9.7 cm

HUND'S RULE AS THE MECHANISM OF THE SPIN-TRIPLET PAIRING IN A CORRELATED AND DEGENERATE BAND SYSTEM

A. Klejnberg and J. Spałek

Marian Smoluchowski Institute of Physics, Jagiellonian University, ulica Reymonta 4, 30-059 Kraków, Poland

We propose that the spin-triplet pairing can originate from the local Hund's rule exchange in a degenerate d-band system. The role of this interaction in the pairing is decisive when accounted for in a conjunction with the correlations induced by the direct Coulomb interactions. The superconducting-gap value is obtained in the saddle-point approximation for the Coulomb correlations combined with the mean-field approximation of the BCS type for the pairing part.

13.4 cm

Subject category :

1. Correlated Electrons and High Temperature Superconductors

Presentation mode :
poster

Corresponding author :
Jozef Spałek

Address for correspondence :
Marian Smoluchowski Institute of Physics, Jagiellonian University,
ulica Reymonta 4, 30-059 Kraków, Poland

Email address :
ufspalek@jetta.if.uj.edu.pl