

THE THEORY OF HIGH-TEMPERATURE
SUPERCONDUCTIVITY IN MANY-BAND
SYSTEMS. MgB₂

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S u m m a r y

The main stages of development of the theory of superconducting systems with overlapping energy bands are formulated. The main references of the classical papers of the author of this theory, Prof. V.A. Moskalenko, and his coworkers are listed. The list also includes papers related to high-temperature superconductivity. Some peculiarities of the two-band model which gives qualitatively new results in comparison with the usual one-band model, are enumerated. The application of the two-band model to the description of thermodynamical properties of compound MgB₂ is also discussed. The references covering our research of the kinetic properties of superconductors with overlapping energy bands are provided. In particular, we present the Ginzburg–Landau (GL) equations for the two-band superconductors doped with impurities and the results on the influence of impurities on the energy gap, as well as those concerning the dynamical properties of two-band superconductors.