Supporting Information

Optimizing Charge Injection across Transition Metal Dichalcogenide Heterojunctions: Theory and Experiment

Jie Guan,[1] Hsun-Jen Chuang,[2] Zhixian Zhou,[2] and David Tománek[1,*]

[1] Physics and Astronomy Department, Michigan State University, East Lansing, Michigan 48824, USA

[2] Physics and Astronomy Department, Wayne State University, Detroit, Michigan 48201, USA

* E-mail: tomanek@pa.msu.edu

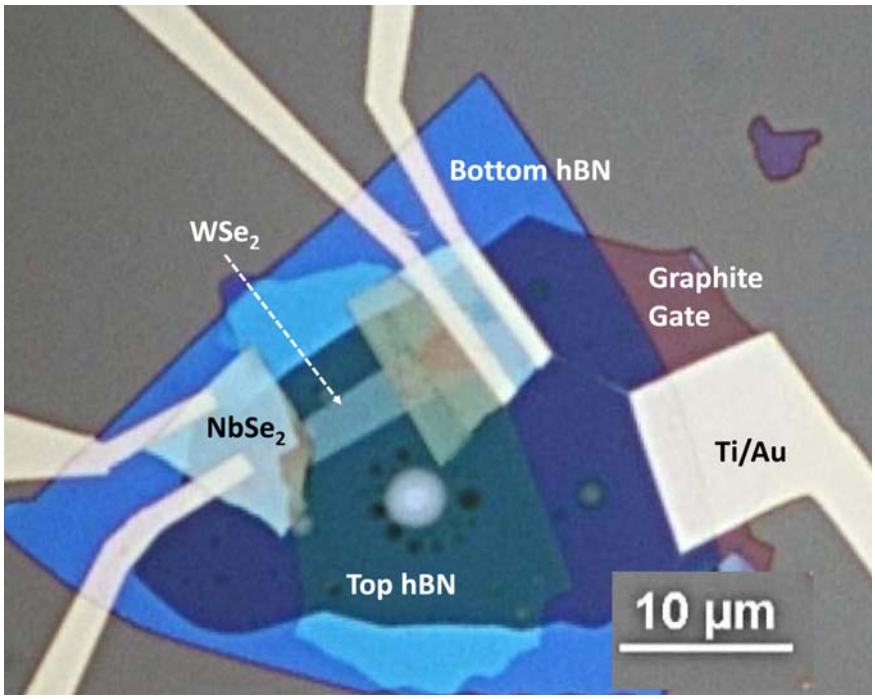

Figure S1. Optical micrograph of a few-layer WSe_2 FET with $NbSe_2$ drain/source contacts and a graphite gate. The channel is encapsulated between thin *h*BN crystals from top and bottom. The bottom *h*BN layer also serves as the gate dielectric.

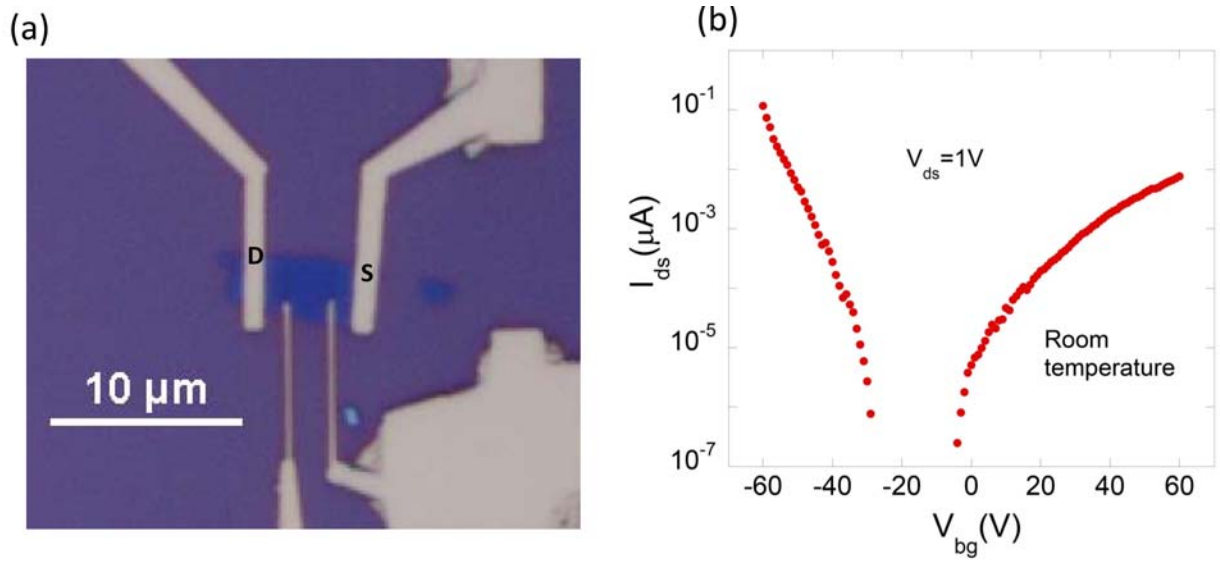

Figure S2. Optical micrograph (a) and transfer characteristic (b) of a comparison device consisting of a few-layer WSe_2 channel and conventional Ti/Au drain and source contacts. The device shows about 2 orders of magnitude lower hole current than our few-layer WSe_2 FETs with $NbSe_2$ contacts discussed in the main manuscript.