

Abstract Submitted
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Gate-field effect in multilayer graphenes MIKITO KOSHINO, Tokyo Institute of Technology — We study the electronic properties of the multilayer graphenes in presence of the external electric field perpendicular to the layers. We calculate the electronic potential of each layer taking account of the screening effect, to obtain the self-consistent band structure within the effective mass approximation. We calculate the conductivity using the self-consistent Born approximation and analyze its external-field dependence for every layer number. We also compute the optical absorption spectra, which is found to be strongly modified by the electric field.

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