

Abstract Submitted  
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**Scanning tunneling microscope study of striated carbon ridges in few-layer epitaxial graphene formed on 4H-SiC(000-1)** SARA HARRISON, MICHAEL CAPANO, School of Electrical and Computer Engineering and the Birck Nanotechnology Center, Purdue University, West Lafayette, Indiana 47907, RON REIFENBERGER, Department of Physics and the Birck Nanotechnology Center, Purdue University, West Lafayette, Indiana 47907 — Scanning tunneling microscopy (STM) is used to study carbon ridge defects found in few-layer graphene formed on the C-face of 4H-SiC(000-1) at growth temperatures between 1475 °C and 1550 °C. STM images reveal that ridges are characterized by a striated exterior surface formed from out-of-plane distortions in the hexagonal graphene lattice. While ridge formation is likely explained by compressive in-plane stresses and small values of the bending modulus for few-layer graphene, the striated structure along the ridges argues for a localized unidirectional stress in the material directed along the ridge length.

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