

Abstract Submitted
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Electrical edge contacts to monolayer MoS₂ BYOUNG HEE MOON, GANG HEE HAN, HYUN KIM, HOMIN CHOI, YOUNGJO JIN, HYE YUN JEONG, SEONGCHU LIM, YOUNG HEE LEE, Center for Integrated Nanostructure Physics, Institute for Basic Science(IBS), Sungkyunkwan University, Suwon 440-746. Korea — Charge injection through the metal contacts to nanostructures has been the interesting issue for the physical mechanism involved as well as the device applications. In this talk, we discuss the effects of electrical edge contact to CVD grown monolayer MoS₂. The edge contacts are achieved by sandwiching MoS₂ with hexagonal boron nitrides (BN) [1]. It appears to show that charge injection by thermionic emission is suppressed, while tunneling effects take over.

[1] L. Wang, *et al.* science 342, 614 (2013).

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