

Abstract Submitted  
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**Electron transport in graphene with uniaxial local strain** HIKARI TOMORI, Japan Science and Technology Agency and Univ. Tsukuba, RINEKA HIRAIDE, HIROKAZU TANAKA, YU ITOU, KENTA KATAKURA, YOUTI OOTUKA, AKINOBU KANDA, Univ of Tsukuba — Strain engineering is a promising method for controlling electron transport in graphene; Spatial variation of pseudo-vector potential and pseudo-scalar potential induced by lattice strain modulate transport property of graphene. We have succeed in fabricating a graphene FET with uniaxial local strain, and observed clear deformation in gate voltage dependence of conductivity ( $\sigma - V_g$  curve). From a comparison with numerical calculation, we conclude that strain-induced scalar potential is responsible for the deformation of the  $\sigma - V_g$  curve.

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