Strongly Correlated S-Wave Superconductivity in the N-Type Infinite-Layer Cuprate

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Quasiparticle tunneling spectra of the electron-doped (n-type) infinite-layer cuprate $Sr_{0.9}La_{0.1}CuO_2$ reveal characteristics that counter a number of common phenomena in the hole-doped (p-type) cuprates.
The optimally doped $Sr_{0.9}La_{0.1}CuO_2$ with Tc = 43 K exhibits a momentum-independent superconducting gap Δ=13.0 $\pm$ 1.0 meV that substantially exceeds the BCS value, and the spectral characteristics indicate insignificant quasiparticle damping by spin fluctuations and the absence of pseudogap.
The response to quantum impurities in the Cu sites also differs fundamentally from that of the p-type cuprates with d_{x2-y2}- wave pairing symmetry.

Keywords : infinite-layer, pairing symmetry