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In Memory of Aleksandr Pavlovich Grinin (1947–2006)

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Aleksandr Pavlovich Grinin, remarkable personality and outstanding scientist, Professor, Doctor of Physics and Mathematics, Head of the Chair of Statistical Physics, St. Petersburg State University, passed away on October 24, 2006, after grave illness.

Grinin was born on January 9, 1947, in village Stroilovo of Vsevolozhskii raion, Leningrad oblast. In 1973 he graduated with honors from the Department of Physics, Leningrad State University (LSU) and was admitted to the Graduate School of LSU. He defended the Candidate of Science dissertation on nonlinear statistical hydrodynamics in 1978 and continued his work in LSU at the Chair of Statistical Physics headed by Professor F.M. Kuni. In 1994, Grinin defended doctoral dissertation on the kinetic theory of phase transitions (theory of nucleation). Beginning with 1995, he was Professor of Chair of Statistical Physics, St. Petersburg State University and from 1996 to his last days he was the Head of this chair.

Grinin is the author of more than 130 scientific publications; most important of them were published in *Colloid Journal*. His research on thermodynamics and kinetics of nucleation in gaseous and liquid media and the aggregation in surfactant solutions gained worldwide recognition. On the basis of the detailed analysis of small parameters when describing the initial stages of nucleation and the studying the material balance of condensing substance, he succeeded, together with his teacher F.M. Kuni, in the breakthrough in the development of transient kinetics of nucleation. The theory of the multistage formation of new-phase particle size spectrum and the particle absorption of the main fraction of metastable substance was constructed. This theory described the nucleation both under the conditions of instantaneous formation of metastable state and

dynamic conditions when factors providing for the transition of a substance to metastable state and subsequent deepening into the region of metastability act also after the onset of intense new phase formation. At the end of the 1980s and beginning of the 1990s, Grinin, together with F.M. Kuni, developed for the first time the method of the solution of two-dimensional kinetic equation of nonisothermic nucleation describing the warming-up of droplets and surrounding medium at the expense of the heat of phase transition. This equation was beyond the framework of Fokker–Planck approximation. Grinin's works of this period laid the foundation for the theory of thermal phenomena occurring upon the nucleation. In the second half of the 1990s, Grinin, together with his students, constructed self-consistent statistical theory accounting for the nonlinear effects of spatial–temporal irregularities of surrounding medium upon the nucleation of new-phase particles. At the same time, from the end of the 1990s, he was actively involved in the development of modern thermodynamic and kinetic theory of micellization. He was the first to develop thermodynamic quasi-droplet model of molecular surfactant aggregates in micellar solutions; together with his colleagues, he constructed the theory of relaxation of solutions containing spherical and cylindrical nonionic micelles. For his works on the theory of micellization published in *Colloid Journal* in 2003–2005 Grinin was awarded the main prize of MAIK "Nauka/Interperiodica", which unfortunately he did not have time to receive personally.

A talented researcher, Grinin generously shared his knowledge and experience, dedicating much time and strength to teaching, to working with students and graduates, and to organizing the teaching process. He did all this with exceptional kindness, sincere effort, and attention to people. Grinin raised many successful pupils engaged in science not only in Russia but also in the USA, France, the Czech Republic, and Germany. Having been an excellent organizer and having worked for ten years as the head of the Chair of Statistical Physics, St. Petersburg State University, he did much to develop and improve the chair.

Grinin was a member of the Scientific Council of St. Petersburg State University and chairman of the Methodological Commission of the Department of Physics of the university. For his long and fruitful work, he was awarded the title "Honorary Worker of Russian Higher Professional Education."

The memory of Aleksandr Pavlovich Grinin will live in the hearts of those who were lucky to associate with him and to whom he left a part of his soul.

Friends and colleagues