Critical review of pseudo-gap in high Tc superconductors: Experiments and theories

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Abstract

Recently the study of the pseudo-gap in high temperature superconductivity become critical issue because it contains key information of the pair formation of the high temperature superconductivity. Specially angle resolved photoemission study shows the various information of the gap formation. In this talk, I will review the recent theories as will as experiments on the pseudo-gap in high temperature superconductors. Specially I will introduce the possible observation of the Andreeve reflection in the underdopped high temperature superconductors.