

Abstract Submitted  
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**Twisted Bilayer Graphene with Controlled Rotation Angles**

YANAN WANG, Department of Electrical and Computer Engineering, University of Houston, SIRUI XING, Center for Advanced Materials and Department of Electrical and Computer Engineering, University of Houston, XIAOXIANG LU, Department of Electrical and Computer Engineering, University of Houston, FRANCISCO ROBLES-HERNANDEZ, College of Engineering Technology, University of Houston, SHIN-SHEM PEI, Center for Advanced Materials and Department of Electrical and Computer Engineering, University of Houston, JIMING BAO, Department of Electrical and Computer Engineering, University of Houston — With unique rotation-angle dependent electronic band structure, twisted bilayer graphene (tBLG) is expected to be a promising platform for future semiconductor electronic and photonic applications. Although tBLG has been observed in the samples prepared by silicon sublimation of SiC, chemical vapor deposition (CVD), and stacking of single-layer graphene, tBLG with controlled rotation angles has not been demonstrated. In this work, we present a simple transfer method to create tBLG domains with pre-defined rotation angles in the size of a few hundred micrometers.

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