Abstract Submitted
for the MAR10 Meeting of
The American Physical Society

Tunneling conductance between misaligned graphene layers RAFI BISTRITZER, University of Texas at Austin, ALLAN MACDONALD — In graphene multi-layer systems, adjacent layers are often slightly misaligned compared to the simple hexagonal or Bernal stacking arrangements. One important example of this behavior is the structure of multi-layers grown on the carbon face of SiC. We report on an estimate of the specific conductance between two misaligned layers. In our theory the lifetime of Bloch states within the semi-isolated layers plays a key role in determining the inter-layer conductance. We discuss how our theoretical picture can be tested by examining the in-plane field dependence of the conductance and comment on current- paths in multi-layer transport experiments with top layer contacts.

Rafi Bistritzer
University of Texas at Austin

Date submitted: 20 Nov 2009 Electronic form version 1.4