

# Editorial



Jan Cvengros  
ETH Zurich

The concept for this issue of CHIMIA dates back to autumn 2019. As part of the activities of the Division of Chemical Education of the Swiss Chemical Society, we sketched the first plans towards an event to be held within the framework of the Fall Meeting of the SCS. A symposium 'Future of Chemical Education' would bring together lecturers facing the same challenge – teaching chemistry courses to first year students in universities. This is a challenging role carrying with it the responsibility of preparing future generations of chemists, materials scientists, pharmacists, doctors, environmentalists and biologists during their first steps after leaving high school. A first year chemistry course is typically associated with a large audience which is very heterogeneous on multiple levels, be it linguistic, different educational and cultural backgrounds, and varying levels of chemical knowledge. Arguably, the most challenging aspect of first year teaching is to catch the imagination of the students and stimulate their motivation for learning.



Catherine Housecroft  
University of Basel

We were delighted that we managed to identify enthusiastic representatives from most of the Swiss Universities or Federal Institutes to speak at the Future of Chemical Education symposium. Their prompt and often warm answers to our invitations were extremely encouraging, and we were also able to gain two equally passionate lecturers from Germany and the UK, as well as numerous exhibitors to present materials for chemistry education. At the beginning of 2020, everything bode well for an excellent event to take place in August 2020, and most of the speakers agreed to provide a contribution to an issue of CHIMIA dedicated to chemical education.

But 2020 was not to be a normal year and, as a consequence, the Future of Chemical Education symposium was rescheduled to April 2021. Although a variety of online alternatives for the symposium were considered, the organizing committee and most of the speakers felt that the role of social interaction in the teaching process is too important to be lost to a virtual setting.

However, we saw no reason to reschedule the issue of CHIMIA. As we are sure you will agree, this issue turned out to be an excellent platform on which authors could share their strategies and solutions for the challenges related to the COVID-19 crisis. In addition to the articles provided by the symposium speakers, we invited educators from a range of backgrounds to enrich the palette of contributors. This issue of CHIMIA presents a wealth of topics for those teaching chemistry from high school through to university. Although not originally intended, most manuscripts allude to COVID-19. Some authors present the development of new techniques tailored for online teaching, while others demonstrate how they have adjusted their traditional approach to an unprecedented situation. Online teaching has one major disadvantage: there is no direct interaction with our class members, and the chat column is no substitute for a face-to-face discussion. Nonetheless, we have to admit that a plethora of opportunities that were previously unknown to most of us, surfaced or were made available in 2020. Some of these new approaches to teaching will no doubt remain, even if the situation allows us to return to the traditional pre-COVID methods of teaching. Without any doubt, studies and personal experience show that the implementation of novel tools, techniques and strategies might increase the attractiveness of lectures, enhance the learning effect and eventually lead to a better examination performance.

We hope that you enjoy reading this issue of CHIMIA. We would like to thank all the authors who contributed for their excellent and timely work.

**Jan Cvengros** was born in Slovakia and studied organic chemistry at Comenius University in Bratislava. After a PhD thesis at University of Cologne and a postdoctoral stint at University of Milan, he moved to ETH Zurich as a postdoctoral fellow and an independent researcher before taking up his current position as a lecturer. In 2020 he became the president of the Division of Chemical Education of the Swiss Chemical Society.

**Catherine Housecroft** is Titular Professor of Chemistry at the University of Basel. She is co-director of a highly active research group with Edwin C. Constable, and has published over 550 research papers and review articles, in addition to numerous chapters in edited books and reference works. She is also an internationally recognized author of undergraduate textbooks including 'Chemistry' (coauthored with Edwin Constable and now in its 4th edition) and 'Inorganic Chemistry' (originally with the late Alan Sharpe). 'Inorganic Chemistry' is in its fifth edition, and is available in seven languages.

**Cover** The cover picture shows a final return to the chemistry lab after the first COVID-19 lockdown in 2020 for students of the chemistry-biology class, Kantonsschule Frauenfeld. All students have signified their agreement to appear on the cover of CHIMIA. Photograph by Markus Müller, Kantonsschule Frauenfeld.

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The CHIMIA Editorial Board would like to express its gratitude to Dr. Jan Cvengros and Prof. Catherine Housecroft for producing a very topical, interesting and useful issue under difficult circumstances. Thanks also go to all of those authors who agreed to write their articles despite the postponement of the 'Future of Chemical Education' symposium.