

Pseudogap in cuprates

Olle Gunnarsson

Max-Planck Institut für Festkörperforschung

The pseudogap in cuprates and organics is studied. Using the dynamical cluster approximation (DCA), numerical experiments are performed to determine important factors. A simple four-level model is introduced, which shows pseudogap behavior, and which is studied in detail. We discuss how the system changes character as the Coulomb interaction is increased and a pseudogap develops. These results are supported by DCA calculations. Finally, we discuss the self-energy in terms of an exact formula and a vertex function.