Abstract Submitted
for the MAR12 Meeting of
The American Physical Society

Electronic Structures of Graphene on Ru(0001): Scanning Tunneling Spectroscopy Study WON-JUN JANG, JEUNG-HUM JEON, JONG KEON YOON, SE-JONG KAHNG[1], Department of Physics, Korea University — Graphene has inspired remarkable advances in nanotechnology due to its unusual electronic band structures represented by massless Dirac cones. Graphene can be epitaxially grown on metal surfaces by chemical vapor deposition method. Due to the lattice mismatch, epitaxial graphene grown on Ru(0001) shows hexagonal Moiré patterns with subatomic height variations. We studied local electronic structures of the epitaxial graphene using low-temperature scanning tunneling microscopy (STM) and spectroscopy (STS). Different spectra were observed at top, bridge, and hollow regions of the Moiré patterns. Observed STS data will be explained with structural models.

[1]corresponding author

Won-Jun Jang
Department of Physics, Korea University

Date submitted: 18 Nov 2011 Electronic form version 1.4