

Abstract Submitted
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Probing the Doping level in Graphene Using Surface Plasmon Resonance. KAMRUL ALAM, YANG LI, JIMING BAO, University of Houston — The present work describes an investigation of the electrochemically doped large area CVD grown graphene by using surface plasmon resonance (SPR). As graphene was doped electrochemically its conductance changes based on electron and hole concentration, that have an effect on its permittivity which has influence on the refractive index. We have used SPR angle interrogation scheme, generally known as Kretschmann configuration, to detect this change in refractive index of graphene as a shift in the angle of the SPR curve. To verify our results we have use Raman spectroscopy of the graphene-Au hybrid sample that was used for SPR measurement. Shift in the G peak signifies that graphene is doped electrochemically which is also in agreement with the shift in the angle of the SPR curve.

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