

Abstract Submitted  
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**Measuring Schottky barrier height at graphene/SiC junction<sup>1</sup>** D. TOMER, L. HUDY, S. RAJPUT, L. LI, University of Wisconsin, Milwaukee — When graphene is interfaced with a semiconductor, a Schottky junction forms with rectifying properties. In this work, we measured the Schottky barrier heights of graphene/SiC Schottky diodes using current-voltage (I-V) measurement. Chemical vapor deposited graphene was transferred onto semiconductor surfaces of opposite polarization: the hydrogen-terminated Si- and C-faces of  $\alpha$ -SiC, which was confirmed by Raman spectroscopy and scanning tunneling microscopy. The Schottky barrier height is found to be sensitive to the polarization of the substrate and surface preparation. On the Si-face, a barrier of 0.47 eV is found. These results will be compared with earlier work as well as our *in situ* scanning tunneling spectroscopy results [1]. [1] Rajput et al., Nature Comm. (DOI: 10.1038/ncomms3752).

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