

STM imaging of Spatial Variations in the Charge-Ordered states of BSCO

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We use scanning tunneling microscopy to investigate the competition between charge density wave and superconducting states. We image the disordered charge modulation in the cuprate superconductor $(\text{Bi}_{1-y}\text{Pb}_y)_2\text{Sr}_2\text{CuO}_{6+x}$. We correlate the local charge modulation wavevectors with other local properties such as the local pseudogap, and local breaking of 4-fold rotational symmetry.