Supplementary Information

Screening limited switching performance of multilayer 2D semiconductor FETs: the case for SnS

Sukrit Sucharitakul,^a U. Rajesh Kumar, ^{bc} Raman Sankar,^{de} Fang-Cheng Chou,^d Yit-Tsong Chen,^{bc} Chuhan Wang,^f Cai He,^f Rui He,^f and Xuan P. A. Gao^{*a}

- *a.* Department of Physics, Case Western Reserve University, Cleveland OH 44106, USA.
- *b.* Department of Chemistry, National Taiwan University, Taipei 10617, Taiwan.
- ^{c.} Institute of Atomic and Molecular Sciences, Academia Sinica, Taipei 10617, Taiwan.
- ^{d.} Center for Condensed Matter Sciences, National Taiwan University, Taipei 10617, Taiwan.
- e. Institute of Physics, Academia Sinica, Taipei 11529, Taiwan.
- ^{f.} Department of Physics, University of Northern Iowa, Cedar Falls, Iowa 50614, USA

*Email: xuan.gao@case.edu

Anisotropic Hall mobility of SnS multilayer devices

Anisotropic conductance was observed in SnS nanoflake van der Pauw devices, suggesting the holes have anisotropic transport mobility. The direction dependent Hall mobility for the 60 nm thick SnS device discussed in Figure 2 and 3 of the main manuscript is analyzed and displayed in Figure S1.

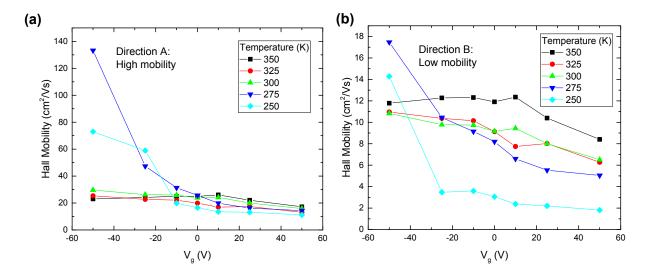


Fig. S1. Hall mobility for holes in a 60 nm thick SnS FET device along the high mobility or Adirection (a), and the low mobility or B-direction (b) *vs*. the backgate voltage at different temperatures.