

Abstract Submitted
for the MAR08 Meeting of
The American Physical Society

Doping dependence of the bilayered colossal magnetoresistive manganites $\text{La}(2-x)\text{Sr}(1+2x)\text{Mn}(2)\text{O}(7)$: Angle Resolved Photoemission studies¹ NORMAN MANNELLA, University of Tennessee - Knoxville, KIYOHISA TANAKA, SUNG-KWAN MO, Advanced Light Source - Berkeley, ZHI-XUN SHEN, Stanford University — We have measured the doping dependence of the bilayered colossal magnetoresistive manganites $\text{La}(2x)\text{Sr}(1+2x)\text{Mn}(2)\text{O}(7)$ with Angle Resolved Photoemission (ARPES). Our measurements reveal profound differences in the spectral features depending on the doping levels. Surprisingly, the spectra corresponding to $x = 0.4$ exhibit more similarities to those corresponding to $x = 0.6$ than the ones with $x = 0.36$ and $x = 0.38$. Further aspects of these data in relation to the physics of layered manganites will be discussed.

¹DOE Office of Basic Energy Science, Division of Material Science, under contracts DE-FG03-01ER45929-A001 and DE-AC03-765F00515

Norman Mannella
University of Tennessee - Knoxville

Date submitted: 25 Nov 2007

Electronic form version 1.4