

Abstract Submitted
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**Large Area Chemical Vapor Deposition
Graphene Photodetectors**¹ ALLEN HSU, MIT, HAN WANG, KI KANG KIM,
JING KONG, TOMAS PALACIOS — We investigate large area graphene photode-
tectors based on graphene grown by Chemical Vapor Deposition on Cu foils and then
transferred to SiO₂/Si wafers. Through scanning photocurrent microscopy (SPM)
at 532 nm, we compare the performance of CVD fabricated devices using Ti/Pd/Au,
Au, and Pt graphene metal junctions with those from literature fabricated through
mechanical exfoliation. Our initial experiments show that photocurrent from CVD
graphene is about an order of magnitude smaller than devices in literature. Non-
idealities related to material properties, defects, and transfer related inhomogenities
are believed to be the cause of the discrepancy. These effects are studied through
concurrent registration of atomic force microscopy, optical microscopy, Raman Mi-
croscopy, and SPM. In addition to intrinsic material property effects, fabrication
related issues of graphene-metal junctions are also explored.

¹ONR Gate Muri, MSD Focus Center, ISN

Allen Hsu
MIT

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