

Abstract Submitted
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Monolayer Graphene Grown on Copper Substrates and Studied by Transmission Electron Microscopy SCOTT SCHMUCKER, JOSEPH LYDING, University of Illinois at Urbana-Champaign — We report transmission electron microscopy studies of graphene grown by chemical vapor deposition on copper foils.¹ An understanding of the quality and transferability of these graphene films is prerequisite to their application in device structures. In our work, graphene has been fabricated on copper for transfer to perforated carbon films and study by Transmission Electron Microscopy (TEM). The resulting suspended graphene structure offers both a superior imaging platform and a method for the characterization of copper-grown graphene films. Here, TEM elucidates microstructure and nanostructure visible in solution-transferred copper-grown graphene sheets. By comparison of this structure to Scanning Electron Microscopy (SEM) images of the copper/graphene surface those features created during growth and during transfer can be distinguished.

¹Li, X., et al., Science, **324**, 5932, 1312-1314 (2009)

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