Abstract Submitted
for the MAR12 Meeting of
The American Physical Society

Sorting Category: 12.1.3 (E)

Measurement of plasmon dispersion in graphene: tunable graphene plasmonics[1] BEN D. DAWSON, MIKE S. LODGE, Department of Physics and Nanoscience Technology Center, University of Central Florida, Orlando Fl 32816, NIMA NADER ESFAHANI, R.E. PEALE, Department of Physics, University of Central Florida, Orlando Fl 32816, M. ISHIGAMI, Department of Physics and Nanoscience Technology Center, University of Central Florida, Orlando Fl 32816 — Graphene is an intriguing material for plasmonics. We have measured the transmission spectrum of large area graphene, grown using chemical vapor deposition, using Fourier transform infrared spectroscopy. By varying the Fermi level of graphene, we are able to explore the energy dispersion of plasmons in graphene. Our result lays the foundation for tunable plasmonic devices based on graphene.

[1]This was was supported by the Intelligence Community Postdoctoral Fellowship Program and by AFOSR grant FA95501010030, Program Manager Gernot Pomrenke.

Ben D. Dawson
bdawson@knights.ucf.edu
Department of Physics and Nanoscience Technology Center,
University of Central Florida, Orlando Fl 32816

[X] Prefer Oral Session
[ ] Prefer Poster Session

Date submitted: 12 Jan 2012 Electronic form version 1.4