Abstract Submitted
for the TS4CF08 Meeting of
The American Physical Society

Conductivity in disordered graphene systems by the recursion method SHANGDUAN WU, University of Utah — Conductivity in disordered graphene systems are calculated based on the recursion method. With the real-space method, we calculate diagonal Kubo conductivity with a binary alloy disorder. Our results are in good agreement with recent experiments and provide a way for detecting the concentration of gas molecules absorbed on graphene in numerical studies. Diffusion coefficient, Charge mobility and mean free path in these systems will also be discussed. A new method which allows one to evaluate hall conductivity of independent electrons in a static potential also has been developed.

Shangduan Wu
University of Utah

Date submitted: 13 Oct 2008 Electronic form version 1.4