

The ground state phase diagram of the Kondo-lattice model

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We present the ground state ($T=0$) phase diagram of the 2D and 3D (ferromagnetic) Kondo-lattice model. By using a moment conserving decoupling approach for the electronic self-energy we have calculated the inner energies of different phases explicitly. The phase diagram is then constructed by comparing the energies for the different phases. For low coupling J we find that depending on the band filling different anti-ferromagnetic configurations are favored. For larger J ferromagnetism is favored except for the half-filled band case. Furthermore, regions of phase-separation are determined by an explicit Maxwell construction.

9.7 cm

13.4 cm

Subject category :

1. Strongly Correlated Electrons and High Temperature Superconductivity

Presentation mode :

poster

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