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Green chemistry and sustainability in education

Green Chemistry and sustainability in Chemistry became a topic in the public debate about twenty years ago. Within these two decades several standards have been defined and found their way to some public regulations. Therefore, nowadays the chemistry industry is in a process to check their activities with respect to sustainability. This development is, however, very diverse in different nations and on different continents. Several local and regional aspects lead to diverse interpretation and application of sustainable concepts.

Green Chemistry has, however, not yet been widely incorporated in chemical education. The aspects have been taken in some Universities by bringing them consequently to their curricula. Other Universities still somehow neglect to anchor sustainability as defined topic in lecture courses. Here is a change to define a framework of "Green Chemistry in Education", which is generally accepted and applied. Such concept may act as a starting point to distribute the idea of Green Chemistry in worldwide accepted manner within the next generation. It might allow our children to define combined targets and regulations to globalize the concept of Green Chemistry by coordinated regulations.

Two different aspects have to be taken into account in planning such educational concept: Apart from some global key aspects of sustainability, regional aspects have to be considered. They should allow optimal applications of Green Chemistry with respect to national, political and environmental frames. Imposing one general global concept will however likely not lead to success. On the other hand, educational concepts for different target groups should be defined. Academic education, teacher training and in-plant training for skilled workers require different approaches.

Biography

Lothar Brecker received his diploma and Ph.D. in chemistry from the University of Dortmund in 1993 and 1996, respectively. After working at Graz University of Technology and Research Center Borstel, he became an associate professor at the University of Vienna. There he actually serves as vice head of the Institute of Organic Chemistry and deputy director of the Chemistry Studies Program. His main research activities are in the fields of using NMR to study enzyme ligand binding, interactions between small molecules, and structure determination of natural products. He has published more than 80 papers in reputed journals.

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