9.7 cm

ON THE NOVEL POSSIBILITY TO DETECT CRITICAL TEMPERATURES OF THE CORRELATED ELECTRONIC SYSTEMS: FERROMAGNETS, ANTIFERROMAGNETS, SUPERCONDUCTORS AND REENRANT SUPERCONDUCTORS

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Basing on the theoretical investigations of the wide class of the model Hamiltonians *we announce* that all critical temperatures of the electronic system can be found from the temperature dependence of the chemical potential. For systems with at least two kinds of interacting electrons the same information can be obtained from the temperature dependence of the average occupation numbers. The mentioned quantities at all critical temperatures exhibit small but distinct kinks. On this ground we suggest that experimental measurements of the chemical potential as function of temperature for real solids should be of fundamental importance in the solid state physics, informing us about all kinds of transitions (first order, second order, structural transitions, etc.).

13.4 cm

Subject category :
1. Correlated Electrons and High Temperature Superconductors

Presentation mode :
poster

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