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**Study the motion of domain wall in bilayer and trilayer graphene**

LILI JIANG, Univ of California - Berkeley, ZHIWEN SHI, Shanghai Jiao Tong University, SHENG WANG, FENG WANG, Univ of California - Berkeley, NANO-OPTICS TEAM — Layer-stacking domain walls in graphene strongly alters its electronic properties and gives rise to fascinating new physics. In bilayer graphene, domain walls between AB- and BA-stacking feature quantum valley Hall edge states, which promised novel approach to control valley degree for valleytronic devices; in trilayer graphene, they are connections of in-plane heterojunctions consisting of metallic ABA-stacking and semiconducting ABC-stacking. Domain walls take the form of soliton and can move freely in crystal. Near-field infrared nanoscopy is a powerful tool for visualizing domain walls in bilayer and trilayer graphene. In this study, we use near-field nano-imaging technique to investigate the motion of domain walls in bilayer and trilayer graphene.

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