Can Disorder Induce Metallic Behavior in a Mott Insulator?

Abstract

What happens to a Mott insulator when you disorder it? Of the two energy scales: the Mott gap $U$ and the antiferromagnetic scale $J$, which one is destroyed first? or together? We find in 2 dimensions, sandwiched between a Mott insulator and an Anderson insulator, is an unusual spatially inhomogeneous metallic phase.