

NIKOLA A. PUŠIN
(1875–1947)

N. A. Pushin was born in 1875 in Saratov (Russia). He graduated from the Department of Natural Sciences of the Faculty of Physics and Mathematics of the University of Sankt-Peterburg. After graduation he worked for three years in a Gun-powder factory in the vicinity of Sankt-Peterburg and simultaneously was a teaching assistant at the electro-technical Institute working with prof. N.S. Kurnakov. He was working in the field of electrochemistry and soon he was in charge of the Laboratory for Electrochemistry in the same Institute. With prof. Kurnakov he also started serious research in the field of binary metal alloys from the point of view of their physicochemical properties (electric conductance, hardness, melting points, etc.) as functions of their composition. Special efforts were put to obtain the adequate solid-liquid phase diagrams for the great number of binary alloys studied. In 1905 he was in Gettingen in the laboratory of famous prof. Tammann, studying the effects of high pressures on the melting points and composition of authentic mixtures, and phase diagrams in general. After a habilitation in 1909 he became Associate Professor of Electrochemistry in the same Institute in Sankt-Peterburg and head of the Electrochemistry Laboratory. Having some health problems in the period 1919–1920 he was Professor of Physical Chemistry in Vladikavkaz in the south of Russia, and in 1920 escaped from Russian revolution to Belgrade. He was given a Honorary Professorship in Electrochemistry and Electrometallurgy at the Technical Faculty of the Belgrade University, but in less than a year he obtained a position of the Professor of Physical Chemistry at the University of Zagreb. As a professor and head of the Department of Physical Chemistry he has spent 8 years in Zagreb teaching physical chemistry, organizing the laboratory work and continuing to do research started long time ago in Sankt-Peterbutg on binary alloy systems. Having some administrative problems in obtaining tenure at the University of Zagreb, he applied for a position as a professor of physical chemistry at the Department of Chemical Technology of the Technical Faculty in Belgrade, and moved to Belgrade in 1928. In 1927, he obtained Ph. D. at the University of Ljubljana.

In Belgrade he joined the already existing Laboratory for Physical Chemistry and Electrochemistry headed in this time by young dozent P.S. Tutundžić and after moving of the Technical Faculty to a new and more spacious building in 1930 the Laboratory was enlarged into the Institute of Physical Chemistry and Electrochemistry with prof. Pushin as its head, keeping this position to 1947 when after a serious illness prof. Pushin passed away.

In the whole period 1930–1947 (except for War time) prof. Pushin and prof. Tutundžić were collaborating within the Institute. Prof. Pushin was in charge of teaching Physical Chemistry and also Ultrapoisons, while prof. Tutundžić was in charge of Electrochemistry.

This last period of his life prof Pushin again devoted to the investigation of binary systems, but this time mainly to the systems consisting of mixtures of various inorganic salts, organic substances (e.g., various alcohols, acids, amines, heterocyclic compounds, etc.), or combination of them. Again, they involved studies of viscosity, conductivity, refractive index and similar properties as functions of composition of binary systems, phase diagram properties and structure of new compounds formed between the components. Prof. Pushin alone or together with coworkers published about 120 scientific papers in German, British, Russian and Serbian scientific journals. Many of his papers were cited in the other research papers and known monographs dealing with binary phase diagrams.

Prof. Pushin was also an active member of the Serbian Chemical Society, and founder and Editor of the Society's scientific journal, "Glasnik Hemijskog društva", in the period 1930–1947.

Prof. Pushin was awarded Becketov's Award given by the Russian Physical Chemistry Society for his work on mercury alloys, and Ilijenko's Award by the University of Sankt-Peterburg for his contribution to aluminium winning from Russian ores. In 1947 the Serbian Academy of Sciences in Belgrade elected prof. Pushin for his corresponding member. Unfortunately, his serious illness prevented him from further active research, and soon, in October 1947 he passed away.