

Abstract Submitted
for the MAR11 Meeting of
The American Physical Society

Laser Scanning Microscopy of Few-Layer Graphene: Optical Reflectivity Contrast¹ BEHNOOD GHAMSARI, Center for Nanophysics and Advanced Materials, University of Maryland, College Park, ALEXANDER ZHURAVEL, B. Verkin Institute for Low Temperature Physics & Engineering, NAS of Ukraine, DANIEL LENSKI, Intel Corporation, 5200 NE Elam Young Parkway, Hillsboro, OR 97124, MICHAEL FUHRER, STEVEN ANLAGE, Center for Nanophysics and Advanced Materials, University of Maryland, College Park — We report laser scanning microscopy (LSM) of few-layer graphene, where a laser beam is raster scanned over the samples and the local reflectivity of the structure is directly measured through a silicon photodiode. The samples are grown by ambient-pressure chemical vapor deposition on copper foils, and transferred to SiO₂/Si substrates, and consist of regions of single- and multi-layer graphene (D. R. Lenski, and M. S. Fuhrer, e-print arXiv: 1011.1683). While the local reflectivity of the structure depends on the thickness of the graphene layer, the LSM data is used to construct a two-dimensional reflectivity image of the sample which, in turn, enables identifying the local distribution of different graphene multilayers and local microscopic properties of the graphene sample.

¹This work is supported by Department of Energy/High Energy Physics through grant number DESC0004950 and ONR through the Maryland AppEl, Task D10, through grant number N000140911190.

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Date submitted: 21 Nov 2010

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