Abstract Submitted
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Electron flow in polycrystalline graphene on C-face SiC CHOCKALINGAM SUBBAIAH, ABHAY PASUPATHY, Department of Physics, Columbia University, NY, JAMES HANNON, RUDOLF TROMP, FRANCES ROSS, IBM T. J. Watson Research Center, Yorktown Heights, NY, SHUAIHUA JI, IBM T. J. Watson Research Center, Yorktown Heights, NY and Department of Physics, Tsinghua University, Beijing, China — Graphene films can be grown both on the Si and C faces of SiC (0001), and the films grown have strikingly different morphologies. Previously, we have used scanning tunneling potentiometry to characterize electron flow in epitaxial graphene grown on the Si face of SiC [1]. Here we will describe recent measurements on nanoscale electronic transport in graphene films grown on the C-face of SiC. In particular, C-face graphene has several topographical features such as pleats, ridges and carbon beads, which determine the quality of the material. We use scanning potentiometry to relate these topographical features to the electron transport in these films at the nanoscale, and discuss the relative impact of different sources of scattering in the epitaxial graphene.

[1] Ji, S.-H. et al. *Nature Mat.* **2012**, 11, 114

Chockalingam Subbaiah
Department of Physics, Columbia University, NY

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