

D.D. Dionysiou, K.D. Hristovski, and B.G. Loganathan (eds). Water Challenges and Solutions on a Global Scale. Chapter 10, pp 185-219. ACS Symposium Series, Vol. 1206. <https://doi.org/10.1021/bk-2015-1206.ch010> (online 3 Dec 2015); <https://iupac.org/project/2008-003-3-600>

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Chemical and Biochemical Thermodynamics Reunification

According to the IUBMB-IUPAC joint commission on biochemical nomenclature (JCBN), two categories of thermodynamics based on different concepts and different formalisms have been established: i) chemical thermodynamics that employs conventional thermodynamic potentials to deal with chemical reactions; ii) biochemical thermodynamics that employs Legendre-transformed thermodynamic potentials to deal with biochemical reactions based on the formalism proposed by Alberty [1].

With this recently approved project, a task group lead by Stefano Iotti will attempt to show that the two worlds of chemical and biochemical thermodynamics, which so far have been treated separately, can be reunified within the same thermodynamic framework.

References

1. R. A. Alberty, A. Cornish-Bowden, R. N. Goldberg, G. G. Hammes, K. Tipton, and H. V. Westerhoff, *Biophys. Chem.*, 155 (2011) 89-203; <https://doi.org/10.1016/j.bpc.2011.03.007>

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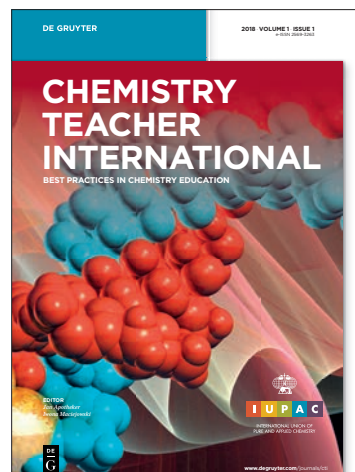
Chemistry Teacher International

As part of IUPAC's publishing partnership with De Gruyter, the Committee on Chemistry Education (CCE) will launch a new open access journal, *Chemistry Teacher International (CTI)*, in summer 2018.

This open access journal will be published biannually, with the inaugural issue released in June 2018 and the second issue in December. The online journal will be peer reviewed and focused on good practices. The target groups are teachers in secondary education, as well educational researchers. CCE expects about 24

articles per year from different sources, in part from selected proceedings of the International Conference on Chemical Education, which the Committee organizes every two years.

Jan Apotheker will function as the executive editor, together with Iwona Maciejowska of the Division of Chemical Education of EuCheMS.



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<https://www.degruyter.com/view/j/cti>

Human Health Risk Consideration of Nano-Enabled Pesticides for Industry and Regulators

Previous IUPAC Nanopesticides projects (e.g., projects 2012-020-3-600 and 2016-016-2-600) have developed risk assessment frameworks and key criteria that could help risk assessment processes for nano-enabled pesticides (especially for ecological risk assessments) [1,2].

While the approach elucidated in the above IUPAC projects is now being considered by regulatory agencies internationally (e.g., USEPA, Environment Canada, APV-MA Australia, EFSA Europe), there is a need to expand our thinking and provide more practical information to answer some key questions, such as those listed below:

1. When a new product is presented to regulators, what are the key questions that they would like to ask? This essentially defines the problem formulation step in the health risk assessment framework.
2. What are the key characterization and analytical requirements for the specific product that may be necessary to answer the questions posed as part of Question 1 for a specific product type?
3. What are the specific methods or approaches for human health effects that are readily available and appropriate to answer the questions for the specific product under consideration?