

## Nikolai F. Bunkin

Bunkin Nikolai, born in 1960 (June 30, Moscow), Doctor of Physics, Professor of Bauman Moscow State Technical University. Specialist in the field of laser diagnostics of colloidal systems.

He graduated from Physical department of Moscow State University with a degree in Physics (1983).

In 1988 he defended his Ph.D., and in 1998 - his doctoral thesis on the topic "Laser stimulation and probing of phase transformations in separable solutions and homogeneous transparent liquids".

His scientific works are devoted to the experimental and theoretical study of the interaction of laser radiation with liquid media, and more specifically, to the optical breakdown of transparent liquids, dynamic light scattering and polarization scatterometry in colloidal systems and phase microscopy of nanoparticles in liquid media.

He developed new conceptual ideas about water and aqueous solutions of electrolytes were, according to which such liquids, which are in thermodynamic equilibrium with a gaseous medium and contain an ionic component, represent a dispersed system "pure liquid + nanobubbles stabilized by ions". In the literature, such nanobubbles are called *bubstons* (the abbreviation of *bubble stabilized by ions*). It was shown that such nanobubbles serve as centers of optical breakdown and acoustic cavitation, as well as boiling nuclei. In addition, such nanobubbles are present in biological systems; their presence in the blood is one of the causes of decompression sickness.

He is author of 118 articles, h-index 22 (Web of Science), 1388 citations (Web of Science).

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