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BIOGRAPHIC DATA ON SOVIET SCIENTISTS ELECTED ACADEMICIANS
23 OCTOBER 1953

[The following report presents short biographies of some of the Soviet scientists who were elected Academicians on 23 October 1953. The specialty in which they were elected Academicians is listed after their name and birth date.

Numbers in parentheses refer to appended sources.]

Aleksandrov, Anatoliy Petrovich, 1903, Physics

After graduation from Kiev State University in 1930, Aleksandrov began working at the Physicotechnical Institute of the Academy of Sciences USSR. In 1943, he was elected Corresponding Member of the Academy, and since 1946 he has been Director of the Institute of Physical Problems imeni S. I. Vavilov of the Academy of Sciences USSR.

The scientific works of Aleksandrov (which number more than 30) cover most important problems relating to various branches of physics. His initial works were devoted to the study of the mechanism of the electric breakdown of dielectrics. His later scientific activity has been connected with study of electrical conductivity and dielectric losses of organic materials. He discovered and studied the dielectric properties of polymerized styrene and developed a method of polymerizing and constructing high-quality condensers from polystyrene.

Aleksandrov carried out research on the mechanical properties of polymers and amorphous substances and suggested the later generally accepted statistical theory of the stability of solid bodies. He developed, together with P. P. Kobeko, the basic concepts of polymer physics and together with his students elaborated the relaxation theory of elasticity, defined the nature of polymer hardening, the role of phase transitions, and the nature of their resistance to heat and cold.

Stalin Prize winner Aleksandrov has been awarded two Orders of Lenin, the Order of Labor Red Banner, and medals of the USSR.(1)

Bogolyubov, Nikolay Nikolayevich, 1909, Mathematics

On completion of aspirantship in the Academy of Sciences Ukrainian SSR, Bogolyubov in 1928 started teaching and scientific work in the country's higher educational and scientific research institutions. From 1936 to 1950, he was professor at Kiev and Moscow State Universities. In 1946, he was elected Corresponding Member of the Academy of Sciences USSR and in 1948, Active Member of the Academy of Sciences Ukrainian SSR.

Bogolyubov has written approximately 200 scientific works, which are mainly devoted to problems of nonlinear mechanics, the general theory of dynamic systems, statistical physics, and the calculus of variations and approximation methods of analysis. The perfection of classical methods of study of the theory of perturbations occupies a significant place in his scientific research. The methods he has developed for the approximate solution of problems of nonlinear oscillations have found uses in radio engineering, in the theory of synchronous machines, and in the design of crankshafts, etc.

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He is the author of a series of works concerned with the field of theoretical physics, in particular, statistical physics, quantum statistics of nonideal gases, and quantum electrodynamics. In 1947, he was awarded a Stalin Prize for his works in the field of statistical physics, Some Statistical Methods in Mathematical Physics and Problems of Dynamic Theory in Statistical Physics.

He has trained a large number of scientists in the field of mathematical physics.

Along with his scientific and teaching activities, Bogolyubov is carrying out public work as a deputy to the Kiev City Council of Workers' Deputies. Among the governmental awards which have been granted to Bogolyubov are the Order of Lenin, the Order of Labor Red Banner, and two Badges of Honor.(1)

Ambartsumyan, Viktor Amaazpovich, 1908, Astrophysics

Ambartsumyan graduated from Leningrad State University in 1928, and in 1931 completed his aspirantship at the Main Astronomical Observatory, Pulkovo, after which he was engaged for the next 12 years in teaching and scientific work at Leningrad University. He was elected Corresponding Member of the Academy of Sciences USSR in 1939, and Active Member and Vice-President of the Academy of Sciences Armenian SSR in 1943. Since 1947, he has been President of the Academy of Sciences Armenian SSR and Head of the Chair of Astrophysics at Yerevan State University.

Ambartsumyan has written more than 80 scientific works on astrophysical problems. He developed the theory of the radiant equilibrium of planetary nebulae, showed the role of ultraviolet radiation and the radiation of lines of the Lyman series, demonstrated the problem of the physical composition of the atmosphere and the envelopes of hot stars, and developed a new method of studying the dynamics of stellar systems.

In 1946, Ambartsumyan was awarded a Stalin Prize for the foundation of a new theory of light scattering in turbulent media; this theory was expounded in the works A New Method of Calculating the Light Scattering in Turbulent Media, The Scattering of Light by the Atmospheres of Planets, and The Problem of the Diffusive Reflection of Light by a Turbulent Medium. In 1950, he was awarded a Stalin Prize for the discovery and study of a new type of stellar system called "stellar associations."

Ambartsumyan is working successfully on problems of stellar cosmogony. He has discovered new stellar groupings, the so-called O- and T-associations.

He combines his teaching and scientific activities with much government and party work. He has been elected a member of the Central Committee of the Communist Party of Armenia and a Deputy of the Supreme Soviet USSR.

He has been awarded the Order of Lenin, two Orders of Labor Red Banner, and medals of the USSR.(1)

Shubnikov, Aleksey Vasil'yevich, 1887, Crystal Physics

Shubnikov graduated from Moscow University in 1912, and has been continuously engaged in teaching and scientific research work since. From 1920 to 1925, he headed the Chair of Crystallography in the Ural Mining Institute, and since 1925 he has been working in the Academy of Sciences USSR.

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Shubnikov was elected Corresponding Member of the Academy of Sciences USSR in 1933. He organized the Laboratory of Crystallography (reorganized in 1943 into the Institute of Crystallography) and is the director. He also heads the Chair of Crystallography and Crystal Physics of Moscow State University imeni M. V. Lomonosov.

Among the published scientific works of A. V. Shubnikov (which number more than 180) are monographs devoted to the research of the growth of crystals, their optical properties, piezoelectrics, and the study of symmetry.

Shubnikov has been awarded a Stalin Prize twice; in 1947, for the discovery and study of a new type of piezoelectric material (the results of which are set forth in the monograph "Piezoelectric Structures") and, in 1950, for his participation in the development of a machine and technique for the production of rubies.

Much of Shubnikov's theoretical scientific work has been continued in the work of his associates and has yielded a number of results of great economic importance.

Shubnikov is a deputy of the Moscow City Council of Workers' Deputies. He has been awarded the Order of Lenin, the Order of Labor Red Banner, and medals of the USSR for his many years of scientific and teaching activity.(1)

Arbuzov, Boris Aleksandrovich, 1903, Organic Chemistry

Arbuzov graduated from Kazan' Institute of Agriculture and Forestry in 1926. Having passed his aspirantship at Kazan' University, from 1930 to 1938 he worked at first as a docent and later as a professor in the Kazan' Chemical Technological Institute. Since 1938, Arbuzov's activity has been connected with Kazan' State University imeni V. I. Ul'yanov (Lenin), where he was successively a professor, head of a chair, and dean of the chemical faculty. He was elected Corresponding Member of the Academy of Sciences USSR in 1943.

Arbuzov has published more than 150 scientific works embracing a number of fields of organic chemistry, in particular the chemistry of terpenes, diene compounds, the chemistry and structure of organophosphorus, and other organoelemental compounds. The extensive study of the chemical conversions of terpenes, begun in 1931, has resulted in a large number of important conclusions and discoveries. His research on the isomerization of bicyclic terpenes into open-chain terpenes, which was later named the B. A. Arbuzov rearrangement, had great practical and theoretical importance. His work in the field of diene syntheses has made it possible to obtain a large number of new compounds and to prove the constitution of the main component of turpentine oil from conifers, i.e., of levopimaric acid.

Arbuzov has synthesized a number of new types of phosphonic acids containing various heterocyclic rings and has found that there is a direct bond between silicon and phosphorus and tin and phosphorus, which proved the universal validity of the classical method of Academician A. Ye. Arbuzov and the possibility of its application to the most varied types of organic compounds containing haloids.

B. A. Arbuzov was awarded a Stalin Prize in 1951 for his study of the chemistry of terpenes and dienes.

He is a deputy of the Kazan' City Council of Workers' Deputies, Deputy President of the Committee for the Defense of Peace, Tatarskaya ASSR. He has been awarded the Order of Lenin, two Orders of Labor Red Banner, and the medal "For Labor Valor in the Great Patriotic War, 1941-1945."

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Kondrat'yev, Viktor Nikolayevich, 1902, Physical Chemistry

After graduating from the Leningrad Polytechnic Institute in 1924, Kondrat'yev worked in the Leningrad Physicotechnical Institute until 1931. Since 1931, he has been working in the Institute of Chemical Physics of the Academy of Sciences USSR, which was organized by separating it from the Leningrad Physicotechnical Institute. He was elected Corresponding Member of the Academy of Sciences USSR in 1943.

Kondrat'yev has published 150 works on chemical kinetics, on the structure of matter, on molecular spectroscopy, on photochemistry, and on other branches of physical chemistry and physics. His early works, carried out between 1924 and 1930, proved him to be one of the leading scientists in the field of the application of modern physics to problems of chemistry. His subsequent studies were devoted to research on the properties of free radicals and the clarification of their role in chemical kinetics.

Kondrat'yev is the originator of an extremely effective spectral method for the identification and quantitative determination of concentrations of free radicals (the line adsorption method). With the aid of this method, he has studied various properties of free hydroxyl and has proved its role in the processes of oxidation of hydrogen, carbon monoxide, acetylene, and other substances. He summarized this research in the monograph "Free Hydroxyl" published in 1939. In 1946, he was awarded a Stalin Prize for his work Spectroscopic Study of Chemical Gas Reactions.

Among Kondrat'yev's major monographs are Elementary Chemical Processes, The Structure of Atoms and Molecules, and Electron Chemistry. He has been engaged in teaching in higher educational establishments for many years and at present is a professor at Moscow Engineering Physics Institute. He has been awarded the Order of Lenin, the Order of Labor Red Banner, and medals of the USSR.(1)

Gerasimov, Innokentiy Petrovich, 1905, Geography

After graduating from Leningrad State University, Gerasimov began work in the Academy of Sciences USSR in 1929, first at the Institute of Soils imeni V. V. Dokuchayev and, since 1947, at the Institute of Geography, of which he is now director. He was elected Corresponding Member of the Academy of Sciences USSR in 1946 and vice-president of the Geographic Society of the USSR in 1953.

Gerasimov's scientific activity has been continuously connected with expeditionary research. He has studied many regions in Central Asia, Kazakhstan, the Urals, Western Siberia, the Caucasus, European USSR, Mongolia, and Bulgaria. He is the author of more than 180 scientific works.

His research has brought much that is new to the study of the geography of soils, geomorphology, and the paleogeography of the Quaternary period. In the field of the geography of soils, his efforts have been directed to the explanation of the soil-forming process in deserts of the Mediterranean and other regions, to the development of the theory of soil provinces, which are represented in the soil-geography charts of the zones of the USSR, to the establishment of scientific bases of a single classification and systemization of soils, and to the development of soil mapping, etc.

Gerasimov has greatly contributed to the geomorphology and paleogeography of the Quaternary period in the USSR. His study of the southern and eastern regions of the USSR not only has a regional significance, but is of great interest for the methodology of geomorphological research and the study of the Quaternary period as a whole.

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Along with his scientific work, Gerasimov successfully engages in administration and teaching. He is an Honored Worker of Science of the Kazakh SSR and has been awarded the Order of Lenin, the Order of the Red Star, and medals of the USSR.(1)

Engel'gardt, Vladimir Aleksandrovich, 189^b, Biochemistry

Engel'gardt graduated from Moscow State University in 1919, and has been engaged in teaching and scientific work in the country's higher educational and scientific research institutions since 1921. He has been a professor of Moscow Order of Lenin State University imeni M. V. Lomonosov since 1936. In 1944, he was elected Active Member of the Academy of Medical Sciences USSR and in 1944 Corresponding Member of the Academy of Sciences USSR. He has worked since 1933 in the Academy of Sciences, where he is head of a laboratory in the Institute of Biochemistry imeni A. N. Bakh.

Engel'gardt has written more than 90 scientific works devoted to the study of the most important problems of functional biochemistry. One of the fundamental lines of his research was the study of the connection between the processes of energy exchange and the state of energy-rich substances in cells and tissues. He has proved the participation of adenosine triphosphoric acid in process of cell respiration and the anaerobic decomposition of carbohydrates. He has discovered the enzyme activity of the basic protein of the muscles, myosin, thus laying the foundation of a new field in biochemistry, the mechanical chemistry of muscles. In 1943, Engel'gardt was awarded a Stalin Prize for his work in the field of muscle activity, the results of which were published in the work Enzyme Activity of Myosin and the Mechanical Chemistry of Muscles in 1942.

He has been awarded the Order of Lenin, the Order of Labor Red Banner, the Order of the Patriotic War Second Class, and medals of the USSR.(1)

Mikheyev, Mikhail Aleksandrovich, 1902, Heat Engineering

Mikheyev graduated from the Leningrad Polytechnic Institute in 1927, and from that time has been engaged in teaching and scientific work in the higher educational and scientific research institutions of Leningrad and Moscow. Since 1933, he has headed the Laboratory of Heat Exchange of the Power Engineering Institute imeni G. M. Krzhizhanovskiy of the Academy of Sciences USSR and since 1935 has been teaching in the Moscow Power Engineering Institute imeni V. M. Molotov. He was elected Corresponding Member of the Academy of Sciences USSR in 1946.

Mikheyev has published more than 80 scientific works devoted to problems of hydromechanics, heat exchange, the theory of heat modeling, and the application of this theory to the study of working processes in engineering installations. He was awarded a Stalin Prize in 1941 for his work Modeling Thermal Installations and again in 1951 for his textbook The Principles of Heat Transmission.

Recently, Mikheyev has been engaged in the solution of the problem of intensification of heat exchange processes, which is of great importance in new fields of engineering.

He has trained a large number of highly qualified specialists working in the field of thermal engineering, and has been carrying out important work on the organization and preparation of the teaching of a course in heat transmission at higher educational institutions.

He has been awarded the Order of Lenin, the Order of Labor Red Banner, and medals of the USSR.(1)

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Sedov, Leonid Ivanovich, 1907, Mechanics

Sedov, since graduating from Moscow State University in 1930, has been engaged in teaching and scientific work in Moscow's higher educational and scientific research institutions. Since 1945, he has been working in the Mathematical Institute imeni V. A. Steklov of the Academy of Sciences USSR. He was elected Corresponding Member of the Academy in 1946.

Sedov has written more than 80 scientific works devoted to the study of the most important problems of water-based aircraft (gidroaviatsiya), ship-building, and the theory of supersonic flight. He is the author of a number of major theoretical studies, foremost among which are works on the theory of planing (glissirovaniye), the theory of dimensions and similarities, the theory of the propagation of powerful explosive waves, and on gas dynamics. He has provided a complete solution to the problem of planing on the surface of the water with calculations of its ponder ability and he has explained the conditions for modeling the phenomenon. He has suggested the use of similarity and dimensional analysis for the solution and study of most important contemporary problems of hydroaerodynamics and gas dynamics.

In 1952, Sedov was awarded a Stalin Prize for the monographs Plane Problems of Hydrodynamics and Aerodynamics and Methods of Similarity and Dimension in Mechanics.

Sedov's works on theory of the propagation of powerful explosive waves occupy an important place in his scientific research effort. He has supplied a complete solution of the theory of propagation of spherical, cylindrical, and plane waves from a strong explosion. He is also the author of a series of interesting works on the theory of potential and vertical stationary movements of a gas and on the application of gas dynamics to the theory of gas machines.

A large number of Sedov's works are devoted to important problems in the theory of the impact of a solid body with water, the theory of the wing and the development of solution methods for plane problems of hydrodynamics, and various hydrodynamic and aerodynamic problems.

Sedov has been awarded the Order of Labor Red Banner, Badge of Honor, and medals of the USSR. (1)

Pospelov, Petr Nikolayevich, 1898, History of the CPSU

Pospelov graduated from the Institute of Red Professorship in 1930, and since then has been engaged in scientific, editorial, and propaganda work. From 1940 to 1949, he was editor of Pravda and from 1949 to 1952, director of the Marx-Engels-Lenin Institute of the Central Committee of the VKP(b). From 1944 to 1946 and from 1949 to 1953, he was head of the chair of party history at the Higher Party School and from 1946 to 1948 he was head of a chair at the Academy of Social Sciences of the Central Committee of the CPSU.

He has published about 80 scientific works and a great number of propagandist and publicity articles. He is one of the editors of the large collective work History of the Civil War in the USSR (Vol II) which was awarded a Stalin Prize. The collection of most important documents on the history of the CPSU, The VKP(b) in Resolutions and Decisions of Congresses, Conferences, and Plena of the Central Committee, appeared under his editorship. He took a direct part in the writing of scientific biographies of V. I. Lenin and I. V. Stalin.

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From Pospelov's pen have come a number of works devoted to individual problems of party history and to radical problems of Marxist-Leninist theory: the role of the party as the political leader and teacher of the people and the mobilizing, organizing, and transforming force of the ideas of Marxism-Leninism.

A member of the Communist Party since 1916, Pospelov was elected a member of the Central Committee at the 18th and 19th Party Congresses. He is a secretary of the Central Committee and a deputy of the Supreme Soviet USSR, and has been awarded two Orders of Lenin, the Order of the Patriotic War First Class, and medals of the USSR.

Ostrovityanov, Konstantin Vasil'yevich, 1892, Political Economics

Ostrovityanov graduated from the Moscow Commercial Institute in 1917 and began his educational and scientific activities at the higher educational and scientific research institutions of Moscow. In 1930, he was elected Active Member of the Communist Academy, a member of its Presidium, and a scientific secretary, and in 1939 was elected Corresponding Member of the Academy of Sciences USSR. Since 1947, he has been director of the Institute of Economics of the Academy of Sciences USSR and since 1943, a professor of Moscow State University.

He has published more than 100 works devoted to the most important problems of political economy.

His study of the problems of political economy of the precapitalist eras occupy an important place in his activity, in this field, his work is summarized in the monograph Sketches of the Economy of Precapitalist Eras. Problems of capitalist political economy have been developed by him in 27 works, including Land Rent and the Development of Capitalism in Agriculture.

A great number of Ostrovityanov's works are devoted to the problems of the political economy of socialism. During the past 10 years, he has written a series of studies on the character of the economic laws of socialism, on the relationship of economics and politics, on the role of the Soviet state in the development of a socialist economy, and on commodities and prices under socialism.

Ostrovityanov engages in much public and political activity. He has been a member of the CPSU since 1914, and was elected candidate for membership of the Central Committee at the 19th Party Congress. He is a deputy of the Moscow Oblast Council of Workers' Deputies and a member of the Soviet Committee for the Defense of Peace. He has been awarded the Order of Lenin, the Order of Labor Red Banner, the Order of the Red Star, and medals of the USSR. (1)

Artsimovich, Lev Andreyevich, 1909, Physics

Artsimovich is a graduate of the Belorussian State University. In 1930, he began his scientific and teaching activity in the higher educational and scientific research institutions of Moscow and Leningrad. From 1930 to 1948, he worked in the Physicotechnical Institute of the Academy of Sciences USSR. He was elected Corresponding Member of the Academy in 1946.

His scientific works have been devoted to problems of atomic and nuclear physics. His studies have contributed to the investigation of the full internal reflection of X rays and the properties of fast electrons.

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In his work Bremsstrahlung for High-Energy Electrons, he studied experimentally the laws of bremsstrahlung brought about by electrons with an energy of 600-3,000 kev. This work explains the dependence of radiation on the atomic number of the element bombarded with electrons, the dependence of the intensity of radiation on the initial energy of the electrons and the definition of the absolute yield of the bremsstrahlung, the angular distribution of photons originating from the passage of fast electrons through the substance, and the attenuation of bremsstrahlung in the substance.

A number of Artsimovich's works are devoted to the problem of the scattering and the so-called "anomaly" of the braking of fast electrons. His studies of electron optics have led to an explanation of the aberrations of electron optical systems with self-illuminating objective lenses.

Artsimovich has been awarded two Orders of Lenin. (2)

Kikoïn, Isaak Konstantinovich, 1908, Physics

After graduation in 1930 from the Leningrad Polytechnic Institute, Kikoïn worked at teaching and scientific work, first in Leningrad and since 1937 in Sverdlovsk. He was elected Corresponding Member of the Academy of Sciences USSR in 1943 and since 1944 has been head of a chair at the Moscow Mechanical Institute.

Kikoïn is the author of more than 50 scientific works on important problems of the physics of metals. He discovered and studied the photomagnetic effect in semiconductors, which has been called in literature the "Kikoïn effect," and also the galvanomagnetic effect in liquid metals. The studies carried out by Kikoïn on the galvanomagnetic properties of ferromagnetic and paramagnetic metals has led to new conceptions of the galvanomagnetic effect in ferromagnetics. He discovered and studied new relations of electrical resistance of liquid metals with the temperature.

Kikoïn developed electrical measuring apparatus for high direct currents. He was awarded a Stalin Prize in 1942 for the invention of a new system of electrical measurement.

He has been awarded two Orders of Lenin, the Order of the Red Star, the Badge of Honor, and medals of the USSR. (2)

Andreyev, Nikolay Nikolayevich, 1880, Acoustics

Andreyev graduated from Basle University (Switzerland) in 1909. Since 1917, he has engaged in teaching and scientific work in the higher educational and scientific research institutions of the USSR. He was elected Corresponding Member of the Academy of Sciences USSR in 1933 and since 1940 has been head of a laboratory in the Physics Institute imeni P. N. Lebedev of the Academy.

Andreyev is the author of more than 90 scientific works, mainly on the theory of oscillations and the theory of sound. His first scientific works were connected with the application of the spectral method to the study of wave processes; later works concerned problems of acoustics. He developed the widely known granule method and was the first to expound the theory of sound propagation in moving media. His studies on piezoelectricity, the theory of the telephone, and architectural acoustics are important. Study of the piezoeffect led him to the foundation of the bimorphous element, which is now widely used.

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Andreyev has carried out much work on musical acoustics; he founded the Institute of the Musical Industry.

Along with his scientific and pedagogic work, Andreyev is active in societies, being president of the Commission on Acoustics and editor-in-chief of the periodical Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki (Journal of Experimental and Theoretical Physics).

He has been awarded three Orders of Lenin, the Order of Labor Red Banner, and medals of the USSR. (2)

Gamburtsev, Grigoriy Aleksandrovich, 1903, Geophysics

Gamburtsev graduated from Moscow State University and since 1926 has carried out continuous scientific work in Moscow, at first in the Moscow Branch of the Commission on the Natural and Productive Forces, Academy of Sciences USSR, and later in the Seismic Laboratory of the Petroleum and Geological Prospecting Institute.

Since 1938, he has been working in the Geophysics Institute of the Academy of Sciences USSR and from 1949 has been its director and also president of the Council on Seismology of the Presidium of the Academy of Sciences USSR. He was elected Corresponding Member of the Academy in 1946.

Seismology and seismic methods of studying the structure of the earth's crust form the greater part of Gamburtsev's scientific activity. He has developed a number of problems on the theory of the seismic method of reflected waves and has founded new methods of research: the correlation method of refracted waves, the method of deep seismic sounding of the earth's crust, and the correlation method of studying earthquakes. He has suggested new types of seismic apparatus.

Gamburtsev's work has assisted the development of seismic methods in geological prospecting. In 1941, he was awarded a Stalin Prize for the development of a method and apparatus for seismic prospecting.

He has been awarded the Order of Lenin, the Order of Labor Red Banner, and medals of the USSR. (2)

Lebedev, Sergey Alekseyevich, 1902, Calculating Machines

Lebedev graduated from the Moscow Higher Technical Institute imeni N. E. Bauman in 1928, and since then has been engaged in teaching and scientific work in the higher educational and scientific research institutions of Moscow and Kiev. He was elected Active Member of the Academy of Sciences Ukrainian SSR in 1945 and from 1946 to 1951 served as director of the Institute of Electrical Engineering of that Academy. In 1953, he was confirmed as director of the Institute of Precision Mechanics and Calculating Techniques of the Academy of Sciences USSR; at present, he is also head of a chair at the Moscow Physicotechnical Institute.

Lebedev's scientific works have been devoted to important problems in the field of electrical systems and automatics. He has developed a number of problems on the stability of parallel work of electrical systems, artificial stability, automation of power systems, mathematical machine building, etc. In 1950, he was awarded a Stalin Prize for the development and introduction into practice of compound generators for electric power stations in order to increase the stability of power stations and improve the work of electric plants.

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Lebedev has conducted much scientific research on problems of computational engineering, on the theory of calculating machines and their construction, and on special apparatus for automatic control. He has formulated and introduced into practice the first high-speed mathematical computer.

He has been awarded the Order of Labor Red Banner and medals of the USSR.(2)

Shcherbakov, Dmitriy Ivanovich, 1893, Geochemistry

Since graduation from Simferopol' University in 1922, Shcherbakov has continuously engaged in scientific work in various institutions of the Academy of Sciences USSR. Since 1939, he has been working in the Institute of Geological Sciences, at first as a Senior Scientific Associate and later as head of a division. In 1946, he was elected Corresponding Member of the Academy, and in 1953 the General Meeting of the Academy confirmed him as Academician Secretary of the Department of Geological and Geographical Sciences.

He has published over 100 scientific works devoted in the main to study of the geology, mineralogy, and geochemistry of rare elements. His work on Central Asia and the Caucasus and their ore formations is very important. He has taken an active part in many geological expeditions to Central Asia, the Pamirs, the Kara Kum, Tyan'-Shan, Kazakhstan, the Kola Peninsula, Kareliya, the Central Urals, the Transbaykal, and other regions of the Soviet Union. Many of his works are important in the development of the raw material bases for the production of nonferrous metals in the USSR. Recently, he has been investigating the regularities connected with the formation and distribution of a number of rare elements.

Shcherbakov has played a large part in scientific organizational and public work in addition to his successful scientific activities. He has been awarded the Order of Lenin, the Order of the Red Star, and medals of the USSR.(2)

Belov, Nikolay Vasil'yevich, 1891, Crystal Chemistry

Belov graduated from Leningrad Polytechnic Institute in 1921. From 1930 to 1938, he worked as a Senior Scientific Associate of the Lomonovskiy Institute of the Academy of Sciences USSR in Leningrad. Since 1938, he has been in the Institute of Crystallography of the Academy, at first as a Senior Scientific Associate and later as head of a division. He was elected a Corresponding Member of the Academy in 1946.

Belov is the author of more than 100 scientific works dealing with the fields of crystallography, crystal chemistry, mineralogy, geochemistry, physical chemistry, etc. He developed and used the latest methods of X-ray structural analysis, which allow the determination of the structure of complex silicates, such as ramzait [ramseyite?], tourmaline, diopside, epidote, and other minerals. He is developing direct methods of fine X-ray analysis of the structure of crystalline substances. The monograph Structure of Ionic Crystals and Metallic Phases is one of his works in this field.

Belov's work on geochemistry, genetic mineralogy, and the technology of silicates is important. It is closely connected with production and is assisting in work on a number of important practical problems. His structural research represents a substantial contribution to the chemistry of sulfides, which is one of the bases of nonferrous metallurgy. Other research is assisting the fast adoption of the use of nepheline in the paper, textile, tanning, and wood-processing industries. Belov was awarded a Stalin Prize in 1953 for his scientific work on the atomic structure of crystals.

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Below is head of the Chair of Crystallography at Gor'kiy State University and devotes much of his attention to the preparation of young cadres of scientists. He has been awarded the Order of Labor Red Banner.(2)

Tyurin, Ivan Vladimirovich, 1882, Soil Science

Tyurin graduated from the Moscow Agricultural Institute in 1919 and until 1930 was engaged in teaching work at Kazan State University, where he was successively an assistant, docent, and professor. In 1930, he transferred his activities to the Academy of Sciences USSR and until 1941 he served as a Senior Scientific Associate of the Institute of Soils imeni V. V. Dokuchayev. He has been its director since 1949. He was elected Corresponding Member of the Academy in 1946.

Tyurin has written nearly 100 scientific works embracing various problems of soil science. His most important works are on the study of the turf process of soil formation, on the genesis and fertility of forest steppe soils, and on soil humus. He was the first to give a correct solution to problems of the genesis and classification of forest steppe soils, and he discovered the laws of the soils distribution. He has developed a number of original methods for determination and investigation of the composition of soil humus that have a wide application.

The honor of determining the geographical laws of humus in soils of the Soviet Union belongs to Tyurin. He has developed the classification of meadow areas of the watershed zone, which has an important part in practical agriculture and forestry. The results of this work have been generalized in the paper An Experiment of Classification of Meadow Areas of the Watershed Zone by Their Watershed and Protective Roles.

He has been awarded the Order of Lenin, the Order of Labor Red Banner, and medals of the USSR.(2)

Stechkin, Boris Sergeevich, 1891, Heat Engineering

Stechkin, since graduating from the Moscow Higher Technical School in 1918, has been engaged in teaching and scientific work in the higher educational and scientific research institutions of Moscow. He was elected a Corresponding Member of the Academy of Sciences USSR in 1946 and since 1953 has been head of the Laboratory of Engines of the Academy.

Stechkin, who has written nearly 30 scientific works, is the founder of the theory of heat calculation and of methods of construction of the ground and flight characteristics of aircraft engines. He also founded the theory of ram-jet engines (1929) and developed and augmented the theory of turbojet engines, axial compressors, and turbocompressors. In 1945, he published the first lectures on The Theory of Jet Engines.

In 1946, he was awarded a Stalin Prize for the creation of a new form of aircraft engine and for the radical improvement of existing engines.

Stechkin has trained a large number of highly qualified specialists to work in the field of aircraft engine construction.

He has been awarded the Order of Lenin, the Order of Labor Red Banner, the Order of the Red Star, and medals of the USSR.(2)

Zhuk, Sergey Yakovlevich, 1892, Hydraulic Engineering

Zhuk graduated from the Leningrad Institute of Transportation Engineers and since then has worked in various organizations in the field of hydraulic engineering.

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For many years, Zhuk has been part of the scientific and technical leadership in the planning of the largest hydraulic engineering constructions: the Baltic-White Sea Canal imeni I. V. Stalin, the Canal imeni Moscow, the Rybinskiy and Uglichskey Hydroelectric Stations on the Volga, the Volga-Don Ship Canal imeni V. I. Lenin, the Tsimlyansk Hydroelectric Station on the Don, irrigation works in Rostovskaya Oblast, the Kuybyshev and Stalingrad Hydroelectric Stations, and many others. The construction of a number of these was accomplished under the continual technical supervision of Zhuk.

At present, Zhuk is the Chief Engineer of Hidroproyekt of the Ministry of Electric Power Stations and the Electrical Industry and is also a member of the Council of Engineering and Economic Experts of Gosplan USSR.

He has twice (in 1950 and 1951) been awarded a Stalin Prize for outstanding work in the field of hydraulic engineering. In 1952, he was awarded the title of Hero of Soviet Labor.

Zhuk has been awarded three Orders of Lenin, the Order of the Red Banner, the Order of Labor Red Banner, two Orders of the Red Star, and medals of the Soviet Union.(2)

Druzhinin, Nikolay Mikhaylovich, 1886, History of the USSR

In 1911, Druzhinin graduated from the juridical faculty and in 1918 from the historical and philological faculty of Moscow State University. In 1920, he started his scientific and teaching work; since then he has trained numerous cadres of Soviet historians. From 1924 to 1952, he was a professor of the historical faculty of Moscow State University and since 1938 he has worked in the Institute of History of the Academy of Sciences USSR. He was elected a Corresponding Member of the Academy in 1946.

Druzhinin has published more than 150 scientific works mainly on the social and economic life, on the history of the revolutionary movement, and on social thought in Russia in the 19th Century. His studies of the history of Russian peasantry in the prereform period are important. His chief work State Serfs and the Reform of P. D. Kiselev, which was based on a close study of archive material, was awarded a Stalin Prize in 1947.

He has also written a number of valuable studies on Moscow and is one of the leading authors in the collective work History of Moscow. He has taken an active part in the preparation of textbooks on the history of the USSR for higher educational institutions.

Druzhinin has been awarded the Order of Labor Red Banner and medals of the USSR.(2)

SOURCES

1. Vestnik Akademii Nauk SSSR, No 12, 1953, pp 61-73
2. Ibid., No 1, 1954, pp 37-49

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