

Abstract Submitted
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Anisotropic electron-phonon coupling in doped graphene JESSICA MCCHESENEY, Montana State University, ALS, AARON BOSTWICK, Advanced Light Source- LBNL, TAISUKE OHTA, Fritz Harber Institute, THOMAS SEYLLER, Universitat Erlangen-Nurnber, KARSTEN HORN, Fritz Harber Institute, ELI ROTENBER, Advance Light Source LBNL — The effects of doping single layer graphene are investigated by mapping the valence band in the vicinity of EF using angle-resolved photoemission spectroscopy (ARPES). The carrier concentration was varied from 0.04 – 1.05 electrons per unit cell with the deposition of Ca and K at low temperatures. As the doping increases there is an enhancement of the electron-phonon coupling along certain high symmetry directions. Changes in electron-phonon coupling parameter, λ , shows that the systems goes through a transition from the weak-coupling regime to the strong-coupling regime.

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