

Vladimir Idelevich Perel' (on his sixtieth birthday)

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The sixtieth birthday of Vladimir Idelevich Perel', a well-known Soviet theoretical physicist and Corresponding Member of the USSR Academy of Sciences, was celebrated on August 24, 1988. V. I. Perel' was born into a teacher's family in Sverdlovsk. He graduated from the physics department of Leningrad University in 1950, a troubled time in Soviet history, and began his career as a teacher in a railroad vocational institute in Petrozavodsk. Yuriĭ Maksimovich Kagan, who worked at the Petrozavodsk University at the time, introduced the young theorist to plasma physics research, thus determining the scientific interests of Vladimir Idelevich for the subsequent decade. But the main scholarly successes of V. I. Perel' sprung from his research in the theoretical physics department of the Leningrad Physicotechnical Institute. In 1958 he was invited to join the research group of Professor L. É. Gurevich, whose inspiring personality and commitment to a creative atmosphere undoubtedly contributed to the development of V. I. Perel's talent.

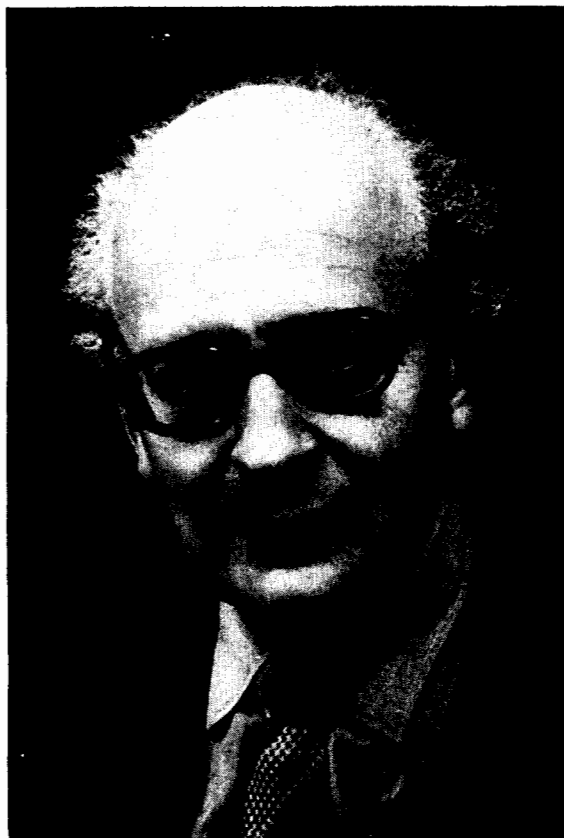
Vladimir Idelevich subsequently took the best traditions of those years with him to the theoretical department of the A. F. Ioffe Physicotechnical Institute, which he currently heads.

Currently the main scientific interests of V. I. Perel' are in solid state physics, but the scope of his three decades of research at the Physicotechnical Institute has been extremely broad. He addressed such disparate topics as the graphical method of calculating kinetic coefficients and theoretical research into optical orientation in gases. The knowledge and experience accumulated in plasma physics research contributed to his prediction of electromagnetic (helicon) waves in metals.

In cooperation with experimentalists V. I. Perel' discovered recombination waves in semiconductors. Important results were obtained in the theory of nonradiative recombination of electrons and holes.

The ability and desire to work in close contact with experimentalists always characterized the scientific activity of V. I. Perel'. He approached refined mathematical theory via an exhaustive examination of minute experimental detail. His talent manifested itself in the fortunate knack of extracting the key facts from a collection of unrelated data, which then enabled him to construct a physical picture as well as a mathematical model of the phenomenon under investigation. Precisely this approach was employed in the development of the theory of optical orientation of nuclear and electronic spins in semiconductors, and polarization effects in hot luminescence. A number of these advances were incorporated into a thematic collection of papers was awarded the USSR State Prize.

The longstanding pedagogic activity of Vladimir Idelevich—from his schoolteacher days to his professorship at the V. I. Ul'yanov (Lenin) Institute of Electrical Engineering in Leningrad—brought him the reputation of an inspiring teacher, a reputation invariably confirmed in student evaluations. His lectures combine a concrete approach em-



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ploying simple and educational examples with a sufficiently rigorous discussion of fundamental principles.

Until 1983 V. I. Perel' did not serve in any administrative capacity. Only after his election as a Corresponding Member of the USSR Academy of Sciences (in 1982) was he appointed head of department. But for a long time before that Vladimir Idelevich was the actual leader of a large school of Leningrad solid state theorists. His unique clarity of thought and absolute rejection of "fudging," coupled with the ability to listen to and understand even the most garbled presentation, attracted both theorists and experimentalists. The combination of these qualities serve as an example to his numerous students. Vladimir Idelevich never refuses a consultation to anybody; he is always prepared to empathize with the difficulties of others and consider problems remote from his own interests. He particularly values discussions with capable experimenters, which often lead to new ideas. It is not surprising that Vladimir Idelevich enjoys great authority at the Physicotechnical Institute and elsewhere.

On his sixtieth birthday we wish Vladimir Idelevich Perel' success in his life and new scientific achievements.

Translated by A. Zaslavsky