

## N-type doping and band gap change of Calix adsorbed on Graphene

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Electronic structure of Calix adsorbed on epitaxial graphene (EG) was investigated using high resolution photoemission spectroscopy (HRPES). Increasing the deposition of calix molecule, we found that EG becomes n-type doping using secondary edge measurement (work function change). As we observe bonding nature of O 1s peak, we found that single O 1s peak can be clearly distinguished in the spectra indicating equivalent adsorption state. Finally, we were able to control the band gap of EG using valence band spectra as we change the amount of calix molecule. In this study, we will propose the possibility of band gap modulation of EG using calix molecule.