

Abstract Submitted
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Graphene plasmonic THz detectors¹ ANDREI SUSHKOV, XINGHAN CAI, DON SCHMADEL, GREG JENKINS, DENNIS DREW, CNAM and MRSEC at University of Maryland, L. NYAKITI, V.D. WHEELER, R.L. MYERSWARD, N.Y. GARCES, C.R. EDDY, JR., D.K. GASKILL, U.S. Naval Research Laboratory, Washington, DC 20375, MICHAEL FUHRER, Monash University, Australia — Frequency and strength of the plasmonic resonance can be tuned in THz range continuously by doping and discretely by changing the width of a single layer graphene strip. It creates strong detector response in the gap between Drude and interband transitions present in infinite graphene sheet. We have working detectors for a FIR laser with power of mW level and we are working toward microWatt sensitivity necessary for a Fourier spectrometer. We will present our devices, optical methods, and our progress in THz detectors.

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