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Optoelectronic Response of the Inversion Breaking Weyl Semimetal TaAs[1] KENNETH BURCH, GAVIN OSTERHOUDT, Boston Coll, BING SHEN, NI NI, University of California Los Angeles, PHILIP MOLL, Max Planck Institute — The recently discovered class of topological materials known as Weyl semimetals have attracted a large amount of interest due to their bulk topological states, chiral excitations, and high mobilities. However, the scattering mechanisms in these materials are not yet well understood. Insight into these mechanisms may be found through optoelectronic measurements. Furthermore, such measurements could potentially reveal a quantum anomalous Hall state. The work we present in this talk has therefore focused on understanding the response of the inversion symmetry breaking Weyl semimetal TaAs under mid-infrared optical excitation.

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