2011 is the International Year of Chemistry

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The 63 UN General Assembly has declared 2011 the International Year of Chemistry, and this is remarkable in view of the everlasting dialog between the chemistry and the human society, which we observe for a long time. Is chemistry useful or harmful? Does chemistry poison people today? How to make chemistry “green”? Or, is it simpler to ban chemistry? It would be funny if I answered these questions here. The Journal of General Chemistry is not a popular edition, and its readers do not need such explanations. However, the human society does need. It is firmly established now that the particular role of chemical plants in the negative technogenic influence on the surrounding medium is negligible (transport and other industries produce the main contribution to the contamination). At the same time, just chemistry is capable of making necessary estimations and elaborating ways of optimization, to say nothing of universal synthetic possibilities of chemistry.

However, we live in the century of biology. Does biology put chemistry into obscurity? Biology and chemistry are two sisters walking with arms entwined. Let us remember that biology itself contains biochemistry, and its new biotechnologies (including genetic engineering) are based on achievements of chemistry. On the other side, the tsunami of nanotechnologies covers us. Nevertheless, the significance of chemistry only increases in this respect too. Technical progress is related to the miniaturization of working devices of various kinds up to supramolecular compounds and single molecules to play a key functional role. Only chemistry can find and synthesize such compounds. All this leads to the conclusion that chemistry is especially important and necessary to the mankind on the modern stage. Gratifying understanding of that fact is just fixed in the decision of the UN.

The penetration of chemistry into various industries of the modern economy can be called almost all-

embracing (let us remember, for example, the use of surfactants for reducing energy consumption in mining and processing industries). Chemistry is also used for weather management for a long time, but this topic now requires a special discussion. The past 2010 was marked with never yet seen on the Earth natural disasters, extreme (especially in Russia) temperatures apparently related to the process of global heating. Speaking about chemistry, the problem “chemistry and climate” seems to be placed in the forefront. However, the chemistry long ago pointed out substances (for example, freons) destructing the ozone layer and enhancing the global heating. Then it was the Kyoto Protocol restricting contaminations. Unfortunately, the USA, the contaminator of the planet number one, abandoned its signing. One may hope bitter lessons of 2010 will make world community more welded in understanding the problem of global heating, and a comprehensive solution will be accepted at last.

2011 is a double chemical event for Russia: November 19 will be 300th anniversary of the birthday of M.V. Lomonosov, the founder of the national chemical science. The essay on the genesis of chemistry in Russia and the creation of the first scientific-research chemical laboratory by M.V. Lomonosov is published in this issue. This, however, in no way exhausts the subject “Russia and Chemistry.” In the 19th century, Russia gave to the world the greatest chemist D.I. Mendeleev. After his passing, London’s “Guardian” wrote that Mendeleev was a teacher for all chemists in the world. His great discovery, the Periodic System of Chemical Elements, mirrors a global regularity on the universe scale, which brings Mendeleev’s name into line with the names of Newton and Einstein. As for us, dear readers, we have a reason to be proud that both the greatest Russian scientists, M.V. Lomonosov and D.I. Mendeleev, were chemists. Cordially congratulating all with the International Year of Chemistry, I wish further success!