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BIOGRAPHIES OF SELECTED SOVIET SCIENTISTS

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BIOGRAPHIES OF SELECTED SOVIET SCIENTISTS

[This report contains biographies of those scientists listed below in the table of contents, taken from various sources, as indicated in the source citations accompanying each item.]

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VLADIMIR STEPANOVICH SOBOLEV

Following is the translation of an article from Mineralogicheskiy Sbornik L'vovskogo Geologicheskogo Obshchestva (Mineralogical Compendium of the L'vov Geological Society), No 12, L'vov, 1958, pages 5-14.

V.S. Sobolev was born on 30 May 1908 in the city of Lugansk. He spent his childhood in Vinnitsa. In 1930 he graduated from the Leningrad Mining Institute, having studied under some illustrious Russian scientists; A.N. Zavaritskiy, V.N. Lodochnikov, A.K. Boldyrev, S.S. Smirnov, and others. Immediately following his graduation from the mining institute, Vladimir Stepanovich began his teaching career, initially in the Crystallography Department and then in the Petrography Department of the institute.

V.S. Sobolev started on his research work while still a student, first in 1928 in the Geological Committee and then in the Central Scientific Research Institute (TsNIGRI Tsentral'niy nauchno-issledovatel'skiy geologorazvedochnyy institut - Central Scientific Research Institute of Geological Survey and VSEGEI Vsesoyuzniy geologicheskiy nauchno-issledovatel'skiy institut - All-Union Geological Scientific Research Institute). Vladimir Stepanovich is the author of over 100 scientific papers dealing chiefly with three subjects: petrography and mineralogy of Siberia, petrography and mineralogy of the Ukraine, and theoretical aspects of mineralogy and petrography.

V.S. Sobolev has devoted many years to the study of traprocks of the Siberian plateau. This study has been the subject of several articles as well as a monograph entitled "Petrology of the Traprocks of the Siberian Plateau", published in 1936. This monograph was accepted in 1936 as his doctoral dissertation and V.S. Sobolev was invested with the title of professor. Having studied femic minerals of the traprocks, the author demonstrated that the formation of various rock minerals is associated with the crystallizational differentiation whose particularly sen-

sitive index is the FeO:MgO ratio.

The writings of Vladimir Stepanovich reveal from the new data relating to the mineralogy of Siberia the first description of a rare paragenesis of the contact calcium silicates - spurrite, merwinite, cuspidine, and others. In addition, he has discovered and described the magnetite deposits in the Ilimpeya river.

In the cited monograph on traprocks the author has furnished a most complete survey of the corresponding formations on the earth's crust, stressing in particular the similarity of the Siberian plateau geology to that of the Karroo plateau (South Africa). This analogy became still more conclusive when in 1937 Vladimir Stepanovich, having analyzed some petrographic samples collected by N.N. Urvantsev from the Taymyr Peninsula, succeeded in finding a unique basic rock resembling the ultrabasic type. V.S. Sobolev concluded that this rock may be an analog of the South African basic formations (melilite basalts) which accompany the kimberlites. He was also the first to advance the hypothesis concerning the diamond-bearing potential of the northern Siberian plateau. This hypothesis was confirmed and substantiated, first, through the study (of pertinent literature) of the geology of diamond deposits in foreign countries - a study conducted by Vladimir Stepanovich jointly with A.P. Burov, and, secondly, by the discovery of extensive areas of basic volcanic rocks in Khatangi district. Rock samples from this district were collected by members of the Arctic Institute Expedition and tested by G.G. Moor in consultation with V.S. Sobolev, whereupon G.G. Moor confirmed the announced hypothesis.

On 5 January 1940, speaking at a special meeting in TsNIGRI on diamond deposits in the Urals, Vladimir Stepanovich maintained that kimberlites must be sought not in the Urals but in the northern Siberian plateau, in analogy with South Africa. In his talk he advised the geologists working in the Arctic to pay particular attention to the prospecting for kimberlite formations and diamond deposits in this area.

V.S. Sobolev developed further and concretely defined his hypothesis in a special report delivered to a meeting before Gosplan SSSR Gosudarstvennyy Planovyy Komitet Soveta Ministrov SSSR - State Planning Committee of the USSR Council of Ministers. In his report for 1940, which served as the basis for the subsequently published monograph and which has been widely used by people engaged in the diamond business, Vladimir Stepanovich wrote: "The Siberian plateau has the greatest coincidence with the kim-

berlite deposits of South Africa. This coincidence is amplified even more by the discovery by the author, on the Taymyr Peninsula, and by G.G. Moor (in consultation with the author) in the Khatangi river area, of basic rocks of the limburgite, augite, and alnoite type, resembling the South African melilite basalts which accompany kimberlites. Each expedition operating in the northern Siberian plateau should give serious attention to prospecting for kimberlites and diamonds. It is especially important to turn to diamond prospecting in the active placers of precious metals in the Noril'sk area and in Vilyuy.¹ See Note. Thus V.S. Sobolev predicted the location of diamond kimberlites not only in the northern Siberian plateau generally, but also in the Vilyuy area, in particular. This forecast, having been sustained by a number of geologists and by a special Gosplan conference, served as the basis for the start in prospecting which has been crowned with conspicuous successes.

(Note "Comparative analysis of geological structures of foreign diamond deposits and their comparison with geological structures of the several USSR regions". Fondy VSEGEI (VSEGEI Contributions, No. 1773).

After the discovery of kimberlites Vladimir Stepanovich was invited to take part in the expedition. He paid visits to diamond deposits (1955), advised in petrographic and mineralogical analysis of the materials, and jointly with A.P. Burov served as the scientific editor of the first book on diamonds in Siberia.

V.S. Sobolev began his investigations in the Ukraine in 1936 and continued them in 1945, following his transfer to the University of L'vov. Of Vladimir Stepanovich's writings on the petrography of the Ukrainian SSR, we must mention first of all the monograph on the petrology of the complex Korosten' pluton which is viewed by the author as having a direct connection with the petrology of traprock formations. In this book the author once again stresses the importance of the study of femic minerals of magmatic rocks. He distinguishes the most important differences between the plateau type of granites and those of folded areas, which are the result of varying ferruginosity in femic minerals. V.S. Sobolev was the first to find basic syenites and new deposits of piezoelectric crystals in this region of the Ukraine.

In post-war years Vladimir Stepanovich has been devoting much of his time to the study of young volcanic rocks in the Carpathian Mountains. Explorations in this region are being conducted jointly with a group of V.S. Sobolev's students. In his writings on the mineralogy and

petrology of the Ukrainian SSR he has described the ultrabasic rocks of Transcarpathia and established, within the metamorphic complex of this region, the occurrence of diaphoresis; he has described a new find of pumpellyite from the Carpathian Mountains, pointing out the identity of this mineral to lotrite and others.

In his scientific interests V.S. Sobolev is not only a petrographer but a mineralogist as well. He always attaches a special importance to the description of minerals. Sharing his considerable experience, Vladimir Stepanovich has since 1944 published a series of articles on the theoretical mineralogy of, principally, silicates. The year 1949 saw the publication of his book entitled *Vvedeniye v mineralogiyu silikatov* (Introduction to the Mineralogy of Silicates) which was awarded the Stalin Prize, second class. The fundamental task in his investigations is the disclosure of interrelationships between the properties and genesis of minerals in general, on the one hand, and silicates and their crystal structure in particular, on the other, endeavoring always to eliminate the rupture existing between mineralogy and crystallochemistry. V.S. Sobolev has successfully established new and interesting mechanisms, specifically the connection between the difference in ionic radii in isomorphic series and the type of fusibility curves; the substantiation of A.E. Fersman's ideas respecting the regularity of isomorphism; the determination of relationship between the change in the coordinate number of aluminum during mineral formation and the physico-chemical equilibrium factors; the clarification of certain mechanisms existing in the relationship between the optical properties of silicates, including their color, and their structure. Moreover, by building up D.S. Korzhinskiy's ideas he has generalized the data of paragenesis of igneous rocks in the form of multi-fascicular diagrams.

Certain structural features of various silicates, which had been predicted by V.S. Sobolev on the basis of mechanisms which he had evolved, have been verified by X-ray analysis. Thus, for example, the investigations conducted by N.V. Belov and I.M. Rumanova have corroborated Vladimir Stepanovich's hypothesis concerning both the hexed coordination of aluminum in epidote and the presence of a diortho group in the latter. Studies by Chinese authors have shown the correctness of V.S. Sobolev's hypothesis concerning the two types of coordination of aluminum in prehnite and others.

Maintaining in his studies that hydroxyl in many silicates can not substitute oxygen in oxysilicic tetrahedrons, V.S. Sobolev proposed in this connection a new way

of computing the crystallo-chemical formulas of water-containing silicates. In 1949 he was the first to advance the hypothesis concerning the substitution of the potassium ion in micas with the oxonium ion. For four years this hypothesis has been conclusively cited in English literature on the subject. The formula computation method as worked out by Vladimir Stepanovich is being widely applied in mineralogy.

V.S. Sobolev has also worked out a number of general mineralogical problems, specifically the concept of species. He had also proposed a new classification of minerals which has been incorporated into the course in mineralogy given by E.K. Lazarenko.

He dealt with some interesting problems of geochemistry in a special work in connection with the crystal lattice energy; he had also attempted to analyze critically and make more precise the meaning of certain laws advanced by A.E. Fersman.

Vladimir Stepanovich has written a number of articles on theoretical petrography: metamorphism, formation of igneous rocks, granitization, genesis of lamprophyres, mineral formation at oriented pressure, etc.

In his writings on regional petrography and in a special article, V.S. Sobolev stresses the importance of studying femic minerals of rocks and proposes certain simplified diagrams which facilitate the approximate determination of biotite and hornblende (by their optical properties) in granitoids. Also of general methodical value are the tables of optical orientation of minerals, which have been appended as a supplement to the course drawn up by Vladimir Stepanovich and called the "Fedorov method".

V.S. Sobolev has been teaching since 1931. He was employed initially in the Leningrad Mining Institute and then in the University of Irkutsk. From 1943 to 1945 Vladimir Stepanovich served concurrently as head of the Mineralogy Department, Leningrad Mining Institute, and as director of the Fedorov Institute. Since 1945 V.S. Sobolev has been with the University of L'vov as head of the Petrography Department. Alongside the busy scientific and teaching activities, Vladimir Stepanovich carries on a varied consultative work, assisting the petrographers of the USSR and of the democratic peoples' republics. In the meantime he carries on responsible editorial and journalistic work, editing textbooks and translated monographs, writing reviews, and publishing review and popular science articles.

In 1951 V.S. Sobolev was elected alternate member of the Ukrainian Academy of Sciences and is now working in the

L'vov Institute of Mineral Geology of the Ukrainian SSR Academy of Sciences. On 28 March 1958 Vladimir Stepanovich was elected academician of the USSR Academy of Sciences.

Vladimir Stepanovich takes an active part in the public life of the country. He delivers reports at geological congresses and conferences in the USSR and abroad. V.S. Sobolev is a member of the Council and Editorial Council of the L'vov Geological Society.

The council of the L'vov Geological Society, in dedicating Mineralogical Compendium No. 12 to V.S. Sobolev on the occasion of his fiftieth birthday and thirtieth anniversary of scientific work, extends to Vladimir Stepanovich sincere wishes for many more years of fruitful and creative labor.

Council of the L'vov Geological Society

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BORIS ALEKSANDROVICH LAVROV

Following are the translations of an article from Zdrav, Beloruss. (Belorussian Health) No 11, 1959, page 78.

The 31st of August was the 75th birthday of Prof. B.A. Lavrov, active member of the Academy of the Medical Sciences, USSR.

B.A. Lavrov began his scientific and pedagogical work in 1909 under the guidance of M.N. Shaternikov in the capacity of an assistant and lecturer in the department of physiology of Moscow University. He has been since 1918 professor in charge of the Physiology Department of the Faculty of Agriculture of the Polytechnic Institute at Ivanovo-Voznesensk. In 1925 he was the head of the Animal Physiology Department of the Moscow Zooveterinary Institute.

He is the author of more than 100 works dedicated to the study of the gas, nitrogen and carbohydrate metabolism in vitamin deficiency, of the role of vitamins as regulators of metabolism in the animal organism, and of problems relating to the enrichment of foods by vitaminization. His scientific works made his name widely known in the USSR and abroad.

Together with M.N. Shaternikov, B.I. Zbarsky and others, B.A. Lavrov took part in the founding of the Central Institute of Nutrition of Narkomzdrav Peoples Commissariat of Health USSR (at present the Institute of Nutrition of the Academy of the Medical Sciences, USSR) and then became the head of a vitamin laboratory of this Institute. Since 1936 he has been working in the State Vitamin Control Station which in 1950 was reorganized into the Institute of Vitaminology. It was he who began a systematic study of domestic vitaminbearing substances and began to derive concentrates from various vitamins.

During years past the scope of theoretical research in vitaminology, made under B.A. Lavrov's direction, and which is of great importance for practical medicine, has been greatly broadened. A department of clinical vitaminology has been created in affiliation with the Institute

under direction of Prof. M.S.Vovsi, a member of the Academy of the Medical Sciences, USSR. There are no similar clinics in institutes of vitaminology abroad.

A number of eminent vitaminologists were trained by B.A. Lavrov, among them S.N.Matsko, N.B. Shepelevskaya, B.I. Yanovskaya, V.V. Efremov, N.S. Yarusova.

B.A. Lavrov is one of the leading Soviet vitaminologists.

B. Merezhinskiy.

SAMUIL ALEKSANDROVICH AGRANOVICH

S.A. Agranovich, a native of the city of Rechitza, was admitted in 1918 to the Medical Faculty of Kiev University, but in the following year became a volunteer in the 1st Cavalry Army. He keeps, as a precious relic, a "Diploma of Honour", which was bestowed upon him 38 years ago by the Military Council of the Army as a token of his splendid performance of his duties.

In 1925 he graduated from the Medical Faculty and worked as an intern in anti-tuberculosis institutions and as the head of a rayon dispensary for tuberculosis, and since 1931 for 10 years he was a departmental assistant in the First Kharkov Medical Institute.

From July 1941 until 1946 he was the head of a hospital. After the demobilization he became a deputy director of the scientific section of the Belorussian Institute for Tuberculosis and later an assistant professor of the chair of Therapeutics. Since 1953 he has been a director of the Pulmonary Tuberculosis Department of the Belorussian Institute for the Advanced Training of Physicians.

S.A. Agranovich has more than 25 scientific works to his credit. Since 1950 he has simultaneously been the chief doctor of the Minskaya Oblast' Anti-tuberculosis Dispensary which represents a clinical base of the department. Assistant Professor Agranovich is a highly qualified phthisisist and an able organizer. He has applied a great deal of effort, energy and knowledge to the training of medical specialists, especially for rural areas, and to the organization of anti-tuberculosis assistance to the public.

Since 1939 S.A. Agranovich has been a member of the CPSU. He performs a social service in the capacity of the chairman of the Scientific Society of Phthisisists of the

Republic and as the chairman of the Problems and Topics Commission of the Scientific Medical Council of the Ministry in the BSSR.

He enjoys the respect and admiration of his colleagues, patients, and the general public.

In his decree, Comrade Insarov, the Minister of Health of the BSSR, congratulated Dr. Agranovich on his birthday expressing his thanks with wishes of good health, a long life and further fruitful work for the good of the working people of our fatherland.

The Scientific Council of the Byelorussian Institute for the Advanced Training of Physicians congratulated and warmly greeted S.A. Agranovich on his 60th birthday.

PROFESSOR PARUIR GAVRILOVICH OGANESYAN

Following are the translations of two unsigned articles from Vestnik Venerologii i Dermatologii (Herald of Venerology and Dermatology), No 4, 1959, pages 87-88.

November 1959 marks the 70th anniversary of the birth of the prominent Soviet scientist-doctor of the medical sciences, Prof. Paruir Gavrilovich Oganessian.

P.G. Oganessian was born in 1879. In 1912 he completed with distinction his work at the Petersburg Military Medical Academy. Prof. Oganessian began his medical career as an intern in a military hospital in Vladivostok and as the head of a laboratory. After demobilization he worked as a lecturer to the Chair of Microbiology in the Leningrad Women's Medical and the Chemico-pharmaceutical Institutes under the leadership of academician D.K. Zabolotnyy and Prof. Uglov.

In 1927 he organized and headed the Hospital imeni Tarnovskiy Laboratory for the Study of Experimental Syphilis; from 1930 to 1955 he directed the Experimental-biological Division of the Leningrad Skin-venerological Institute, and since 1956 he has been managing the Laboratory of Clinical Research in the Leningrad Institute of Antibiotics. In 1943 P.G. Oganessian defended his dissertation for the academic degree of Candidate of the Medical Sciences, and in 1946 for the degree of Doctor of Medical Sciences. In 1947 he was awarded the title of professor.

P.G. Oganessian has written more than 50 scientific works on various questions of experimental syphilis, serology, and other divisions of microbiology. Among these are three works of a monographic character: Biologicheskkiye svoystva passazhnykh shtammov sifilisa (Biological Properties of Syphilis), Novyye puti eksperimental'nogo issledovaniya sifilisa (New Approaches in the Experimental Study of Syphilis), and Experimental'nyy sifilis (Experimental Syphilis).

P.G. Oganessian, employing methods personally developed by him, showed for the first time (1947) the possib-

ility of obtaining in experiments with rabbits the manifestation of secondary syphilis. Much later, analogous results were obtained in the USA.

On the basis of his direction of the Laboratory for Experimental Syphilis four doctoral and four candidate dissertations were prepared and many scientific papers were written.

In the following years P.G. Oganesyanyan energetically worked on the resistance of microbes to antibiotics.

P.G. Oganesyanyan has successfully combined his important scientific work with an active part in public affairs. For many years he was a member of the Board of the Leningrad Scientific Society of Dermatologists and Venereologists imeni V.M. Tarnovskiy and was the chairman of the Serological Section of the Society.

P.G. Oganesyanyan is a fascinating person and is a talented and industrious scientist, who is always willing to share his great experience with young colleagues. He deservedly occupies a position of authority among dermatovenerologists, microbiologists, students and colleagues.

PROFESSOR VARDAN YAKOVLEVICH ARUTYUNOV

Vardan Yakovlevich Arutyunov was born 20 February 1899. On completing his work in the Medical Faculty of the Azerbaydzhan State University in 1926, he was sent as an intern to the skin clinic in Baku. Here he wrote his candidate's dissertation--Materialy Kizucheniyu pellagry (Material for the Study of Pellagra).

In 1932-1936 Vardan Yakovlevich worked in the skin clinics in the I and II Moskow Medical Institutes. He defended his doctoral dissertation on the subject of the biological treatment of soft chancroid and pyodermatitis in 1939. In 1936-1941 Vardan Yakovlevich worked as a lecturer and docent in the skin clinic of the IV MGMI (MOKI-Medvuz) (Moskovskiy gosudarstvennyy meditsinskiy institut (Moskovskiy oblastnoy klinicheskiy institut - Meditsinskoe vyssheye uchebnoe zavedeniye) -- Moscow State Medical Institute (Moscow Oblast Clinical Institute-Higher Medical Educational Institution), and from 1945 he directed the skin clinic of MONIKI (Moskovskiy oblastnoy nauchno-issledovatel'skiy klinicheskiy institut -- Moscow Oblast Scientific Research Institute for Clinical Research). From 1948 to 1950 V. Ya. Arutyunov worked in several capacities as the head

of the Venerological Division of the Ministry of Public Health of the USSR. During the period of the work of Prof. Arutyunov in MONIKI upwards of 60 scientific studies by colleagues in the clinic and by oblast' physicians were produced in the defense of a number of dissertations.

Prof. V. Ya. Arutyunov has completed more than 85 published scientific studies, among which are four monographs dedicated to the prophylaxis of vocational dermatiti, the treatment of soft chancroid, the prophylaxis of impetiginous diseases, and a reference book for physicians.

A number of methods established by V. Ya. Arutyunov have been introduced into practice: the treatment of chronic pyodermatiti by laky blood, and the treatment of dermatiti by the zonal exposure of ultra-violet rays.

Under the direction of V. Ya. Arutyunov the skin clinic of MONIKI was the first in the USSR to introduce for study the problem of the so-called porphyrine disease.

Prof. V. Ya. Arutyunov has been selected as an honorary member of the Czechoslovakian Scientific-Medical Society imeni Purkin.

Vardan Yakovlevich has taken an active part in public affairs. He is the chairman of the Moskovskaya Oblast Society of Dermatologists and a member of the Commission of Experts, VAK (Vysshaya attestatsionnaya komissiya -- Higher Certification Commission).

P. Ye. LUKOMSKIY

Following is the translation of an unsigned article from Sovetskaya Meditsina (Soviet Medicine), No 9, 1959, pages 147-148.

One of the noted therapeutists of our country, Prof. Pavel Yevgen'yevich Lukomskiy recently celebrated his 60th birthday.

After graduation from the Medical School of the First Moscow State University in 1923, Pavel Yevgen'yevich worked for 21 years (until 1941) in the First Moscow Medical Institute as an intern, assistant, and docent. From 1941 through 1943 he headed the Chair of Propaedeutics of Internal Diseases at the First Moscow Medical Institute, which was evacuated during the war to the city of Ufa. After the return of the First Moscow Medical Institute to Moscow, from 1943-1944, Pavel Yevgen'yevich was professor of Therapy and headed the Chair of the Sanitary-Hygiene Faculty, and from 1944 through 1949 headed the Chair of the Therapy Faculty at the Cheliabinsk Medical Institute. From 1949-1953 he taught therapy in the Chair of Pediatrics and from 1953 -- professor of therapy at the Medical School.

The scientific activities of Pavel Yevgen'yevich have been devoted mainly to the question of cardio-vascular pathology, i.e., coronary deficiencies, infarction of the heart, rheumatism and syphilis.

Pavel Yevgen'yevich has raised to a high level the study of changes in the electrocardiogram in different ailments of the cardio-vascular system thereby throwing light on some individual problems in Soviet medical literature for the first time. This pertains above all to electrocardiogram changes in the thoracic cavities. He has also thoroughly studied the problems of the origin of the "predominance" curves of one of the ventricles, rhythm disturbances such as dissociation with the interferences. Experimentally, by applying a new method he also studied the electrocardiogram changes at the ventricular extra systoles. In 1943 Pavel Yevgen'yevich wrote a monograph about electrocardiogram changes in different ailments of the

heart muscle. In the following years he studied the problems of coronary deficiency, infarction of myocarditis and arterio-sclerosis. A great number of his works about the infarction myocarditis were included in his scheduled report (about the origin and flow of the infarction of myocarditis) at the XIV All-Union Convention of Therapists in October of 1956.

Presently Pavel Yevgen'yevich, in close contact with a large group of his students, is supervising research work on the problems of the cure and prophylaxis of arterio-sclerosis and on the influence of various remedies on the interchange of lipids, leucocytes and lipoproteins, possessing lipothrophic qualities like choline, methionine, vitamin B₁₂, folic acid, pyridoxin and lipocaine. Some of these remedies have been studied by Pavel Yevgen'yevich and his co-workers for the first time in the history of the problem (vitamin B₁₂ and lincetole, prepared on his recommendation in the All-union Chemicopharmaceutical Scientific Research Institute were applied extremely successfully).

The second problem being studied at the present time by Pavel Yevgen'yevich is that of better determining the need for surgical treatment of heart diseases. For this purpose he has established a functional determination office, supplied with up-to-date modern equipment.

As a clinical physician of broad scope, Pavel Yevgen'yevich has also paid attention to the elaboration of a series of questions pertaining to internal medicine, such as non-specific ailments of the lungs and their cure by antibiotics, the application of oxygeno-therapy, jaundice of Salvarsan, septic angina, etc.

Further the positive significance of Pavel Yevgen'yevich's scientific research work in the field of the broad prophylaxis of ailments must be mentioned and its relation to the questions of health protection, his scheduled report on public extensive dispensary check-ups (at the All-union Conference of Therapists in 1955), and his reports about the classification of ailments and other public activities.

A large number of dissertations have been presented to him for judgment by medical students. Many times he has read reports on medical conventions and conferences of therapists not only in the Soviet Union but also abroad (Rome, Stockholm, Philadelphia).

Organizational and social work has always been near to Pavel Yevgen'yevich. Since 1949 he has been the head therapist of the Ministry of Health of the USSR, providing the right solution to a series of practical scientific problems especially in the field of problems connecting

scientific medicine and practical health protection.

We must mention also his high initiative, firmness of principle and his persistency in any line of work. For five years he has successfully headed the Cardiological Section of the Moscow Therapeutical Society; he is a member of the editorial staff of the magazine Sovetskaya Meditsina (Soviet Medicine), co-editor of the therapeutic part of a large medical encyclopaedia, honorary editor of a comprehensive manual of internal diseases, member of the Board of Directors of the All-Union Society of Theraputists, vice-president of the Russian Society of Theraputists and member of the Presidium of the Moscow Therapeutic Society.

His special concern is educational work and the preparation of new medical personnel.

The government has highly appreciated the work of Pavel Yevgen'yevich and has awarded him the Order of Lenin.

The editors of the magazine Sovetskaya Meditsina, his co-workers and students wish our dear Pavel Yegen'yevich new fruitful successes in his many useful activities for the good of our Soviet motherland.

PROFESSOR A. I. BETEL'MAN

Following is a translation of an article from Vrachebnoye Delo (Physician's Affairs), No 8, 1959, pages 883-884.

July 1959 marks the 70th anniversary of the birth and the completion of 45 years of medical, scientific, and pedagogical activity of one of the founders of orthopedic stomatology in our country, who occupies the Chair of Orthopedic Stomatology in the Kiev Medical Institute imeni A.A. Bogomolets, -- Professor and Doctor of the Medical Sciences Abram Isaakovich Betel'man. His career is a brilliant illustration of the famous path which orthopedic stomatology has followed from pre-revolutionary dental prosthesis, inspired by handicraft practices, to an independent field of medicine that is developing on a broad biological basis.

Abram Isaakovich began his work in the field of stomatology in the year 1914. Up till 1936 A.I. Betel'man was a physician-stomatologist, after which he was engaged as an assistant in the Second Stomatology Department in the Central Institute for the Advanced Training of Physicians, and was at the same time a consultant to the Moskovskaya Oblast Division of Public Health on questions of stomatology.

In 1940 Abram Isaakovich defended his candidate dissertation and in 1941 was appointed to the Chair of Orthopedic Stomatology in the Perm Stomatology Institute, which he occupied until 1945. At the same time he was a consultant to a maxillary-facial evacuation hospital. For his exemplary work in the hospital he was honored with a diploma by the Ministry of Public Health, USSR, and was rewarded with a medal for "Valiant Work in the Time of the Great Patriotic War."

In 1944 Prof. Betel'man became a member of the CPSU. In 1945 he returned and until 1949 worked as a docent in the Chair of Orthopedic Stomatology in the Moskov Stomatological Institute. In 1947 A.I. Betel'man defended his dissertation for the academic degree of doctor of medical

sciences. In 1949 A. I. Betel'man was chosen to occupy the Chair of Orthopedic Stomatology in the Kiev Stomatological Institute (since 1954 -- the Stomatological Faculty of the Kiev Medical Institute), where he is working at the present time.

Prof. A. I. Betel'man was one of the first Soviet scientists of stomatologists to be involved in the origins of the conception and development of this discipline in accordance with basic principles of a physiological approach in medicine.

Through all the scientific works of A. I. Betel'man there runs the concept of the unity of the organs of the mouth cavity and the entire organism as a whole, and the correlation between the form and function of the masticatory apparatus. Through these concepts he has promoted the establishment of orthopedic stomatology in a spirit of close interaction with the general medical disciplines.

Abram Isaakovich has written upwards of 60 works, including six monographs and textbooks. The textbook of A. I. Betel'man, in co-authorship with Prof. Byniny, on orthopedic stomatology (1947) has received wide recognition and popularity not only in our country but also abroad. It has been published in Polish, Rumanian, and Bulgarian, and also has been submitted for publication in Chinese. This book has become desk material for practising physicians.

In 1956 there appeared the monograph Zubnoye Pratezirovaniye (Dental Prosthesis) by Abram Isaakovich, and in 1958 -- the monograph Ortodontiya i Chelyustno-litsevaya ortopediya (Orthodontia and Maxillary-Facial Orthopedics.)

In his ten years of occupancy of the chair in the Ukraine, Prof. A. I. Betel'man has prepared 11 candidates of medical sciences and three students have readied their doctoral dissertations.

Abram Isaakovich is, as always, full of strength, energy, and new creative ideas. Under his initiative while occupying the chair there was opened the one and at present the only department of prophylactics of malocclusion which embraces in its prophylactic work assistance to children (from three to six years of age) who are suffering from malocclusion. He is working tirelessly in the perfecting and enriching of methods for treating the orthopedically ill, is improving the pedagogical process, and is constantly sharing his rich experience with young specialists.

Prof. A. I. Betel'man has taken an active role in the public affairs of stomatological establishments. Since 1949 he has been a permanent member of the Board of the Kiev Society of Stomatologists, a member of the Presidium of the

All-Ukrainian Society of Stomatologists, has become a member of the Problems Commission of the Scientific Council of the Ministry of Public Health, UkSSR is a member of the editorial council of the Journal Stomatalogiya (Stomatology), is the chairman of a group of members in the Society for the Dissemination of Political and Scientific Knowledge of the Kiev Medical Institute. For many years he has been a member of the Organization Bureau of all stomatological conferences, and meetings of physician-stomatologists of the UkSSR, and he is an indispensable lecturer at these conferences.

The colleagues and numerous students of Abram Isaakovich, workers in stomatological establishments, and the entire stomatological community congratulate him and wish him many years of health, socialist work, and successes in his tireless activity in the field of Soviet stomatology.

IVAN ALEKSEYEVICH SHAKLEIN

Following is a translation of an article from Problemy Tuberkuleza (Problems of Tuberculosis), No 5, 1959, pages 116-117.

In July of 1959, Professor I.A. Shaklein, M.D. turned sixty; that date marked also the thirtieth year of his medical, social and scientific-pedagogical work.

I.A. Shaklein, who has been a member of the CPSU since 1919, is the leader in the work against tuberculosis in the Urals, a surgeon specializing in tuberculosis, a pedagogue, and a prominent public worker.

The biographical data concerning I.A. Shaklein are a brilliant indication of the vast opportunities offered to those who toil under Soviet rule. The son of a peasant, in the years of the Civil War he became a volunteer in the Red Army; then, after demobilization he enrolled in the Workers Faculty in Perm. In 1929 he completed his work in the Medical Faculty of the University of Perm and remained a medical practitioner in the Clinic of Internal Diseases; after this he terminated his post graduate course of study at the Central Institute of Tuberculosis in Moscow.

Having received preparation in therapy and phthisis, I.A. Shaklein, beginning in 1932, devoted all his strength to the fight against tuberculosis in the Urals, first in his capacity as an assistant director, and from 1937 on as the director of the Sverdlovsk Institute of Scientific Research in Tuberculosis.

A big service of I.A. Shaklein in the field of scientific research is linked with his works in silico-tuberculosis and in collapse-therapy. Still in the first years after the organization of the Sverdlovsk institute of tuberculosis, he studied the death rate of miners due to pneumoconiosis and developed prophylactic measures against this disease. He studied the clinical methods and the effectiveness of artificial pneumothorax and especially pneumoperitonium. The research on pneumoperitonium is presented by I.A. Shaklein in the form of a doctor's thesis

and published as a separate monograph.

The pen of I.A. Shaklein is responsible for 32 printed works, which are dedicated to the incipient tuberculosis clinic, to the processes of cure, to the complex methods of healing tuberculosis and to the problems of the organization of the fight tuberculosis.

Under the guidance of I.A. Shaklein, the Sverdlovsk Tuberculosis Institute grew into a large scientific establishment. The institute extends great help in organizational methods to the tuberculosis sanitariums in the Urals and successfully puts into practice the achievements of Soviet science. I. A. Shaklein also played a large part in preparing the staff phthisists.

Since 1933 he has combined his work as an assistant to the chairman of the therapy faculty at the Sverdlovsk Institute of Medicine with his duties as Director of the Sverdlovsk Institute of Tuberculosis; since 1937 he has given a docent's course on tuberculosis, and since 1954 has been the head of the Department of Tuberculosis.

In the period of the Great Civil War, I.A. Shaklein headed the Sverdlovskaya Oblast Public Health Section. Under his guidance the public health organs did a fine job of guarding the home front of our country against outbreaks of epidemics, of organizing medical sanitation divisions for the industrial enterprises of the region and of raising the standard of medical accommodations for the workers. The network of anti-tuberculosis establishments in the region has also noticeably expanded.

I. A. Shaklein actively participates in social life. He is the Vice-chairman of the All Russian Organization, and the Chairman of the Sverdlovsk Association of Phthisicists, a member of the editorial staff of the magazine Problemy Tuberkuleza (Problems of Tuberculosis). He was repeatedly elected deputy to the Sverdlovsk City Council of Workers Deputies; he is the chairman of the Permanent Public Health Commission affiliated with the Council of Workers Deputies; he is also a member of the Kirovskiy Rayon Committee of the Sverdlovsk CPSU.

The government has highly valued the activity of I. A. Shaklein and has conferred upon him two orders of Red Banner of Labor, medals and a "Distinguished Public Health Worker" badge.

The staff of the magazine Problemy Tuberkuleza, friends, colleagues and students wish Ivan Alekseevitch good health and further success in his work.

DOCENT IVAN FEDOROVICH KHARITONOV

Following is the translation of an article from Kazanskiy Meditsinskiy Zhurnal (Kazan' Medical Journal) No 1, 1959, pages 96-97.

I.F. Kharitonov was born in 1898 in Menzelinsk, in the former Kazanskaya Guberniya.

In 1922 he graduated in medicine from the University of Kazan' and was retained as an intern in the Propaedeutic Surgical Clinic. At the same time he worked as an assistant to the dissector on the Faculty of Operational Surgery and Topographical Anatomy.

After finishing his term of duty as an intern and while working as a surgeon in Menzelinsk, I.F. Kharitonov acquired great practical experience and a well-earned popularity among the people.

In 1933 I. F. Kharitonov was chosen as an assistant at the clinic of the Kazan' Medical Institute and in 1938 he was granted a scientific degree of Candidate of Medical Sciences for his work on Krovosnabzheniye simpaticheskoy nervnoy sistemy (The Bloodsupply of the Sympathetic Nervous System).

In 1939 I. F. Kharitonov was made docent and the head of the Faculty of Childrens' Surgery at the Kazan' Medical Institute which he has been heading successfully to the present time.

In the Civil War years while the surgeons' collectives were being prepared for the needs of the front, he took a most active part in the treatment of battle casualties.

He wrote about 30 scientific works, most of which were published.

As a practicing surgeon and a scholar I.F. Kharitonov has always been outstanding in the multiplicity of his interests. He was interested in urology, the surgery of abdominal-intestinal tract, etc., along with childrens' surgery. Having once begun his work at the Faculty of Topographical Anatomy he always remained in contact with it. On the Faculty of Normal Physiology he systematically engaged himself in experimental work, the result of which was his doctoral dissertation which illuminated from a

different standpoint the physiology of the ureter.

His great capacity to work demand for high standards for himself and others, simplicity and modesty are the distinguishing qualities of I.F. Kharitonov. It is these qualities together with his professional authority which won him great popularity with the public.

As a member of the CPSU Kharitonov carries also a great share of social work.

I.F. Kharitonov was awarded the "Znak pocheta" (Badge of Honor), a medal "Za Pobedu nad Germaniyey" (For the Victory over Germany) and two badges "Otlichnik zdravookhraneniya" (Distinguished Public Health Worker).

On 31st of January 1958 by the decree of the Presidium of the Supreme Soviet of Tatar SSR he was granted an honorary title of Honored Doctor of the Tatar SSR.

We wish our beloved Doctor Ivan Fedorovich health and further productive work and success as an author.

At the request of comrades - - -

K.C. Rakhimkulov

PROFESSOR VLADIMIR NIKOLAYEVICH SHUBIN

Following is the translation of an article from Kazanskiy Meditsinsky Zhurnal (Kazan' Medical Journal) No 3, 1959, pages 45-46.

Vladimir Nikovayevich Shubin was born on the 21st of November, 1898, in Nolinsk of the former Vyatskaya Guberniaya. After graduating in medicine from Perm University in 1922 he worked at first in the medical uchastka district and later was made an intern of the Perm University Hospital Surgical Clinic where he worked under the direction of Professor V.M. Parin. Through subsequently acquiring the positions of non-faculty and later faculty assistant Vladimir Nikolayevich received great practical experience. During this time he completed several scientific works on different branches of surgery: typhoid fever peritoniti, abdominal and duodenal ulcer, and goiter.

After serving for a short while on the Faculty of General Surgery at the Izhevsk Medical Institute in 1936/37 academic year and after defending his candidate's dissertation, Vladimir Nikolayevich transferred to the Faculty of General Surgery at the Kazan' Medical Institute. Here under the direction of Professor B.G. Hertzberg he completed his studies and in 1942 defended his doctoral dissertation on the function of cardiac closure of the aesophagus.

In 1944 V.N. Shubin won a competition for the position of the Dean of the Faculty of General Surgery at the Astrakhan' Medical Institute and in 1951 the Dean of the Faculty of General Surgery at the Kazan' Medical Institute. Here Professor V.N. Shubin together with the faculty staff and the staff of the Department of Surgery of the Republic Hospital participated actively in research on many pragmatic questions of surgery. He alone published more than 30 scientific works.

His co-workers successfully completed and defended a series of dissertations. Professor V.N. Shubin's staff center their special attention on the problems of shock which obliterates end arteries and surgery on suppurating matter.

As a member of the CPSU, V.N. Shubin participates actively in politico-social and administrative work. For the past several years he has been working as a deputy director of the Kazan' Medical Institute in the Research Department.

Vladimir Nikolayevich has been awarded the Order of Lenin, the medal "Za Pobedu nad Germaniyey" (For the Victory over Germany), a medal "Za Doblestniy Trud" (For Valiant Work) and also a badge "Otlichnik zdravookhraneniya" (Distinguished Public Health Worker).

The members of the staff wish our beloved Vladimir Nikolayevich good health, vigour, and long years.

PROFESSOR VASSILIY IVANOVICH ZYUZIN

Following is the translation of an article from Zdravoochranenie Kazakhstana (Health Protection of Kazakhstan) No 3, 1957, pages 45-46.

In December of 1956 the medical community of Kazakhstan marked warmly the 60th birthday and the 30th anniversary of the scientific, educational and social activities of the director of the Institute of Tuberculosis at the Department of Health of the Kazakh SSR, the dean of the Tuberculosis Faculty of the Kazakh Medical Institute and chairman of the Scientific Council of the Health Department of the Kazakh SSR -- Doctor and Scientist Eméritus of the Republic, Professor Vassiliy Ivanovich Zyuzin.

V.I. Zyuzin was born in 1896 in a hard working farmer's family of the Stalingradskaya Oblast'. After the Civil War, during which he served in the Red Army, the Sanitary Department of the Ninth Army assigned him to study at the Kuban Medical Institute in the city of Krasnodar.

During the years in which he studied, V.I. Zyuzin did exceptional work in the organization and the furthering of the Medical Institute and also worked in the Red Cross Society.

In 1924 the Health Department of the Kuban-Black Sea district placed him at the disposal of the director of the Health Department of South-East Russia in the city of Rostov-na-Donu. Here he continued his higher education in the Medical School of the Don University from which he graduated in 1925. V.I. Zyuzin started his medical practice in the rural region of the medical section of Goryache-Klyuchevsk.

In the three districts of the Severo-Kavkazskiy Kray (Goryache-Klyuchevsk, Seversk and Korenovsk) Vassily Ivanovich worked as a rayon and uchastok physician for five years. This was an especially interesting and organizationally fruitful period of work for the young physician. At that time there was work being done on the establishment of new sanitary-medical institutions and V.I. Zyuzin, besides his physician's activities, contributed much of his

time and knowledge to the creation and furthering of these medico-prophylactic undertakings. He was elected member of the district executive committees several times.

After five years of professional practice in this rural rayon he was accepted for further studies in the Scientific Research Institute of Tuberculosis in the city of Krasnodar in the North Caucasus.

He finished his studies in three years and in 1933 was appointed director of the Kazakh Institute of Tuberculosis in Alma Ata and has been the head of this Institute till the beginning of World War Two. Since 1936 V.I. Zyuzin has been associate professor of therapy at the Kazakh State Medical Institute imeni Molotov, and has been teaching a course in tuberculosis.

In August 1941 V.I. Zyuzin was drafted into the Soviet Army and served as head of an evacuation hospital in Alma Ata. After his demobilization from the army in 1943 he was director of the Kazakh Medical Institute and associate professor of tuberculosis for eight years.

Presently V.I. Zyuzin is the director of the Kazakh Tuberculosis Institute of the Department of Health of the Kazakh SSR. With his cooperation and assistance quite a number of anti-tuberculosis stations were opened in Kazakhstan, and the main building of the Tuberculosis Institute and the Therapeutic Clinic of the Medical Institute were built.

Already during his rural medical practice and during his studies in Krasnodar V.I. Zyuzin wrote and published eight scientific works. He is also the author of more than 40 scientific publications about the problems of diagnosis, prophylaxis and cure of tuberculosis. Many of his works have great scientific significance for the country. In 1937 Vassily Ivanovich presented his master's dissertation (in Moscow) and in 1944 his doctor's dissertation. The latter was the first doctor's dissertation accepted in the Kazakh Medical Institute. Both dissertations are monographs dedicated to the study of the prophylaxis of tuberculosis of the population of Kazakhstan.

V.I. Zyuzin is one of the first organizers and participants of special scientific research expeditions sent to different areas and industrial centers of Kazakhstan for the purpose of study and organization of the fight against tuberculosis. He has been doing great work through the education, training and preparation of special personnel for this fight. About 100 physicians under his leadership were qualified in phthisiatry and are successfully fighting tuberculosis; some of them have presented their dissertations.

V.I. Zyuzin is skillfully combining his medical and scientific activities with social work: he is chairman of the Scientific Council of the Department of Health of the Kazakh SSR, chairman of the Medical Section of the Republic Society for the Dissemination of Political and Scientific Knowledge; he devotes much time to the work of the Red Cross and to the sanitary education of the population; he is the author of more than ten popular science brochures about tuberculosis.

For his long and fruitful work in public health protection the Soviet government has decorated Vassiliy Ivanovich with the order "Znak Pocheta" (Badge of Honor) and four medals. The government of the Kazakh SSR gave him the title of Doctor and Scientist Emeritus of the Kazakh SSR.

At the celebration of Professor Zyuzin's 60th birthday, congratulations addressed to him were received and read from the Academy of Sciences of the Kazakh SSR, from the Society for the Dissimination of Political and Scientific Knowledge and from a number of scientific research institutes. V.I. Zyuzin was personally congratulated by the oldest scientists of the republic - Corresponding Member of the Academy of Sciences of USSR - G.A. Tikhov, Professor S.A. Poplavsky, and Professor B.I. Ilyin-Kakuyev. He was congratulated also by representatives of the rural medical community Dr. I.G. Khalo and others. He received over 300 congratulatory telegrams. The fruitful work of Professor V.I. Zyuzin was honored also in special orders of the Departments of Health of the USSR and the Kazakh SSR.

The Presidium of the Supreme Soviet of the Kazakh SSR has awarded to Professor Vassiliy Ivanovich Zyuzin an Honorary Diploma.

We extend to Vassiliy Ivanovich Zyuzin our best wishes for good health and long years of fruitful activities in the field of Soviet public health.

MIKHAIL POLIYEVKTOVICH KOSTENKO

Following is the translation of an article from Nauka i Zhizn (Science and Life), No 3, 1960, pages 42-43.

The cherished dream of V.I. Lenin on the complete electrification of our country in our times is becoming a reality. In the course of the Seven-Year Plan scores of new powerful hydro and thermal electric power plants will rise, unified power supply systems in the European part of the USSR, in Central Siberia, and in other regions are being constructed, and thousands of kilometers of railroads will be electrified. No small contribution to the realization of these tasks was made by the distinguished Soviet power engineer and laureate of the Lenin Prize, Academician Mikhail Poliyevktovich Kostenko, whose 70th birthday was observed not long ago by the Soviet people. We shall tell of the glorious, vital and laborious road this scientist has followed in this sketch.

From Electrician to Academician

Mikhail Poliyevktovich looks out from the window of his office-laboratory onto the snow-covered embankment of the Neva. Many years have passed since the revolutionarily inclined students walked along this embankment in the pre-October days. The Czarist government sent him, a student at the Petersburg Electrical Engineering Institute, into one of the remote corners of the Urals for participating in the demonstrations. Having served his sentence, the youth returned to his native city where he succeeded in graduating from the institute with distinction. The professors predicted his future as a scientific researcher, theoretician, and invited him to remain at the institute as a worker, but Mikhail went into a factory, into practical activity.

The first years of Soviet power passed. For the young Kostenko as for many other electrical engineering specialists the Lenin plan GOELRO (Gosudarstvennyy Plan Elektrifikatsii Sovetskoi Rossii -- State Plan for the Electrification of Soviet Russia) became the torch of life.

The national economy of the republic needed its own, Soviet electrical machines, its own power equipment. In order to create them the engineer enthusiasts of the "Elektrosila" Plant organized an office for new designs. One of the initiators of this business was Mikhail Kostenko. Soviet specialists boldly eliminated the old technical norms, applied new calculating methods, and conducted deep theoretical research.

The scientist of that time could never forget when the first child of Soviet electrification, the Volkhov GES (gidroelektrostantsiya-hydroelectric power plant); was ready for operation. Eight turbines had to be constructed for the station. For experience the collective of the office of new designs was commissioned to work out four of them. The remaining ones were ordered from Sweden "for accuracy". Kostenko and his comrades spent day and night over calculations and draft boards, and their labor met with success.

The long-awaited day arrived. As representative of the Leningrad plant, Mikhail Kostenko went to the Volkhov GES construction site to verify and test the first large generators built by Soviet engineers. He thought to himself uneasily: "Will they be better than the foreign ones?"

The motors were started. The machines with the "Elektrosila" trademark operated brilliantly and received the approval of the members of the State Acceptance Commission. The Swedish turbines suffered break-downs.

In the evening, when the Soviet and foreign specialists were assembled in the home of the power plant construction chief, Graftio, it was unanimously decided that the Soviet machines were superior to the foreign ones in all respects. The representative of the Swedish firm, Professor Lindstrom, was also forced to agree with this.

This was a signal victory for Soviet engineering. The Volkhov turbines initiated the beginning of Soviet power machinery construction. Many machines with the "Elektrosila" trademark were built from then on by Soviet designers under the supervision of M.P. Kostenko, and each following machine was better and more "intelligent" than its predecessor.

It can be boldly stated that M.P. Kostenko has participated in the creation of all the basic types of electrical machines produced in our country. Generators have been produced under his supervision for the Dneprovskaya, Rybinskaya, Uglichskaya, Kashirskaya and many other electric power plants, and for the largest in the world, the Volga Cascade. He never copied foreign models and

always went his own way with original experiments, inventions, and the theoretical generalization of accumulated practical experience. The advice of the scientist was solicited in the production of motors for the atomic-powered ice breaker "Lenin", for generators of the Kuybyshev and Stalingrad GES, and for the fulfillment of other extremely complex industrial orders.

The scientific activity of Kostenko is many-sided. Specialists are well acquainted with the theory he worked out on the so-called synchronous rotation, which has received wide recognition in Soviet engineering, and with the monograph devoted to the universal transformer, in which are generalized problems of the theory of induction machines. Kostenko's book Kollektornyye Mashiny (Commutators), which appeared in print a quarter of a century ago, and his subsequent numerous scientific works, of which there are more than a hundred, have become indispensable manuals for electrical engineers. Academician Kostenko twice received the Stalin Prize for the design of new electrical machines which have enriched Soviet power engineering. In 1958 he became a laureate of the Lenin Prize.

The Kostenko School

"We are from the school of Academician Kostenko", many Soviet power engineers say with pride. And this is understandable. For more than 30 years Mikhail Poliyevktovich has headed the Chair of Electrical Machines at the Polytechnical Institute imeni M.I. Kalinin in Leningrad. During these years he has developed the engineering personnel for Soviet enterprises and scientific research institutes. More than 400 engineers -- specialists in constructing electrical machines -- have graduated from the Kostenko school. The scientists solve the most important tasks in Soviet power engineering in the laboratories of the institute and in close collaboration with production workers. Here, within the walls of the institute, one can always meet plant representatives, representatives from electric power plants and designing offices of various enterprises throughout the country.

A combination of science with practice, an excellent knowledge of production and a constant, strong connection with it are the characteristic features of the creative work of M.P. Kostenko. Not without reason do his students and many workers have a high regard for him. Mikhail Poliyevktovich may often be seen at the "Elektrosila" Plant, at the same plant where he once began his career.

For many years the scientist has been the head of the general plant office of research and is a member of the technical council of the plant.

Academician Kostenko is also the desired guest in other enterprises. Thus, at the request of workers, he took upon himself the obligation of Chief Electrician of the Khar'kov Electromechanical Plant and helped its collective master the manufacturing of new machines.

Students may meet Kostenko in enterprises and in institutions not only in our country but in Rumania, Hungary, Bulgaria, and Poland.

Mikhail Poliyevktovich was stopped on one of the streets of Paris by a short, dark man.

"Hello, dear teacher!" he exclaimed.

This was the Chinese specialist Gao Tszin'-de /Kao Ching-Te/ who, like M.P. Kostenko, was invited to Paris to participate in the International Conference on Large-scale Electrical High-Tension Systems. A graduate of the Polytechnical Institute, he now reads lectures in electrical engineering in Shanghai.

In the Scientist's Laboratory

We were the guests of Academician Kostenko in the Institute of Electromechanics of the USSR Academy of Sciences, which he heads. Here in laboratories located in the small private residence on the Palace Embankment of the Neva, the present and past of Soviet power engineering is graphically represented.

Before us is an entire complex of diverse electrical mechanisms. In miniature these machines represent the Stalingrad GES, the most powerful in the world. But if the construction of the plant on the Volga is far from completed, here its turbines for some time now have been producing electric power.

This electrical system does not have an external resemblance to the aggregates of the Stalingrad GES in the working model as well as in its set up on sketches and blueprints, but in them are occurring the same physical phenomena which workers with future power systems will meet. The electrodynamic model accurately reproduces the "behavior" of all electric plant systems and transmission lines. It gives the designer the opportunity to test "in practice" what before was in his imagination.

Climbing a narrow stairway to the second floor of the building, you now see a model of the long-distance Stalingrad-Moscow transmission lines. This occupies a

stand whose length is several meters.

Mikhail Poliyevktovich Kostenko comes to the laboratory almost every day.

"What's new today at the Stalingrad GES?", he inquires of a young engineer.

"We have been "planning" a breakdown since morning."

"Excellent! Let's decide how to "repair" it."

And just as doctors experiment on animals with future medicines, power engineers study on models the most complex problems which crop up in practice in operating electrical power equipment.

It is difficult to enumerate all the important scientific problems which are presently being solved with the aid of models in the laboratories of Academician Kostenko. For example, the problem of the combined work of direct and alternating current transmission lines has immense significance. Until now, as is known, a large extension of direct current transmission lines did not exist in our country. A characteristic feature of the Stalingrad GES shows that its transmission lines will transmit to immense distances both direct and alternating current simultaneously. The alternating current of the Stalingrad GES will be sent to Moscow and the direct current to the Don Basin. All the possibilities and advantages of such work of Hydroelectric power plants are being investigated by scientists with the use of models. Of no less importance are the experiments being carried out at the present time in the institute on the automatic regulation of superpower turbogenerators.

Mikhail Poliyevktovich willingly demonstrated for us a power system in operation. Submitted to automatic regulation, models of electric power plants -- ones already built and future plants -- the Volga, Stalingrad, Krasnoyar, Bukhtarmin, and Bratskaya -- operate in the laboratory accurately and efficiently.

The results of the scientific investigations conducted under the supervision of M. P. Kostenko have immense practical significance. They are being widely used by enterprises in creating superpower machines and apparatus for hydroelectric plants throughout the country.

The method of using models, whose authors are Academician Kostenko and a professor of the Moscow Electric Power Institute, Venikov, is also being utilized in solving still one more important task assigned to engineers in the Seven-Year Plan for the development of the national economy of the USSR. This is the broad electrification of the main line railroads of the country. M. P. Kostenko is successfully working on problems of the utilization of

alternating current electric traction.

The Institute of Electromechanics of the USSR Academy of Sciences has become a major center of Soviet science. Here the deputy of the Supreme Soviet of the USSR and laureate of the Lenin Prize, Academician Mikhail Poliyevktovich Kostenko, continues to labor fruitfully, his whole life dedicated to the noble service of his fatherland and his people.