Abstract Submitted
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Measuring the charge of a defect in graphene using atomic force microscopy[1] LAWRENCE HUDY, YING LIU, MICHAEL WEINERT, LIAN LI, University of Wisconsin Milwaukee — Graphene exhibits linear dispersion at the Dirac point, leading to novel properties that can be further tailored by the introduction of defects into the honeycomb lattice. In this work, we created vacancies on epitaxial graphene/SiC(0001) using N and Ar plasma, and studied the atomic structure of these defects using non-contact atomic force microscopy with a Q-plus sensor and density functional theory (DFT) calculations. We also determined charges carried by the vacancy defects by local contact potential measurements. These results and comparisons with DFT calculations will be discussed at the meeting.

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