9.7 cm

DYNAMICAL MEAN-FIELD APPROACH TO MANY-BAND HUBBARD MODELS

Ryszard J. Wojciechowski and Błażej Radzimirski
A. Mickiewicz University, Institute of Physics
ul. Umultowska 85, 61-614 Poznań, Poland

We study systems with degenerated orbital degree of freedom in the limit of large lattice coordination. The orbital degeneracy plays a very important role in many correlated systems with perovskit-like geometry and is crucial for understanding many unusual properties of the systems e.g. the colossal magnetoresistance. The purpose of the paper is to incorporate the orbital degeneracy into the dynamical mean-field method. We consider a scaling procedure developed in [1] to avoid difficulties coming from the simple scaling in the case of non-generated orbitals. Then, we examine,in the large spatial dimension, the electronic density of states using a selective treatment of different hopping integrals.

[1] P. Lombardo, M.Avignon, j. Schmalian, and K.H. Bennemann, Phys.Rev.B **54**, 5317 (1996)

13.4 cm

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Corresponding author :
Ryszard J. Wojciechowski

Address for correspondence :
A. Mickiewicz University, Institute of Physics
ul. Umultowska 85, 61-614 Poznań, Poland

Email address :
wojrysz@main.amu.edu.pl