

## **Annual Report on 2024 Activities**

### **IUPAC Committee on Ethics, Diversity, Equity and Inclusion**

6 January 2025

#### **Part 1. Executive Summary**

The work of CEDEI relates most directly to upholding all of the Core Values of IUPAC in its Strategic Plan, as well as advocating the free exchange of scientific information. Highlights of CEDEI's activities during 2024 include: (1) broadening the membership of CEDEI to include Associate Members and Division/Standing Committee Representatives (Council approval needed), (2) amendments to the Harassment Policy Statement to include a process for dealing with incidents (Executive Board and Council approval needed), (3) progress on the Guiding Principles Project, 2022-034-3-060, (4) partner projects on the gender gap in chemistry, (4) selection of awardees for the IUPAC Award for Distinguished Women in Chemistry and Chemical Engineering, and (5) representing IUPAC on the Standing Committee for Gender Equality in Science and a new ISC project on Gender Equality in Scientific Organizations.

#### **Part 2. Plans and priorities for the remainder of 2024-2025 biennium and beyond**

1. Completion and launch of the Guiding Principles project, including review and posting of the Guiding Principles on an IUPAC Web page, external publicity as appropriate, and an official launch associated with the 2025 IUPAC World Congress and General Assembly in Kuala Lumpur in July 2025.
2. Cooperation with external organizations including the Standing Committee for Gender Equality in Science (SCGES) and with the International Science Council (ISC), the Interacademy Partnership (IAP) and the SCGES on gender equality in scientific organizations.
3. Gathering and organizing statistical information on gender equality in IUPAC, including volunteer membership, service on Divisions, Standing Committees and project task groups, and IUPAC leadership.

#### **Part 3. Overall report of activities and achievements of CEDEI since 2023 report to Council**

The IUPAC Committee on Ethics, Diversity, Equity and Inclusion, CEDEI, provides advice, recommends best practices, and develops policies to ensure that IUPAC promotes and embraces ethics, diversity, equity and inclusion in the workplace, in publications, and in education in chemistry. CEDEI may also produce and collect examples of best practices, guidelines, and recommendations for the use of IUPAC and the chemistry community. CEDEI can, at the request of the President of the Union, provide an independent opinion on any topic related to its mandate.

Following is a summary of progress and achievements in CEDEI in 2024 related to the goals and priorities of IUPAC as requested in the document, "Reports to Science Board and (later) to Council 2025."

**Goal b: Interaction with chemistry organizations, professional societies, industry and other relevant bodies to facilitate best practice in chemistry and chemistry education, or that support educational initiatives in data standards and management.**

Two members of CEDEI (Mei-Hung Chiu, Mark Cesa), as part of IUPAC Project 2020-016-3-020 – The Gender Gap in Chemistry – Building on the ISC Gender Gap Project, co-authored two refereed publications on the subject; see Part 4 for details on these publications.

**Goal c: Connections with cognate disciplines and educational communities, including outreach or engagement initiatives and those that contribute to sustainable development.**

Standing Committee for Gender Equality in Science, SCGES: The chair of CEDEI served in 2024 as Treasurer and IUPAC Deputy Representative to the SCGES and was a member of the SCGES working group on Best Practices. This working group is preparing an inventory of best practices in gender equality across the 24 member organizations of SCGES; see <https://gender-equality-in-science.org/>.

International Science Council project: Gender Equality in Scientific Organizations: two members of CEDEI (Mark Cesa, Supawan Tantayanon) are members of the working group on this project, which is a collaboration among the ISC, the Interacademy Partnership (IAP), and SCGES. The project will provide quantitative and qualitative analysis of the drivers and barriers to an equitable representation of women scientists in science academies, medical academies, academies of engineering, and international scientific unions. A comprehensive survey of these stakeholders is in the final stages of preparation and will be circulated in early 2025, with a goal of preparation of a report to the partner organizations later in the year.

**Goal d: Promotion of diversity and inclusiveness in the profession of chemistry, or of values and ethics in science through responsible practice.**

Project 2022-034-3-060 – Guiding Principles for the Responsible Practice of Chemistry: A project task group has worked energetically to prepare drafts of eight Guiding Principles for the Responsible Practice of Chemistry. Students at The Kings University in Edmonton, Alberta, Canada, under the supervision of Peter Mahaffy, worked with the task group to prepare icons, tag lines, and one-sentence statements for each Principle, and they constructed a Web site framework for the Guiding Principles. Each task group member drafted and reviewed expanded texts for each Principle, including one-paragraph descriptions, examples of the applications of each Principle, guidelines for future action, and discussion questions for use by students, educators, and professionals in applying the Guiding Principles in their schools and workplaces and with the public where they live. Plans for launching the Guiding Principles as a flagship activity of IUPAC are under way for a launch in 2025; see <https://iupac.org/project/2022-034-3-060>.

IUPAC Award for Distinguished Women in Chemistry or Chemical Engineering: The chair of CEDEI served as chair of the jury for this important IUPAC award. Twelve outstanding women chemists and chemical

engineers were selected for awards in 2025, which will be presented at the Opening Ceremony of the IUPAC World Chemistry Congress and General Assembly in Kuala Lumpur, Malaysia, in July 2025.

### **Additional CEDEI activities**

CEDEI Membership: The IUPAC Executive Board gave provisional approval for modifications of the CEDEI Composition and Terms of Office to allow for Associate Members and Division/Standing Committee Representatives on the Committee. In 2024, Ghada Bassioni and Dan Reddy accepted invitations to join CEDEI as Associate Members, and Tanja Junkers (Polymer Division, CPCDS), Marloes Peeters (Polymer Division), Fabiana Piscitelli (Analytical Chemistry Division), and Malgorzata Witko (Physical and Biophysical Chemistry Division) became Division/Standing Committee Representatives.

IUPAC Policy Statements: During 2024, at the request of the President of IUPAC, the chair of CEDEI provided an opinion on dealing with a volunteer behavioral matter. At the request of the Secretary General, a CEDEI working group has prepared an amended Harassment Policy Statement to provide a process for dealing with violations of the Harassment Policy. The amended Policy will be submitted to IUPAC Leadership in early 2025 for provisional approval, and when appropriate will be submitted to Council for approval.

### **Part 4. Tabular Material**

#### **Publications**

1. Chao, Hsui-Yi, Lin, John J. H., Cesa, Mark, Chiu, Mei-Hung, "Gender Gap in Chemistry – Still?!", *J. Chem. Educ.* **2024**, *101*, 3, 831–840, <https://doi.org/10.1021/acs.jchemed.2c00650>.
2. Fung, Fun Man, Markic, Silvija, Mamluk-Naaman, Rachel, Cesa, Mark, Chiu, Mei-Hung, "Analyzing the existing programs on promoting women scientists in chemistry," *Chemistry Teacher International*, 2024, <https://www.degruyter.com/document/doi/10.1515/cti-2024-0076/html>.