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Probing Pseudospin-mixing Potential in Graphene/Boron Nitride Moire Superlattice by Infrared Spectroscopy ZHIWEN SHI, CHENHAO JIN, UC Berkeley, WEI YANG, Institute of Physics, Chinese Academy of Sciences, LONG JU, JASON HORNG, UC Berkeley, GUANGYU ZHANG, Institute of Physics, Chinese Academy of Sciences, FENG WANG, UC Berkeley and Lawrence Berkeley National Laboratory — Graphene/boron nitride (BN) Moire superlattice, where the slow superlattice period is superimposed on a fast B-N oscillation, provides an attractive approach to engineer the electron pseudospin in graphene that goes beyond an electrostatic. Here we perform micro-infrared spectroscopy on graphene/BN superlattice, and find that the BN substrate effect in the context of pseudo-spin is much richer than an electrostatic potential. We further show that the BN substrate effect can be modified through electrostatic gating.

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