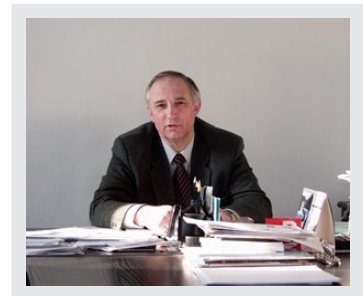


Foreword about Sergey Vladimirovich Serebriannikov, member of the Department of Physics and Technology of Electrotechnical Materials and Components, National Research University, Russian Federation:

I was born in the Moscow region in 1952. I graduated from electromechanical faculty of the Moscow Power Engineering Institute (MPEI) in 1975 as an engineer of electroinsulating and cable technique. Candidate of Technical Sciences degree I received in 1987 having defended the dissertation on a problem of heat conductivity of solid dielectrics in electric fields. In 2004 I defended the dissertation for an academic degree Doctor of Technical Sciences and since June of the same year became the head of the department of physics and technology of electrotechnical materials and components. Since 2005 I have professor's rank. In 2004 - 2005 I was the vice rector of MPEI for scientific work, and in 2005 – 2013 – the rector of MPEI. During this period MPEI received the honorable name "National research university "MPEI". I was also the member of Boards of directors of the Russian energy companies: "RusHydro", "Federal grid company", "Holding of the interregional network companies". Now I continue work as the head of the department and as the adviser to the rector.



Sergey Vladimirovich Serebriannikov

The main areas of my scientific work – the physicist of polymeric electroinsulating materials, application of various fillers for creation of composite materials, ferrite and their application, materials for insulation of electrical machines, methods of research and tests of electrotechnical materials and the analysis of results.

Dear readers,

many years ago I have gained the diploma of the electrical engineer and thought that mine sphere of activity will be only that technology, research and usage of electrotechnical materials, which are connected with electricity, an electromagnetic field or electrophysical properties. Real work and research showed that this sphere is much wider. Specialists in the field of electrotechnical materials must have profound knowledge and ability in such branches of science as a substance structure, chemistry and technology of various materials, the heating technique, the mechanics, physical methods of the analysis, nanotechnology. They must understand an environmental problems and sometimes problems of human health, climatic impacts on given person and equipment are required too. All this developed in wide area of my work from the 70th's of the last century till today.

My colleagues and I received many interesting scientific results, applying various methods of research and the analysis: the differential thermal analysis, microscopy, infrared spectrometry, the differential scanning calorimetry, researches of resistance, capacities and dielectric losses, influence of high tension, the chemical analysis, a dilatometry, studying of microwave ranges, research of durability, etc.

In recent years the laboratory of our department was replenished with devices and apparatuses, which allowed performing research not only in the Russian standards, but also in the European standards, recommendations of IEC and ASTM.

The most interesting areas of modern works are studying of opportunities to increase working temperatures of insulation of electrical machines, especially generators and traction engines. For this purpose various compositions are made and it is necessary to study processes of heat transfer in these compositions.

The microwave techniques and technologies are actively developing as well. In parallel, issues of the person and the equipment protection from microwave radiations have to be resolved. It is very interesting sphere too, in which magnetodielectrics – ferrites can take an important place.

I wish to all readers of the Advances in Electrical and Electronic Engineering journal to be always on the first line of scientific research, to receive interesting results, to apply achievements of science in the fields of electrotechnics and electronics to push forward advancement in this wide area. I am convinced that the journal will be an important element in your work.