

Abstract Submitted  
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**ARPES investigation of deeply underdoped BISCO 2212 K.**  
TANAKA, W. S. LEE, D. H. LU, T. FUJII, A. FUJIMORI, Z. HUSSAIN,  
Z. X. SHEN — We present ARPES results from deeply underdoped BISCO 2212  
with  $T_c$  ranging from 30 to 50 K. The improved sample quality with Y substitution  
enables the detection of much sharper spectral features. We uncovered experimental  
evidence for two distinct energy gaps in these deeply underdoped samples. The the-  
oretical implications of these findings will be discussed in conjunction with ARPES  
and RAMAN data.

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