

Abstract Submitted
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Magnetotransport **in**
extremely-high magnetic fields of $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$ with nearly continuous doping ZACHARY STEGEN, GREG BOEBINGER, Florida State University, FEDOR BALAKIREV, ALBERT MIGLIORI, Los Alamos National Laboratory, JIE WU, IVAN BOZOVIC, Brookhaven National Laboratory — The doping dependence of the Hall effect and longitudinal magneto-resistance in the high-temperature superconductor $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$ are examined. Samples were grown using Combinatorial Molecular Beam Epitaxy (COMBE), which allows electrical transport measurements with a doping resolution of $\Delta x \approx 0.0002$. This is an increase in doping resolution of about 50-fold compared to typical magneto-resistance measurements. The experiments were performed in pulsed magnetic fields up to 57 T with the goal of investigating transport properties of the magnetically-induced normal state near optimum doping.

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