

60th Anniversary of the National Institute of Chemistry

Peter Venturini

The National Institute of Chemistry (NIC) has been, from its very beginnings under the leadership of Professor Maks Samec until today, true to its mission and fundamental values, which are: high-level science and cooperation with industry, to which high-quality education is ever more strongly linked. In the 60 years since its establishment, the NIC has developed into a modern, well-equipped research institution, which is a part of global research efforts, with the aim of aiding economic advancement and enhancing the quality of life in Slovenia.



Dr Peter Venturini, Assist. Prof.

Now, let us focus on the implementation of the fundamental strategic goals of the NIC within the past 10 years.

NIC has consistently raised the level of understanding and science in the fields of:

- biotechnology and the chemistry of drugs (as well as food),
- materials and engineering,
- environmental protection and analytical chemistry, as well as
- structural and computational chemistry.

The ever higher quality of the research of those working at the NIC is shown by the increase in publications in better scientific journals; it is also evidenced by the higher impact factors of the journals where our scientific articles are published. International cooperation is very important in order to carry out high-quality research work and for our successful competition for European and other international research projects. To this end, our traditional openness in the international sphere and the professional work of our researchers while visiting prestigious institutions abroad, where they are always welcome, has helped us.

Photographs: Matjaž Omerzel and Milan Simčič





Prof. Janez Plavec was among the first to be congratulated by Prime Minister Janez Janša

For research to be comparable with the best in the world, there cannot be simply enthusiastic scientists, but there must also be appropriate research equipment and working conditions. Within the past few years, we have put a lot of energy into investment. Among other things, we have made the largest investment into an individual piece of research equipment in Slovenia in the form of an 800 MHz NMR spectrometer, which, together with other instruments in our European Center of Excellence, represents an important part of Europe's research infrastructure. There is an ever greater interest from abroad in undertaking research work at the NIC, which is a good sign that we are heading in the right direction. A comparative study of European

research institutes from 2002 showed the NIC to be quite competitive with the best in the world, as we managed, despite more modest financial resources, to outdo other European institutions on many criteria.

One of the constants which has been with our institute from its foundation is the strong cooperation with industry. The NIC has consistently cooperated in a large-scale and successful way with companies. This cooperation has demanded a great deal of organization in our work and business matters, but at the same time has allowed us to obtain additional knowledge and financial resources, with which we have been able to buy research equipment for the long-term development

The Grand Pregl Award of the National Institute of Chemistry for Research Work was awarded to Member of the Slovenian Academy of Sciences Professor Dušan Hadži for his outstanding work in various fields of research.





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The Pregl Award of the National Institute of Chemistry for outstanding achievements was received by Professor Janez Plavec, for his important scientific achievements in the research of nucleic acid building blocks using magnetic resonance.

The Pregl Award of the National Institute of Chemistry for outstanding doctoral work in the field of chemistry and related sciences was awarded to Dr Primož Šket.

of the institute. We have also created a number of long-term partnerships with companies in Slovenia, which are based on a high-level of interpersonal trust and have been strengthened through exchanges of experts.

Therefore, the NIC is very pleased with the exceptionally successful development of our economic partners, many of whom are among the largest and most successful in Slovenia, even among those who do business globally and must therefore face tough global competition. We are aware that we can successfully cooperate and also contribute to their success in the future only if our own knowledge is globally competitive. Average knowledge or science is simply not good enough! The NIC is working more and more with foreign companies. We are also gaining business experience through the co-establishment of a company in the Netherlands in the field of chemometrics, together with other high-level research institutions. An illustration of our innovativeness has been the breakthrough invention of our institute in the field of nutritional supplements in cooperation with industrial partners.

An excellent level of knowledge strengthened by appropriate working conditions and a modern research infrastructure are not the only necessary conditions for successful cooperation with industry and for achieving excellent science in an international framework; another necessary condition needed is high-quality education. The NIC successfully participates in the education process. Within the



The prestigious Pregl Awards were awarded for the first time on the occasion of the 60th anniversary of the National Institute of Chemistry (Grand Hotel Union, Ljubljana, 29 May

past ten years, research work at the NIC towards a PhD was completed by 74 researchers, towards a Master's degree by 42 researchers, and towards a B.S. degree by 323 students. At the moment, 65 doctoral students are undertaking research work at the institute and approximately one-third (out of 96) of our PhD's are affiliated with a university. Our successful association with education is also shown by the amaz-

ing win by a Slovenian group at an international competition of students from the world's best universities in the field of synthetic biology last year.

With all we have achieved it is no surprise that we are in the process of establishing an institute of higher education: the Research School of the National Institute of Chemistry. We are convinced that in a strategic partnership with other organizations of higher education we can contribute to the global competitiveness of Slovenian higher education and, indirectly, to the competitiveness of the Slovenian economy as a whole.

In order to successfully compete on a global level in the future we are going to have to bring together all of our knowledge and capabilities not only within the institute but also within Slovenia itself. The interdisciplinary nature of the NIC will be a great advantage

in this regard. Researchers who work at the institute come from the fields of chemistry, physics, biology, pharmacy, medicine, and mathematics. I am convinced that closer work between individuals and smaller groups from different fields of research will also contribute to successful collaboration in highly competitive research projects. Such international projects, where many research groups from the NIC are already participating, are currently up and running, for example, the previously mentioned NMR Center, a fuel cell project and a project concerning nanobiopharmaceuticals.

The National Institute of Chemistry has travelled a remarkably successful road over the past 60 years. Those who have worked at the institute have contributed to this success through their own creative work. Thank you all for your contribution to the development of the institute. I am personally very pleased to have been able to work with you and to contribute my own talents to the development of the institute.

Many successful projects have not been carried out by us alone, but together with partners from the academic sphere and the economy. Therefore, I would finally like to thank all of our partners for their successful partnerships with the hope that these will only be strengthened in the future.