

Center for Nanophase Materials Sciences (CNMS)



CNMS DISCOVERY SEMINAR SERIES

Joint Meeting with the
CONDENSED MATTER THEORY SEMINAR SERIES

Friday, February 24, 2006
11:00 am
3025M, Auditorium (3rd floor)

Refreshments will be served at 10:45 am

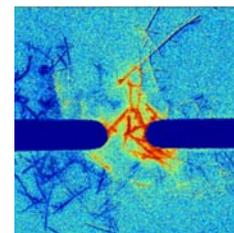
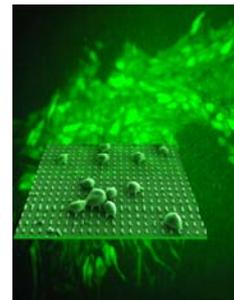
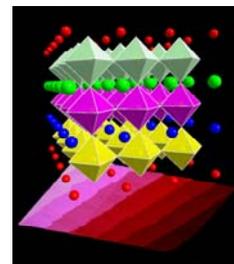
“Strange Electrons in High-Temperature Superconductors”

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Abstract

After almost twenty years from their discovery, high temperature superconductivity has defied any explanation. One of the reasons for this is that these materials are characterized by a large variety of competing orders in the ground state, where the spin, charge and lattice degrees of freedoms are intertwined and cooperate to yield enhanced collective phenomena. In this talk we will explore the complex electronic properties of high temperature superconductors and we will present an overview of their doping, temperature, momentum and isotope dependence. In particular we discuss the role that the lattice degree of freedom poses to enhance one of the competing order and their role for superconductivity.



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