

Petko Popov and Optics in Bulgaria during the 20th Century Founder and Supporter of Education in Optics and Optical Instrumentation



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Abstract. In the present work, the creative activity of Petko Popov is exposed. He is one of the first teachers on optics and constructor of optical devices in our country through the 20 century. His achievements were gained in some educational and scientific institutions as well as in the industry. Petko Popov is author and co-author of row books and textbooks on optics and patents of optical devices.

The physics is a fundamental science that has successful development in Bulgaria during the 20 century. Bulgarian physicists, professors in the Sofia University, Porfiry Bachmetjew (member of Bulgarian Academy of Sciences, 1900) and Georgi Nadjakov (member of Bulgarian Academy of Sciences, 1945) discovered two fundamental phenomena – anabiosis in the area of biophysics and photoelectric state of matter in the area of physics of semiconductors and dielectrics. Many physicists took part also in the development of the first enterprise for production of various physical devices in our country. Petko Popov (22.11.1904 – 1963) has especial considerable contribution and merits in development of optical instrumentation.



Petko Hristov Popov was born in the village of Vidrare, around Teteven, in a large family of a secretary – tax-collector. After graduating from secondary school, he worked in different places up to the 30s of the 20 century. After that, he arrived in Germany, studied optics in the University of Jena and specialized in the optical plants “Karl Zeiss” in Jena in the 40s of the 20 century.

After his return to Bulgaria, Petko Popov worked in the factory Arsenal near Kazanluk. He headed repairment of the military optical devices. People’s Court sent Petko Popov to prison of Stara Zagora for 5 years because an accusation of the factory’s employees after 9 September 1944. One year later, however, he has pardoned and liberated.

Petko Popov arrived in Sofia in 1947 and opened with a colleague a shop for glasses in the central part of the street Lege. He was one of the initiators of foundation the State Institute on fine mechanics and optics in Sofia started as a college with 3 years course of education since 1948. He taught optics up to retirement in 1960. Best specialists in optics, cinema-technics, watch making, typing and calculating machines worked as teachers in this college. Todor Vasilev taught computational optics in the Institute also. Other popular teacher in this Institute was Josif Petrov – poet, writer, and politician, Humbold fellow, one of the best galvano-plastics specialists in our country at that time.

Petko Popov was author and co-author of many textbooks and books in optics and optical instruments. He wrote the first textbook “Notes for optical instruments” printed during in 1950. Petko Popov published books “Practical optics”, Technics Publisher, Sofia (1958)

During the 70s of the 20 century, the Institute on fine mechanics and optics became technical college on fine mechanics and optics. Neno Ivanchev, physicist specialist on optics, and Petko Popov wrote next textbooks “Theory of the optical instruments”, textbooks

for III, IV and V grades of the College on fine mechanics and optics, Technics Publisher, Sofia (1959), which had several editions. The technical college is National high school for optics and fine mechnics now [1-5]. It is necessary to remark that his author's manuscript about the repair of military optical devices written when he was in the Arsenal in Kazanluk is preserved in the library of the Military College.

Georgi Nadjakov gave an idea production of lenses to start in our country in the beginning of the 60s of the 20 century. An original polar grind was installed in a room on the area of the Faculty of Physics and Mathematics on 49 Moskovska Street. Petko Popov provided the constructive data. He managed installation. Mihail Mihaylov, teacher in the Institute on fine mechanics and optics and a future chief of the shop "Optics" in the Optical and mechanical factory – Sofia, realized it. As a large protector of the applied optics, Petko Popov consulted creation of this lens, which was prepared for the Veterinary Faculty of the Sofia University.

It was the first successfully manufactured spherical lens in our country. Georgi Nadjakov enlarged the existing little optical workshop. It became optical and mechanical workshop. Petko Popov was head there. Later on, he became a head of the first optical shop in our country for school appliances, Uchtehprom, settled initially on street Georgi Kirkov near to the "Female marketplace". Just here, production of several dozen microscopes – trichina-scopes for the needs of the Veterinary faculty at the Sofia University started. In this time Petko Popov was one of the initiators for creation of the first optical shop in the enterprise for school appliances, Uchtehprom, where have elaborated and prepared school microscopes, slide-projectors and other optical devices and equipment. The company had replaced in a new building in Modern suburb, which later enlarged the production of optical and mechanical devices during the 60th years of the 20 century. It became the first Optical and mechanical factory in our country. The first Bulgarian binocular microscope was projected, elaborated and produced there.

Petko Petkov had indisputable merit for the education of optical specialists. His assistance was crucial for the appointment of Hrant Bostandjian and Milko Bojilov in the Institute of Physics at the Bulgarian Academy of Sciences in 1951. Hrant Bostandjian headed the optical laboratory of the Institute of Physics – BAS, and Milko Bojilov was head of the optical workshop in the Institute of Solid State Physics.

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