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Quantum Hall Effect (QHE) in ABA stacked trilayer graphene

PETR STEPANOV, YAFIS BARLAS, NATHANIEL GILLGREN, University of California, Riverside, TAKASHI TANIGUCHI, National Institute for Materials Science, JEANIE LAU, University of California, Riverside — Since its experimental discovery in 2004 graphene was under extensive research as a promising counterpart of silicon for the future electronics application as well as an excellent model of 2 dimensional electron gas. Here we investigate quantum Hall effect in ABA trilayer graphene – hexagonal boron nitride heterostructures. Landau Levels (LL) crossings at low filling factors were observed and explored at different external electric fields. The formation of the QH states as an interaction of monlayer-like and bilayer-like branches will be discussed. We will present the most recent experimental results.

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