Photon Induced Dynamic THz Conductivity Change in Graphene
SUFEI SHI, TOM TANG, BO ZENG, LONG JU, FENG WANG, UC Berkeley —
The linear dispersion relation in graphene gives rise to large and highly tunable
conductivity at THz regime, which makes graphene a promising candidate for new
optoelectronic devices. We use optical pump THz probe spectroscopy to investigate
photon induced conductivity change in graphene in time domain, and show that
the THz response sensitively depends on the initial doping of graphene. This study
sheds light on the carrier relaxation in graphene after optical excitation and provides
valuable information for designing future graphene-based opto-electronic device.