

ANNIVERSARIES

ON THE 100th ANNIVERSARY OF THE BIRTH OF ACADEMICIAN S. S. NAMETKIN

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July 3, 1976 marked 100 years from the date of birth of the outstanding chemist of our nation — Academician Sergei Semenovich Nametkin. Sergei Semenovich enriched the treasury of the Soviet chemical school with a series of brilliant research efforts in many fields of organic chemistry.

The scientific investigations of S. S. Nametkin embrace an extremely wide range of subjects. The greatest of his fundamental studies relate to the chemistry of alicyclic hydrocarbons, terpenes, and petroleum hydrocarbons.* The work of S. S. Nametkin in the field of nitration of saturated hydrocarbons, the stereochemistry of alicyclic compounds, and the chemistry of terpenes is considered to be classic research. In the field of terpene and camphor chemistry, S. S. Nametkin occupies a leading role in world science. The camphene rearrangement of the second kind that he discovered has been named the Nametkin rearrangement.

The work of S. S. Nametkin and his associates in the field of perfumes, plant growth stimulants, and herbicides is of great scientific and practical importance.

The name of S. S. Nametkin is particularly close to all the petroleum workers of our country. From his first steps in science to the last days of his life, he was closely connected with the petroleum industry. The broad-scale work of S. S. Nametkin on the chemistry and technology of petroleum, in combination with fruitful scientific-organizational work in this area, had enormous importance in the development of the science of petroleum.

Research on a circle of problems of major theoretical and practical importance was conducted under the direction of S. S. Nametkin, primarily at GINI [State Scientific-Research Petroleum Institute] starting in 1926, then starting in 1934 at IGI [Institute of Fossil Fuels] and the Institute of Petroleum of the USSR Academy of Sciences. Of major importance at that time was the work toward more profound investigation of the crude oils from new fields in Sakhalin, Kamchatka, the "Second Baku," and others. The years 1931-1933 saw the first detailed, broad-scale investigation of natural fuel gases from many fields. They served as a beginning for a widespread study of the hydrocarbon gases of the Soviet Union. Also started were profound studies of the composition of the oil fractions from petroleum, as well as paraffins and amorphous or microcrystalline waxes.

In the field of petroleum refining, S. S. Nametkin gave considerable attention to problems in cracking, aromatization, and aromatic cyclization of petroleum cuts, and also to

*S. S. Nametkin, Collected Works [in Russian], Izd. Akad. Nauk SSSR, Moscow (1954).

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petroleum-product treating, particularly desulfurization. His research on treating cracked naphthas with sulfuric acid led to the establishment of a new type of unsaturated-hydrocarbon conversion that has been termed hydropolymerization and dehydropolymerization. We also must not fail to note his major experimental work on comparative studies of Soviet and foreign petroleum products.

Being a fervent advocate of thorough "chemization" of the petroleum industry, S.S. Nametkin took up such questions as the production of benzene, toluene, xylene, isobutylene, and amyl alcohols, as well as the oxidation of wax to alcohols and aldehydes, etc. In a program paper published in 1939 on "Basic problems in the chemistry of petroleum in the new stage of the petroleum refining industry," S. S. Nametkin termed the modern stage of the petroleum refining industry a chemical stage and mapped out certain problems, many of which still remain urgent up to the present day. S. S. Nametkin is deservedly considered to be one of the founders of petrochemical science.

S. S. Nametkin did much for the growth in production of fuels and lubricants. Under his direction, experimental studies were performed on the relation between engine-fuel antiknock properties and the fuel structure and hydrocarbon composition; methods for rating antiknock properties were studied; etc. In cooperation with D. N. Abakumovskaya and D. N. Kursanov, he developed a laboratory method for preparing tetraethyllead (TEL) and provided for the performance of the first tests on leaded gasolines; together with K. P. Lavrovskii, he participated in the development of a commercial method for producing tetraethyllead.

S. S. Nametkin foresaw the possibility of improving the service properties of fuels and lubricating oils by means of additives; he performed major work on the synthesis and investigation of the operational mechanism of pour-point depressants, V.I. improvers, and detergents.

The research work of S. S. Nametkin was combined with multifaceted pedagogical activity. Over almost half a century, he was connected with Moscow University, working as a professor, and as a chairman and director of the organic chemistry laboratory in the Chemistry Department. After leaving Moscow University in 1911, when he resigned along with a group of progressive professors and teachers as a sign of protest against the reactionary politics of the Czarist Minister of Education, Kasso, S. S. Nametkin began to work at the Higher Women's Courses, where he acted as chairman and headed the organic chemistry laboratory. He returned to Moscow University only after the October Revolution. In 1918, S. S. Nametkin was named dean of the Physicomathematical Department of the Second Moscow State University, and from 1919 to 1924 he was rector of this institute.

S. S. Nametkin made a major contribution to the preparation of specialists for the petroleum refining industry. In 1927 he organized the Chair of Organic Chemistry in the Petroleum Department of the Moscow Mining Academy, subsequently reorganized to form the Moscow Petroleum Institute (now the I. M. Gubkin Moscow Institute of the Petroleum Refining and Petrochemical Industry). S. S. Nametkin, for the first time in Russia, began a course of lectures on the chemistry of petroleum, and on the basis of these lectures wrote the outstanding monograph "The Chemistry of Petroleum."

S. S. Nametkin created a school of petroleum chemists and prepared more than one generation of chemists and technologists, who are working successfully in industry and in research organizations, developing and expanding on his scientific ideas.

S. S. Nametkin was a great worker for society. He served for many years on the Committee for the Affairs of the Higher School and on the Council of Scientific and Technical Expertise under Gosplan SSSR; he headed the Commission on Motor Fuels and Lubricating Oils under the Presidium of the USSR Academy of Sciences; he was one of the founders of the D. I. Mendeleev All-Union Chemical Society and for many years was chairman of its Moscow branch.

The dedicated service of Sergei Semenovich Nametkin to our Socialist Motherland and to science must serve as an unforgettable example.