

Abstract Submitted
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Electronic Structure of Ultra-thin Graphite GEY-HONG GWEON, ELIZABETH ROLLINGS, SHUYUN ZHOU, University of California, Berkeley, BONGJIN MUN, ALEXEI FEDOROV, ALS, LBNL, P. N. FIRST, W.A. DE HEER, School of Physics, Georgia Tech, ALESSANDRA LANZARA, University of California, Berkeley — We report a high resolution angle resolved photoemission spectroscopy (ARPES) study on ultra-thin graphite samples, grown and characterized successfully in ultra-high-vacuum environment by a thermalization of SiC. We discuss similarities to and differences from the data obtained on bulk graphite. Notable differences include doping, electronic structure as a function of k_z (momentum component perpendicular to graphene layer), line width, and substrate-induced features in ultra-thin graphite samples. We discuss the effects of grain boundaries, disorder, and symmetry breaking, as possible explanations of these differences.

Gey-Hong Gweon
University of California, Berkeley

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