

Abstract Submitted  
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**Effects of sliding on Raman spectrum of bilayer graphene**<sup>1</sup> SEON-MYEONG CHOI, Korea Institute for Advanced Study, Seoul 130-722, Korea, SEUNG-HOON JHI, Department of Physics, Pohang University of Science and Technology, Pohang 790-784, Korea, YOUNG-WOO SON, Korea Institute for Advanced Study, Seoul 130-722, Korea — Electronic properties of graphene are changed by various external effects such as strain, doping, and defects, etc. Such effects can be measured by Raman spectroscopy. For example, doping and defects increase the intensities of D-peak of single layer graphene, while the external strains generate splitting of G- and 2D-peaks respectively. In bilayer graphene, sliding motions between two layers also can change its electric and optical properties. Based on the first principles calculation methods, the sliding between two layers of bilayer graphene is shown to change the electronic and phonon dispersions, thereby altering its Raman spectrum significantly.

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