Dear colleagues!

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You are holding the unusual issue of Polymer Science which is devoted to its fiftieth anniversary. Our journal was established in 1959 under the initiative of Academician Kargin. This was associated with the rapid development of polymer science in our country and all over the world. From the very beginning, the scope of the journal was very wide and covered fundamental and applied studies, physical and chemical methods, and theory and experiments. High scientific standards were maintained over half century by editors-in-chief, namely, Academicians Kargin (1959–1969), Medvedev (1970), Korshak (1973–1988), and Platé (1988–2007). Works of nearly all polymer scientists of our country, including eminent researchers, such as Aleksandrov, Amerik, Andrianov, Al.An. Berlin, Bresler, Vinogradov, Vol'kenshtein, Godovsky, Danilov, Dogadkin, Dolgoplosk, Enikolopov, Zhdanov, Zhurkov, Kabanov, Kazanskii, Kitaigorodskii, Kobeko, Kozlov, Kolesnikov, Korolev, Korotkov, Koton, Krentsel', Lazurkin, Lipatov, Minsker, Nametkin, Papkov, Ponomarenko, Pravednikov, Ptitsin, Rafikov, Rogovin, Svetlov, Slonimskii, Tager, Ushakov, Frenkel', Tsvetkov, Chirkov, Emanuel', and Entelis, were published in our journal. Many of these scientists, who have left us, were the members of the editorial board of the journal and actively contributed to its successful development.

Since 1992, the journal is fully translated into English and distributed abroad under the name Polymer Science.

The editorial board decided to start this issue by the review paper which describes in detail the history of domestic polymer science. This paper is the result of collective efforts. It includes materials presented by leading Russian scientists Antipov, Anufrieva, Belov, Bershtein, Birshhtein, Valetskii, Valuev, Vannikov, Vasnev, Vettegren', Volynskii, Vygodskii, Golubev, Gotlib, Grishin, Darinskii, Dubrovskii, Elyashevich, Erukhimovich, Zaikov, Zezin, Zelenetskii, Zubov, Irzhak, Kas'yanenko, Kireev, Kovarskii, Kudryavtsev, Kuleznev, Litmanovich, Makovetskii, Malkin, Manevich, Muzafarov, Novakov, Ozerin, Oleinik, Panarin, Papisov, Potemkin, Prut, Rozenberg, Rusanov, Ryumtsev, Semchikov, Sergeev, Sinani, Subbotin, Tal'roze, Ten'kovtsev, Tiger, Fatkullin, Filippov, Finkel'shtein, Khazanovich, Khalatur, Tseitlin, Chalykh, Chvalun, Shantorovich, Shibaev, and Yampol'skii. I am much obliged to all of them.

Certainly, this enormous work was a challenge, and it should be admitted that some important directions in the field of polymer science are concerned insufficiently. As a rule, this was due to the fact that we failed to find an author, who could survey domestic research activities in this field for such a long period. Nevertheless, we decided to submit the paper to the court of the reader in its current form, keeping in mind that "the best is the enemy of the good". In our opinion, this paper may be useful for fundamental polymer science, from the viewpoint of science history, and as a reference material.

In connection with the fiftieth anniversary of our journal, the editorial board decided to publish review articles covering the state-of-art and further trends in various fields of polymer physics and chemistry. We hope that these articles will be interesting most of all for young scientists and will help them to choose their way in the fascinating polymer science, in which there are still many interesting, even though, difficult problems. This issue of the journal includes reviews devoted to the synthesis and properties of gradient copolymers (Zaremskii and Golubev), the rheology of polymers (Malkin), and knots in polymer chains (Grosberg). Other papers will be published in the forthcoming issues of this year.

Editor-in-Chief,
Academician