

Abstract Submitted
for the MAR12 Meeting of
The American Physical Society

Graphene on Metals: Interface Structure and Defects

LYUDMYLA ADAMSKA, RAFIK Q. ADDOU, MATTHIAS BATZILL, IVAN I. OLEYNIK, University of South Florida — The epitaxial growth of graphene on metal substrates is one of the major methods of graphene production for electronic applications. Therefore, the metal/graphene interface interactions as well as the graphene defects appeared during the growth affect in a substantial way the electronic properties of both graphene and graphene/metal contacts, which are both important for device applications. Structural and electronic properties of simple and complex graphene/metal as well as graphene/metal-alloy interfaces were investigated using first principles density functional theory. The point defect structures in graphene on metal substrate were studied and compared with those in free standing graphene.

Lyudmyla Adamska
University of South Florida

Date submitted: 16 Nov 2011

Electronic form version 1.4