Graphene Synthesis and Scaling over 300mm wafers

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Growth and characterisation of graphene grown using copper foils as well as copper films on silicon dioxide on silicon substrates were performed. Kinetics of growth and effective activation energy for the graphene synthesis will be discussed for the surface catalytic synthesis of graphene. Conditions for large-scale synthesis of monolayer graphene will be addressed in this talk. Wafer-scale graphene transfer and electrical results will be presented. Key considerations and challenges for scaling are discussed and results for graphene growth on the 300mm wafer scale will be discussed.