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**Carrier Transport in Epitaxial Multi-layer Graphene** YU-MING LIN, CHRISTOS DIMITRAKOPOULOS, DAMON FARMER, SHU-JEN HAN, YANQING WU, WENJUAN ZHU, IBM, D. KURT GASKILL, JOSEPH TEDESCO, RACHAEL MYERS-WARD, CHARLES EDDY, JR., NRL, ALFRED GRILL, PHAEDON AVOURIS, IBM, IBM TEAM, NRL TEAM — Significant attention has been focused recently on the electrical properties of graphene grown epitaxially on SiC substrates, because it offers an ideal platform for carbon-based electronics using conventional top-down lithography techniques. The transport properties of graphene are usually studied via Hall effect measurements, which provide information on the carrier mobility and density. Hall measurements performed at a single magnetic field yield a weighted average of carrier mobility and density, and are strictly applicable to homogeneous samples. In this study, we performed variable-field Hall and resistivity measurements on epitaxial graphene, and the results were analyzed with a multi-carrier model. Good agreements were obtained between experimental data and the model, providing further evidence of multi-carrier transport in the C-face grown MLG. This work is supported by DARPA under contract FA8650-08-C-7838 through the CERA program and by the Office of Naval Research.

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