

Preface: Proceedings of the 21st ICCE

Sustainability. The dictionary defines this term as “to maintain or endure.” And, following the work of the UN Brundtland Commission, we have learned to think of sustainability in the context of development that “meets the needs of the present without compromising the ability of future generations to meet their own needs.” It is long overdue that we begin to link this vitally important concept with the goals and learning outcomes of science education and think about what it means for chemistry education to be sustainable and contribute to sustainable development.

The 21st conference of the International Conference on Chemistry Education (ICCE) series, held in Taipei from August 8–13, 2010, created just such a linkage, with an overarching conference theme of “*Chemistry Education and Sustainability in the Global Age*.” This theme was developed in recognition of the International Year of Chemistry 2011, which highlights the role for chemistry in meeting Millennium Development Goals and environmental challenges.

This volume of proceedings from the conference provides an opportunity for readers to engage with a selection of refereed papers that were presented during the 21st ICCE conference. Divided into 6 sections, the 31 papers published here pick up on the multiple meanings of the term sustainability. Themes for the sections will be of interest to chemistry educators who care that the learning environments in their classrooms motivate students to learn effectively, so that those learners are equipped to contribute solutions to the serious global challenges our planet faces. Efforts to improve chemistry education must also be sustainable – that is, they must be maintained and endure. And so the reader will sample here reports of research on topics ranging from globalization and chemistry education through a suite of issues related to learning and conceptual change; teaching strategies; curriculum, evaluation and assessment; e-learning and innovative learning; and microscale approaches to chemistry.

One of the unique and valuable dimensions to the ICCE conference series is the way the series brings chemistry educators together from around the world to discuss ways to serve learners better. The reader will discover that both common challenges and creative solutions emerge from very diverse settings – examples include the University of Venda in South Africa (Mammino), Pulau Pinang Matriculation

College in Malaysia (Teh and Yakob), Tokyo Gakugei University (Ogawa and Fujii), the MicroChem Lab in Hong Kong (Chan), and the National Taiwan Normal University (Chen, Lin, and Chiu). I hope you both enjoy and find valuable your engagement with their ideas in sustaining your own professional development in the global world of chemistry education.

Past Chair of Committee on Chemical Education of IUPAC

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Age

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