Study of photocurrent response in bilayer graphene

LONG JU, University of California, Berkeley, LEI WANG, JAMES HONE, Columbia University, FENG WANG, University of California, Berkeley — Bilayer graphene is a unique system where the electronic band structure can be controlled by external electric field. The transition between semimetal to semiconductor with a bandgap up to 250 meV can be achieved by applying voltages on top and bottom gates. In this talk I’ll show our photocurrent measurement in dual-gated bilayer graphene devices. Different mechanisms of photocurrent generation will be discussed. I’ll also talk about its implications for potential opto-electronic applications of bilayer graphene.

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