

Abstract Submitted
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Probing weak localization in chemical vapor deposition graphene with wide constriction by scanning gate microscopy¹ CHIASHAIN CHUANG, National Taiwan University, M. MATSUNAGA, Chiba University, FAN-HUNG LIU, TAK-PONG WOO, National Taiwan University, NOBUYIKI AOKI, Chiba University, LI-HUNG LIN, National Chiayi University, Y. OCHIAI, Chiba University, CHI-TE LIANG, National Taiwan University, NATIONAL TAIWAN UNIVERSITY COLLABORATION, CHIBA UNIVERSITY COLLABORATION, NATIONAL CHIAYI UNIVERSITY COLLABORATION — We observe weak localization effect in different wide channels on this disordered CVD graphene device. We also perform the low temperature-scanning gate microscopy experiments under weak localization regime on CVD graphene with wide constriction. The movable local gate can sensitively perturb the total conductance in the wide constriction CVD graphene under magnetic field, suggestive the advantages in the local electric perturbation for the interference behaviors of transport carriers rather than that in fully covered and high consumption magnetic field, a great step for applications in graphene-based spintronics.

¹The Aim for the Top University Project by National Taiwan University and Chiba University

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