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## CHRONICLE

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### In Memory of Igor Stepanovich Zaslonko

On January 23, 2001, the prominent scientist in the field of physical chemistry, Professor, Doctor of Science (Physics and Mathematics), Head of the Laboratory of High-Temperature Kinetics and Gas Dynamics at the Semenov Institute of Chemical Physics of the Russian Academy of Science, member of the Editorial Board of *Kinetika i Kataliz* (Kinetics and Catalysis) Igor Stepanovich Zaslonko passed away.

Before graduating from the Moscow Institute of Engineering Physics, I.S. Zaslonko started working at the Institute of Chemical Physics in 1961 and spent almost 40 years there. He first worked at the Laboratory of Gas Combustion and then became the Head of the Laboratory of High-Temperature Kinetics and Gas Dynamics.

I.S. Zaslonko devoted most of his studies to physicochemical kinetics in shock waves using optical spectroscopy and microwave methods. He showed in his best studies on high-temperature kinetics that non-equilibrium effects are a critical factor that determines the behavior of a gaseous medium. This was best demonstrated using hydrogen trinitride decomposition and the bimolecular reaction of nitrous oxide with carbon monoxide. In reactions of this sort, states are formed with the pronounced overheating of vibrational degrees of freedom.

I.S. Zaslonko contributed greatly to the development of experimental and theoretical methods for the studies of polyatomic molecules excited to the energies close to the reaction threshold. Specifically, he developed promising methods for the description of energy distributions, which appeared to be very efficient in interpreting processes with polyatomic molecules during their thermal and laser activation.

Along with the kinetics of selectively excited vibrational states, I.S. Zaslonko devoted much attention to the physical chemistry of combustion. He participated in the studies and model development of the formation of harmful impurities during hydrocarbon fuel combustion: nitrogen oxides and soot. He studied the properties of combustion and ignition regulators and the mechanism of their action. His findings were reflected in many patents and inventor's certificates.



In recent years, I.S. Zaslonko was actively involved in the problems of formation and decomposition of condensed phases in gaseous media. The use of shock-wave techniques in combination with the non-contact methods of diagnostics enabled him to obtain unique data on the mechanism of the formation of dispersed particles during high-temperature chemical reactions. In several works, he grounded the theory of condensation in the systems with extremely high oversaturation.

I.S. Zaslonko paid considerable attention to teaching. He was an advisor of nine candidates of science. For many years, he was a lecturer at the Moscow Pedagogical University.

For his scientific activity, I.S. Zaslonko received governmental awards.

Igor Stepanovich Zaslonko was all-round educated, cheerful, well-wishing man. Unfortunately, he fell at his high point. The blessed memory of Igor Stepanovich Zaslonko will be preserved forever in the hearts of his friends, colleagues, and disciples.