

Abstract Submitted  
for the MAR16 Meeting of  
The American Physical Society

**Negative to Positive Crossover of Magnetoresistance in WS<sub>2</sub> nanoflakes with Ohmic Contact** YANGWEI ZHANG, HONGLIE NING, YANAN LI, YANZHAO LIU, JIAN WANG<sup>1</sup>, — We report studies on the transport measurements of WS<sub>2</sub> nanoflakes including contact optimization and magnetoresistance measurement. We find that the platinum electrodes deposited by focused ion beam (FIB) technology on WS<sub>2</sub> exhibit an ohmic contact, which provides a pathway to solve the dilemma of Schottky barrier for WS<sub>2</sub> devices. A temperature-modulated negative-to-positive crossover of magnetoresistance (MR) is also observed, replenishing the existing data which mainly emphasizes field effect transistor (FET) related transport. Our work may stimulate further studies and potential electronic and optoelectronic applications on transition-metal dichalcogenides.

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Date submitted: 23 Nov 2015

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