

Dear colleagues,

As always, the calendar year runs to a close abruptly and too soon, in a whirlwind of reports, preparations for New Year celebrations, and endless Covid waves. Not unlike this Editorial. Since its main objective is to convey the spirit of the moment, it's filled with Pre-New Year agitation and activity.

There were a lot of events. Let's start with the General Assembly of the Russian Academy of Sciences dedicated to fighting off Covid which touched upon new medicine and the experience of using our renowned vaccines that are still underappreciated by the people thanks to either natural reticence or heightened suspiciousness. Considering that we've had more than enough of impassioned Covid discussions, I would rather direct your attention to the scientific session of the Chemistry and Materials Science Division of the RAS that was traditionally held at the Zelinsky Institute of Organic Chemistry. Following the spirit of the times, we joined forces to fight the carbon imprint.

The session reflected on many aspects of this global problem. The brilliant in their comprehensiveness reports of the corresponding members of the RAS A. L. Maksimov, director of the Topchiev Institute of Petrochemical Synthesis, S. N. Kalmykov, dean of the Chemistry Department at MSU, and E. V. Antipov, head of the Electrochemistry Chair, touched on the current aspects of solving the problem of lowering the carbon imprint in each of their respective organizations. At the same time, the reports of the full members of RAS K. V. Grigorovich as well as yours truly went far beyond that singular problem.

I was especially impressed by the presentation of A. L. Maksimov, which I would call exemplary. Not only did he shed the light on current trends of the chemical recycling of CO₂ but he also presented a comprehensive comparative analysis of the entire field. As a cherry on top, the presenter stayed within the 30-minute time limit.

S. N. Kalmykov's presentation was unique in terms of general education. Using the language easily accessible for the audience, he successfully analyzed the current situation with nuclear waste disposal. He explained the heart of the problem which is creating an obstacle for large-scale application of nuclear energy instead of burning carbon-containing resources. Then, he suggested the ways of resolving it, namely, as our atomic scientists see it, by creating the so-called "garbage" reactors that are capable of transmuting the long-living dangerous isotopes, the by-products of uranium fission, into the relatively shorter-living ones. This approach allows one not to slice through but rather carefully untie the Gordian Knot of the nuclear waste disposal problem. The attempt to encompass the unencompassable and include his own research into the isotope fission resulted in a significant overrun with the timing of the presentation; the concluding part did not ruin the impression but was definitely superfluous here and deserved its own presentation.

The champion in exceeding the time limit, however, turned out to be the respectable full member of the RAS K. V. Grigorovich. With the common for all metallurgists surety that metals are our everything, he analyzed not only the state of affairs in metallurgical science but also paid special attention to the mistakes of the current management in developing metallurgy in our country as a whole. These mistakes, as the presenter skillfully demonstrated, include not only falling behind in creating new metallurgy bases but also in the most vital part—preparing qualified engineers for one of the most important areas of development of our country.

The video recording of this scientific session is available at the Division, and I would highly recommend using the materials of the presentations for educating future scientists. I draw your attention to being able to abide by the time limit specifically because it is important for everyone, from students and grad students to the esteemed academicians. It is a part of the scientific etiquette that needs to be developed from the very beginning of any scientist's career and then followed impeccably, regardless of the audience and arena.

I will not delve into my own presentation; what's important is that it revealed a key trend—the rejuvenation of the activity of the Scientific Councils of the RAS. When the direct management of the institutes is no longer available, the role of the Scientific Councils should significantly expand. This is the place now for the cross-discipline prognoses of the further development of the country, especially for global matters of natural sciences. This is the forum for not-administrated-to-death scientific thought, free of reports and ratings. This is the Nesmeyanov's preserve of the academic tradition, where it can, as a rare species, survive in the overall unfavorable conditions until happier days when the Academy has full functionality.

Equally deserving of attention are the science and administrative events that took place at the end of this year at INEOS RAS. The performance reviews of the department heads revealed a radical shift toward lowering the age of laboratory heads—the front line of the scientific research administration. The previously updated Scientific council of the Institute conducted this reporting session respectfully and with great attention, revealing a visible renewal of scientific leaders. It's important that most of them yielded their spots to younger colleagues not only voluntarily but with a conscious understanding of the necessity of change, which is a key factor in preserving the research profile of the most successful labs and retaining these areas as the Institute' responsibility. That is a vital element of our academic tradition, as opposed to the West where as soon as the professor or the head of the lab leaves, the lab is completely dismantled and a new one is created in its place, completely different not only in its shape but also in the research profile.

The Institute's management ended this stage on a touching note by presenting the Institute veterans with awards and symbolic gifts in a celebratory session of the Science Council. The new stage is already looming—the review of the young leaders and the creation of the new labs and groups, but this is a topic for future issues of our Journal.

On behalf of the INEOS OPEN Editorial Board and our team, I wish a very happy New Year to our authors, readers, and reviewers! Wishing you good health, prosperity, and, of course, new discoveries and achievements!

Sincerely yours,

Editor-in-Chief

Prof., Full Member of RAS

Aziz M. Muzafarov