S. National or Liaison Committees to IUPAC, the International Union of Pure and Applied Physics (IUPAP), the International Union for Crystallography (IUCr), and the International Union of Psychological Science (IUPsyS), moderated by Dr. Ester Sztejn.

Each panelist touched on what sustainability means for their field and related Sustainable Development Goals. Danniebelle Haase, Dow Chemical Company, spoke to her work supporting energy efficiency and considering environmental and health impacts across the lifecycle of products that improve quality of life as well as the contribution of chemistry to zero hunger, good health, and other environmental and health challenges. Similarly, Kristin Bennett, KB Science, addressed crystallography's contribution to drug discovery, work in clean energy, and water quality and sanitation. Jennifer Lansford, Duke University, highlighted the importance of psychology in good health, education, and understanding behavior and ramifications of climate action. Vivian U, University of California, Irvine, emphasized the importance of good health and well-being as well as gender parity for the strength of the field of physics while astrophysicists look to far-flung galaxies and black holes to understand how the phenomena evolved.

IUPAC has supported the GWB annually since 2019 and along with IUPAP participates in a cross-union effort on reducing the Gender Gap in Science. Every three years since 2002, IUPAP has held an International Conference on Women in Physics originating from the eponymous Working Group. IUPAC and IUCr have also recently established internal committees addressing equity and diversity. While there are common goals and challenges across these disciplines, the panel also discussed issues unique to each field and current efforts or best practices. For example, field work in certain disciplines can put women in vulnerable and isolated situations. For psychology, there is gender parity, if not a high proportion of women, but this has not meant that a) women are equally represented in

Conference Call

positions of authority, or b) that there has been equitable representation across countries. IUPsyS efforts of late have aimed to be more inclusive of global research and perspectives and reduce the overemphasis on U.S.-centered psychology.

Suggested best practices for promoting inclusivity in scientific societies and communities included:

- Require inclusion, quota for keynote speakers, panelists, presenters, and symposium organizers at conferences
- Work towards inclusivity at all levels of authority
- Make use of anonymous proposals where applicable to reduce the effect of biases
- Partner with communities affected by your science to understand their needs
- Support scientific literacy
- Use metrics to demonstrate real progress towards equitable inclusion
- Support hybrid meetings for improved accessibility and environmental sustainability

One emergent common theme, relevant to both sustainability and inclusivity, was the importance of developing situation specific solutions with measurable outcomes that are also scalable. Lansford

described efforts in psychology to study implementation science, aimed at improving the outcomes of interventions that take place outside of laboratory or experimental settings. Understanding what circumstances will support change and acceptance is vital for taking technical solutions developed by physical and life scientists and enacting them for the good of the broader society. This underscores the importance of continued conversation between disciplines, sharing best practices and complementary efforts. We are grateful for the IUPAC Global Women's Breakfast platform for this opportunity to have this conversation and contribute these insights.

Liana Vaccari and Ana Ferreras are from the U. S National Academies of Sciences, Engineering, and Medicine, Washington, DC; Kristin A. Bennett is from KB Science LLC, Boston, MA; Danniebelle N. Haase is from Dow, Collegeville, PA, Jennifer E. Lansford is from Duke University, Durham, NC; A. Ester Sztein is from the Geological Society of America, Washington, D.C.; and Vivian U is from UC Irvine, Irvine, CA

The opinions expressed here are those of the authors and do not necessarily represent positions of the U.S. National Academies of Sciences, Engineering, and Medicine.

The banner features a dark teal background with a circular inset showing a woman speaking into a microphone. On the left, the 'GI Wo Br' logo is displayed above the large text 'GWB 2024' and the tagline 'Catalyzing Diversity in Science'. On the right, the website 'iupac.org/gwb' is shown above a circular graphic containing the date 'FEBRUARY 27'. Decorative elements include a grid of plus signs and concentric circles.

You are invited to organize an event for **#GWB2024**, the IUPAC Global Women's Breakfast, happening on **February 27, 2024**. Together we are Catalyzing Diversity in Science!

