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**Revealing pseudogap physics using lanthanide substituted $\mathbf{Bi_2Sr_{1.6}Ln_{0.4}CuO_{6+\delta}}$** DANIEL GARCIA, University of California, Berkeley, JEFF GRAF, CHRIS JOZWIAK, SHUYUN ZHOU, HIROSHI EISAKI, ALESSANDRA LANZARA — Towards understanding the physics of the high-temperature superconducting cuprates, there has been growing interest in the role lattice strain plays between the copper oxide planes. We have examined $Bi_2Sr_{1.6}Ln_{0.4}CuO_{6+\delta}$ (Ln=La, Nd, Eu, Bi) near optimal doping using angle resolved photoemission spectroscopy. The increasing radius mismatch of the substituted lanthanide, which monotonically decreases the superconducting Tc, appears to also affect the electronic properties of these system. The effect of strain on Fermi arcs, superconducting gap and pseudogap physics will be discussed.

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