Academician Strashimir Dimitrov — a bright trail in Bulgarian geology

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Strashimir Dimitrov was born on 10 August 1892 in the city of Sofia in a poor and large family — his father Dimitar Giorev Mechkarski and his mother — Susana Igova Kilimarska had 13 children. "The most important family traits of the Giorevs, parents and children, are natural intelligence, studiousness, persistent conscientious and beneficial diligence, good manner to neighbours, clients, fellow-citizens; sharp sense of duty and justice. These inherited and acquired virtues were the most specific features of Strashimir Dimitrov that built him up as a first class scientist and valorous citizen who was respected and loved by everybody." — writes Academician Prof. Ivan Kostov about the stock of Strashimir Dimitrov.

Strashimir Dimitrov completed his education in high school in 1908, and graduated from the Sofia University "Sv. Kliment Ohridski" in 1914. He was wounded in the First World War and was decorated with medals for his courage. After the war Strashimir Dimitrov worked as a teacher in Sofia, Sevlievo and Pleven, and later as a fishing inspector in the town of Rousse. In 1920 he was invited by the founder of the Bulgarian mineralogy and petrography, "the petrographer of all times in Bulgaria"- Acad. Prof. Dr Georgi Bonchev to be his assistant at the department "Mineralogy and Petrography". During 1927-1928 he specialized at world famous petrographer Prof. Ermansdorfer in Heidelberg, Germany. There he improved his German, contacted with outstanding geologists and acquired his high qualification in petrochemistry. He became Associate Professor in 1936 and Professor in 1942. Since 1944 he has been head of the department "Mineralogy and Petrography". S. Dimitrov was elected as Academician in 1947. During 1959 he was a secretary at the Department of Geological, Geological and Chemical Sciences and director of the Geological Institute at the Bulgarian Academy of Sciences, and since 1959 — vice-president at the Academy. He died on 24. 04. 1960 in Prague, Czechoslovakia.

Academician Strashimir Dimitrov combined in a perfect harmony his achievements in petrology, his organizing talent in the geological sciences and his social activities. He was an acknowledged pedagogue and model for diligence and humanism. He is one of the most eminent representatives of the second-generation Bulgarian mineralogists after our independence from the Ottoman Empire. His constructive course of life is connected to the biggest science and educational institutions— Sofia University "Sv. Kliment Ohridski" and Bulgarian Academy of Sciences, on the one hand, and on the other hand — to the revolutionary reforms in the social and economic relations in Bulgaria during the middle of the 40th. The two stages of his scientific activity passed at these institutions — professor and academician, head of the department "Mineralogy and Petrography", the first director of the Geological Institute, the founder of the specialty Geochemistry. The University and later the Geological Institute became these centers where the bloom of the Bulgarian geological science and practice started. Members of the Bulgarian petrographic school developed in such environment where they were influenced by the renaissance spirit of Acad. Georgi Bonchev and motivated by the innovation of Acad. Strashimir Dimitrov.

During the passed 20th century, Acad. Strashimir Dimitrov created the basis of the modern petrography in Bulgaria.
Igneous and metamorphic rocks in Bulgaria, studied in two hierarchical lines — descending and ascending lines are the main aim of his scientific activity. In the descending hierarchical petrogenetic line, he characterized rock species and varieties, mineralogical composition and mineralogical parageneses, structures and textures, chemical and petrochemical characteristics.

In the ascending line he studied various synpredictive and superimposed rock associations, groups, complexes and formations. These two hierarchical lines he connected to the tectonic processes and ore mineralization.

Prof. Jordanka Mincheva-Stefanova says: "The scientific work of Acad. Prof. Strashimir Dimitrov will be always an inseparable part of the history of the Bulgarian science since it marks not only the new stage of the development of petrology here, but is connected to his numerous contributions to studies of the mineral deposits and foundation of the mineralogy as a detached branch in the geological science. Scientific researches accomplished by Acad. Prof. Strashimir Dimitrov are a result of his modern style of investigation, of his brilliant knowledge of crystallooptic methods, geometrical crystallography, and quantity chemical analyses of rocks and minerals. He was the first scientist in Bulgaria who applied the X-ray methods for mineral diagnostics. He also submitted the question about special examination of the crystal's morphology as a characteristic of mineral deposit. Consequently, he outlined new and perspective trend in Bulgarian mineralogy."

Academician Strashimir Dimitrov was ahead of his time with his works on spilitisation and variolites at diabases, weathering crust on serpentinite, anortosites and non-granitic pegmatites from Vitosha Mountain, etc. He introduced new terms that are still in use — "compound pluton", "varied formation", "leptites", etc. He found out new thematic branches, which we could call magmatic fluid systems, parallelism in differentiation and crystallization, etc. He launched processes as liquation, filter-pressing, magma contamination, and proved them. The contributions of Academician Strashimir Dimitrov in the field of metamorphism, magmatism, ore mineralization, and metallogeny are universally recognized. Instead of regional mapping, he carried out thematic petrologic studies that led to numerous regularities in the space distribution of magmatic and metamorphic rocks in Bulgaria. He outlined the migration processes and successive development of morphostructures in the light of the geosynclinal theory. Academician Strashimir Dimitrov characterized in detail alkaline rocks, and submitted fruitful ideas about the heteromorhism, the development of Pacific series into the Mediterranean, about the presence of potassium-alkaline province. The recent authors relate these alkaline magmatites to the Perigondanian territories, accreted to the southern edge of Eurasia. In his fundamental work "Vitosha pluton" Strashimir Dimitrov introduced structural analysis, characterized joint set granitic tectonics and subsequent distribution of the intrusives added in the range of an
integrated plutonic body. He also developed the homodromous model of differentiation and crystallization of partial magmatic-fluidal systems in two facial environments — abyssal and hypabyssal “in situ”, but opposed to it the agpaitic crystallization as an antidromous differential motive. He outlined the bifurcation trends of the end differentiates in the Vitosha plutonites. He introduced the concept about the tectono-magmatic triad in the Srednogorie eruption area as facially detached co-magmatic tites: volcanites — plutonites — dyke magmatic tites. He also submitted the term “variegated formation” as a prototype of the litho-stratigraphic succession in the Rhodope supergroup. Strashimir Dimitrov introduced the complex notion “Diabase-phillitoidal formation” to which he added later the Prazinite formation. He detached Sakar-Strandzha zone as independent tectono-metamorphic unit with its own sedimentary, metamorphic and magmatic rocks, developed at the account of the Rhodope and Srednogorie morphostructure. He launched a comprehensive tectono-magmatic metalogenic model in which he divided three tectono-magmatic epochs (cycles): (1) Precambrian-Cambrian; (2) Caledonian-Hercynian and (3) Alpine, each one with its own magmatism, metamorphism, metasomatism, and metallogeny.

The significant part of his achievements is vivid nowadays. They made Academician Strashimir Dimitrov one of the most cited authors in our country. The three criteria proving the vitality of one’s work are present — actual thematic, confirmation of facts and ideas by new methods, and opportunity to upgrade on the existed basis.

As an eminent scientist Academician Strashimir Dimitrov is well known abroad. He had a rich correspondence with scientists from Austria, Germany, Russia, France, Yugoslavia, and China, and read lectures and reports in Berlin, Warsaw, Kiev, Lvov, Moscow, Mexico, Prague, Tashkent, Tirana, Freiberg.

Academician Strashimir Dimitrov was a prominent pedagogue and beloved teacher, who trained two generations of geologists. He was a model of inspired author for his students. He actively participate at creation of the new department structure in the field of geology, and supported the growing of the Department “Mineralogy and Petrography”. This idea he realized at the price of great efforts. The new specialty “Geochemistry” with its three departments — “Mineralogy” (later “Crystallography and Mineralogy”), “Petrography” (later “Li-
for the educational collections. With persistence and importunity he created a school that continues his work. The ideas that he put into his scientific work are still glowing ember among the ash of the destruction and a new hope for better future. His numerous students as well as geologists from subsequent generations had established new facts about the geology of Bulgaria. Unique rock types were found out. Improved lithostratigraphic schemes were composed. New geological maps were prepared on the formational, serial and geodynamic base. Modern approaches for magmatic and petrogenetic modeling were used on the basis of new geological, mineralogical, petrological, geochemical, radiometrical, metallogenical, geophysical, and mathematical methods. Attempts at clarifying of the profundial geological structure of the lithosphere were made in collaboration with geophysicists. In collaboration with geomorphologists the depth of the erosional cut of several ore deposits was assessed. Many rock-forming minerals were characterized. Discoveries of an universal validity were done. The acquired experience from work in different countries in Asia, Europe, Africa, America and Antartida they built in their further scientific production.

Facts, ideas and approaches from the heritage of Strashimir Dimitrov in the field of petrology were affirmed because, as Acad. Ivan Kostov wrote, "... in each geological work there is a sparkle of the scientific truth that he leaves for the future researchers of our land."