My memories of Professor G.V.Samsonov

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In the year 1956 I joined the recently established Laboratory of Metallurgy, at that time a small Institute of the Slovak academy of sciences, located in Kosice. The first research projects we oriented toward powder metallurgy, as that technology was already established in a Slovak plant, that time called Kovohuty Mokrad. Our team gradually made contacts with related research institutions in countries, belonging to the «socialist block», obviously our first priority was to seek a partner in the Soviet Union.

Our choice turned out to be the Institute located in Kiev, Ukraine, by name «Institute of Powder Metallurgy and Special Alloys» (1955), where research, far exceeding our capacity, was well established. In 1964 the Institute was renamed as «Institute of Materials Science Problems». After the death of its Founder Director Academician I.I. Frantsevich, his name was prefixed to the Institute. We were reading with utmost interest publications in Russian, which the Institute provided us with. It was in that connection I began to know of Professor Samsonov.

Our Director, Professor J. Kubelík, was the first to visit the Institute in Kiev and came back with much enthusiasm about the research in progress and he was very much impressed by the work of Professor Samsonov as well as by his personality. Kubelik asked Samsonov how did he manage to work so hard, as his research results and publications were awe inspiring. This is Professor Samsonov's reply: You know, my friend, I have a young wife. In the evenings I send her to bed and then I can work undisturbed. Samsonov's sense of humor was also a lovable feature of his personality.

In 1962 the Slovak Academy of Sciences arranged the First International conference on powder metallurgy. It took place in Smolenice Castle near Bratislava and there I met Professor Samsonov for the first time in person. I used this opportunity to discuss with him some problems I had encountered in my research and was overwhelmed by his detailed knowledge of all aspects of powder metallurgy and related topics.

Later I read and studied several of his publications and was looking forward to an opportunity to travel to Kiev and visit his institute. Unfortunately my wish was never fulfilled and in 1968 I left the Institute in Kosice and moved to Gothenburg, Sweden, where I became visiting scientist at the Institute of Metallic Materials of Chalmers University of Technology. I informed Professor Samsonov of my new workplace and our correspondence continued. He sent me a long letter containing his views and ideas on the electronic structure of elements, alloys and compounds, presently known as the configurational model of matter. I informed my superior, Professor Hellmut Fischmeister, of this correspondence and he immediately asked me to give a seminar talk on that topic. The seminar was attended by several scientists, including the professor of physics, and ended with a lively discussion, as the content of my talk was considered highly novel and, possibly even somewhat controversial. In 1968, there existed several theories within the frame of metal physics, and journals were full of discussions among scientists.

My last meeting with Professor Samsonov was in 1971 at Herceg Novi at one of the Round Table International Meetings on Sintering, arranged by Professor Ristic of that-time in Yugoslavia. He listened to my presentation and later we discussed my research at Chalmers, Gothenburg, which was oriented toward investigating the rate of coarsening of oxide particles (Ostwald Ripening) in steels with various alloying elements. Samsonov pointed out to me the need of applying thermodynamics, in addition to the kinetics of the process, and his advice and comments were very valuable. I was much impressed by his capability to understand problems right on the spot, as well as to suggest ways how to solve them.

In the year 1970, I met his former Indian Ph.D. scholar Dr. Gopal Sh. Upadhyaya at the International Powder Metallurgy Conference organized by American Powder Metallurgy Institute in New York at Waldorf Astoria Hotel. Unfortunately Samsonov could not make up to join the conference. Soon after the scientific presentation by Upadhyaya, I remembered to send to Samsonov a beautiful picture post card by air mail with our joint signatures. It is gratifying to see Gopal as the joint editor of this Special Memorial issue in honour of Samsonov.

Years later I learnt that Samsonov's theory was published as a book (in Russian) with title: «Configurational Model of Matter» with coauthors of his two former students I.F. Pryadko and L.F. Pryadko. This was published by «Naukova Dumka», Kiev in 1971. The book later got translated into English and published by Consultants Bureau, New York, 1973. It was fortunate that Samsonov saw the good reviews of the book before his untimely death in December, 1975. The book then became an internationally recognized achievement in physics of solids.

I will always remember Professor Samsonov as a great scientist and a very likeable person.