

Abstract Submitted
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Visible Pump-THz Probe Spectroscopy of the Undoped Cuprate $\text{Sr}_2\text{CuCl}_2\text{O}_2$ JESSE PETERSEN, J. STEVEN DODGE, Simon Fraser University, RUIXING LIANG, University of British Columbia — We present experimental results on the mobility of photoexcited carriers in $\text{Sr}_2\text{CuCl}_2\text{O}_2$, an undoped cuprate. We use ultrafast laser pulses to excite photocarriers in the antiferromagnetic insulating lattice. We then probe the low-frequency dynamical conductivity of this nonequilibrium state with time-domain terahertz spectroscopy. Our current measurements place an upper bound on the mobility that is consistent with Hall mobility measurements.¹

¹Y. Ando *et al.* PRL **87** 017001 (2001)

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