Traditional and Novel dielectric materials for Epitaxial Graphene electronics applications

YIKE HU, CLAIRE BERGER, WALT DE HEER, Georgia Institute of Technology — Graphene field effect transistor performance relies on the quality of the dielectric and its interaction with the graphene layer. The high frequency cutoff is currently, for a large part related to losses and mobility reductions caused by the dielectric overlayers. We will present a progress report on traditional (ALD) dielectrics as well as novel approaches including chemically modified graphene.