

(<https://gender-gap-in-science.org/2020/06/25/gender-gap-in-science-book/>). At the final project conference at the International Center for Theoretical Physics, ICTP, in Trieste, Italy, a series of recommendations for improving gender awareness for scientific unions, local organizations, and instructors and parents was prepared and disseminated (<https://gender-gap-in-science.org/project-book-booklet/>).

The project partners and participants at the final conference contributed a range of approaches to reducing the gender gap in science and improving gender equity in their fields. To raise awareness among chemists about these perspectives, we invited sixteen persons from a range of scientific, mathematical and computing disciplines to prepare articles for a special topics issue of *Pure and Applied Chemistry*. This issue explores the results of the Global Survey; describes initiatives to reduce the gender gap in astronomy, biology, chemistry, computing machinery, mathematics, ocean science, and physics; includes regional approaches to reducing the gender gap, particularly in the developing world; and proposes new and innovative approaches that include networking initiatives and collections of good practices around the world for encouraging girls and young women to pursue careers in science.

Work in IUPAC on the reducing the gender gap in science continues. In 2020 the Standing Committee for Gender Equality in Science, SCGES (<https://gender-equality-in-science.org/>), was instituted, with IUPAC is a founding member along with fifteen other international partners. A current IUPAC project (<https://iupac.org/project/2020-016-3-020>) includes analysis of the Gender Gap project survey data specific to the chemical science, a compilation of good practices in reducing the gender gap, and participating in an initiative by several scientific publishers to examine gender trends.

Reference materials for phase equilibrium studies. 1. Liquid-liquid equilibria (IUPAC Technical Report)

Ala Bazyleva, William E. Acree, *et al.*

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This article is the first of three projected IUPAC Technical Reports resulting from IUPAC Project 2011-037-2-100 (Reference Materials for Phase Equilibrium

Studies). The goal of this project is to select reference systems with critically evaluated property values for the validation of instruments and techniques used in phase equilibrium studies of mixtures. This report proposes seven systems for liquid-liquid equilibrium studies, covering the four most common categories of binary mixtures: aqueous systems of moderate solubility, non-aqueous systems, systems with low solubility, and systems with ionic liquids. For each system, the available literature sources, accepted data, smoothing equations, and estimated uncertainties are given.

<https://iupac.org/project/2011-037-2-100>

Special CTI on Polymer Sciences

A special issue of *Chemistry Teacher International* has been released, resulting of a collaboration project between the Sub-committee on Polymer Education part of the IUPAC Polymer Division, and the IUPAC Committee on Chemistry Education.

CTI, Volume 3, Issue 2

June 30, 2021; <https://www.degruyter.com/journal/key/CTI/3/2/html>

This special issue, co-edited by Chin Han Chan and Jan Apotheker, contains articles which are intended to bridge the gap between research and education. The idea is to share the good practices for some topics in polymer sciences for educational purposes. We hope that lecturers at the universities may refer to these articles as the references to teach or lecture young researchers. Another purpose is to inform the high-school/pre-university teachers about recent developments in polymer chemistry, so that they may introduce some of the topics in this issue to students.

The articles are based on the lecture notes presented at IUPAC Education Workshops in Polymer Sciences (2016, 2017, 2018, and 2020+) and educational materials in polymer sciences covering topics of polymer synthesis (three articles), polymer characterization (five articles), polymer processing (two articles) and polymer applications and others (three articles). The educational materials shared in this special issue have been previously used by researchers with the aim of promoting polymer sciences.

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