

Electronic Structure Calculations with DMFT

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A novel electronic structure method for dealing with realistic systems which gives both ground state properties and excitations spectra will be reviewed. The method is based on dynamical mean field theory of strongly correlated electronic systems which treats many-body effects locally via self-consistent solutions of the Anderson impurity-like models. Applications of the method to the structural phase transition in metallic plutonium will be discussed.

Work done in collaboration with Gabriel Kotliar.