

High temperature superconducting theory drew controversy after the discovery of superconductors at close to room temperatures. However, a consistent microscopic theory of HT superconductivity based on bipolaron mechanism leads to a better understanding of microscopic and macroscopic description. By presenting aspects of superconductivity now joined in a strict theory rather than separate models this work is especially useful for graduate students.a

- ▶ Better understanding by combining the theory of superconductivity with that of bipolarons.
- ▶ Explaining numerous experiments on the thermodynamic, spectroscopic and transport characteristics.
- ▶ Problems and solutions for a successful exam preparation.



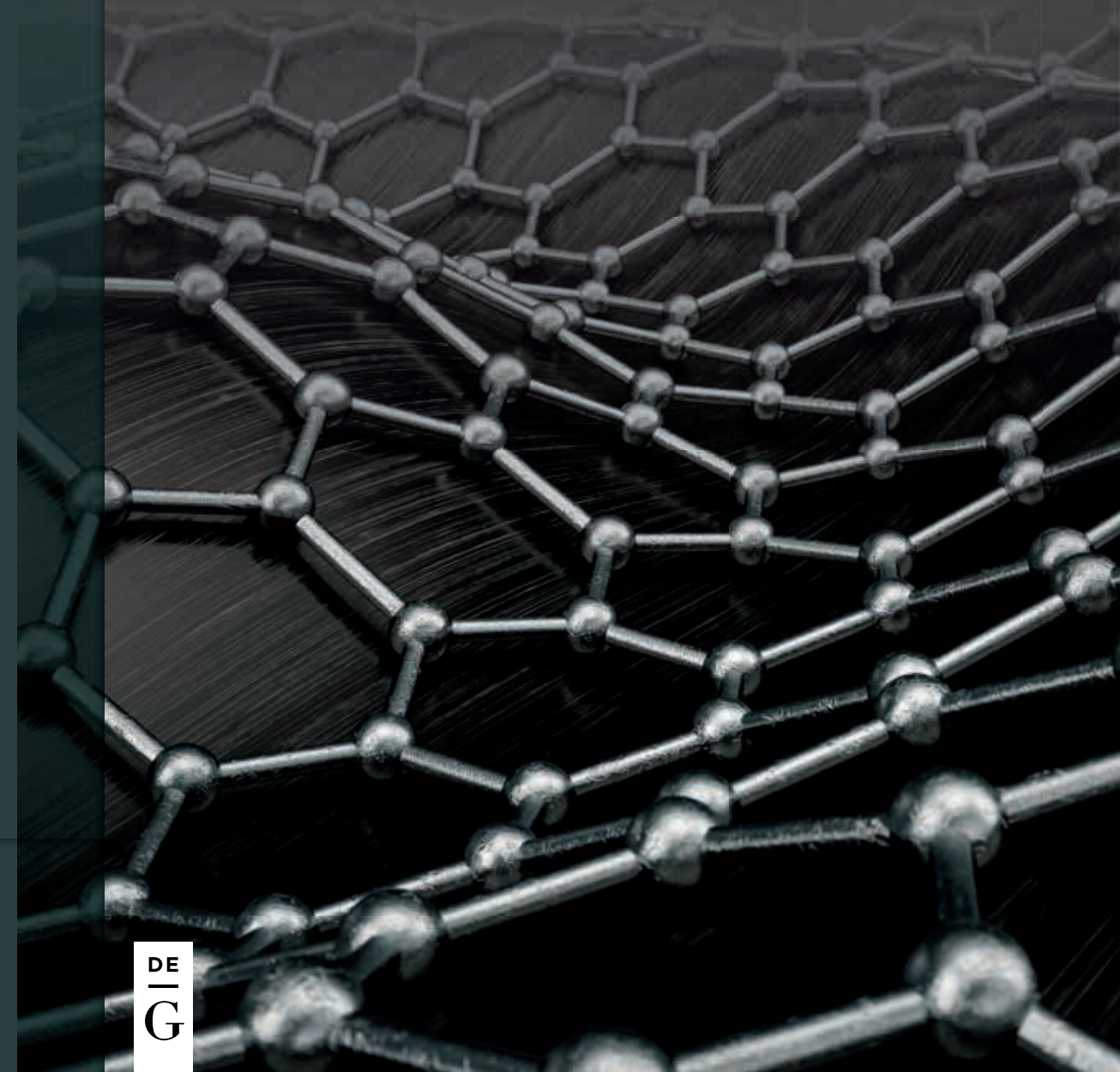
Prof. Dr. Victor Dmitrievich Lakhno
 Scientific supervisor of the Institute of IMPB
 RAS. Main achievements: New types of polaron
 excitations in condensed media, magnetic systems,
 theory of DNA charge transfer, superconductivity.
 Awards: Russian State Research Award for
 Outstanding Scientists, Krylov award of Russian
 Academy of Sciences, Honoured Master of
 Sciences.

Victor Dmitrievich Lakhno
HIGH-TEMPERATURE SUPERCONDUCTIVITY

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BIPOLARON MECHANISM



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