

# Editorial

More than 40% of Swiss exports, valued at 80 billion CHF, are generated by the chemical, pharmaceutical and biotech industry. Hence, this industry is one of the strongest pillars of our economy, and Switzerland is among the global leaders in this sector.

To achieve and maintain this leadership position, education is one of the keys to success: top professionals at all levels, from the laboratory technician to the researcher, need to be trained. We chemists also need to be aware that we depend on a positive perception by the public. About a quarter of the research funding of 22 billion CHF is from the public sector or the taxpayer, and in our direct democracy, the voter often has the final word in legislative matters that concern the work place Switzerland. Therefore, it is important that chemistry is perceived as a discipline that offers many attractive professional opportunities, that plays an important role in our daily lives, and that offers great research challenges.

In April 2017, the Swiss Chemical Society (SCS) established its Division of Chemical Education. The Division is intended to be a platform for the discussion of disparate topics related to the teaching of chemistry at all levels, from primary school to university. The underlying conviction is that a basic understanding of the fundamental concepts of chemistry coupled with the awareness for the essential contributions of chemistry to society can only improve the understanding of the material, biological, or economical reality in which we are all imbedded. Thus, the Division will foster the exchange between teachers in both a horizontal and a vertical sense, by, for example, reflecting on how a certain topic can be best taught (best practices), or by intensifying the contacts between the various school levels. Furthermore, the Division shall be a vehicle in establishing new contacts between educators and practitioners of chemistry in industry. An important role the Division may fulfil in the long term is to become an invaluable outreach instrument for chemistry.

Therefore, the Board of the new division will include representatives from all levels of education as well as from industry.

There have been two first events ('Future of Chemical Education'), held on the occasion of the SCS Fall Meetings in 2016 and 2017, gathering well beyond one hundred participants. This has clearly shown that there is a wide-spread interest in what appears to be at the same time a necessity. Connecting with colleagues, establishing new contacts and exchanging ideas is essential in view of improving the already high quality of teaching in chemistry. Quality education integrating modern, exciting new topics will inspire the students and possibly even their parents. To be able to reach out also to our youngest students, the SCS has entered a partnership with SimplyScience, a foundation supported by scienceindustries, the business association of the chemical, pharmaceutical and biotech industry (see also corresponding articles in this issue of CHIMIA).

With this issue of CHIMIA, this community presents itself for the first time to the members of the SCS and the readers of this society's journal. You will find articles showing how complex topics such as photosynthesis and the chemical potential can be introduced at the high school level, or how basic principles of chemistry can be discovered in a playful way. One of the articles describes how high-school chemistry teachers are being educated in Germany and should inspire a provoking and potentially far reaching question: How is it that universities in Switzerland hosting large and world-renowned chemistry departments do not have dedicated professorships for chemical education?

On the cover page, you see two young students of the Gymnasium Bäumlhof in Basel, members of the winning team of the 'Science on the Move' competition organized by SimplyScience. The team was invited to participate in the 'Science Week' in London. Here you see them preparing a DNA sample for gene-electrophoresis at the L'Oréal Young Scientists Center in London. The gloves they are wearing are not to protect their hands, but rather to avoid contamination of the sample with their own DNA.

We hope you will be as inspired reading through this issue of CHIMIA as these two young ladies are exploring the genome of a plant.

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The Editorial Board of CHIMIA would like to thank Professors Hans Peter Lüthi and Antonio Togni for organizing this issue on Chemical Education covering exciting topics at all levels of education and introducing the new Swiss Chemical Society Division of Chemical Education