

Spin-Filter induced Large Magnetoresistance in 2D van der Waals Magnetic junctions

*Wei Yang^{1, ‡}, Yuan Cao^{1, ‡}, Jiangchao Han^{1, ‡}, Xiaoyang Lin^{1, 2, *}, Xinhe Wang¹,*

*Guodong Wei¹, Chen Lv¹, Arnaud Bournel³, Weisheng Zhao,^{1, 2, *}*

¹ Fert Beijing Research Institute, School of Microelectronics & Beijing Advanced Innovation Center for Big Data and Brain Computing, Beihang University, Beijing 100191, China

² Beihang-Goertek Joint Microelectronics Institute, Qingdao Research Institute, Beihang University, Qingdao 266000, China

³ Centre de Nanosciences et de Nanotechnologies, Université Paris-Saclay, CNRS UMR 9001, 91120 Palaiseau, France

* E-mails: weisheng.zhao@buaa.edu.cn; XYLin@buaa.edu.cn

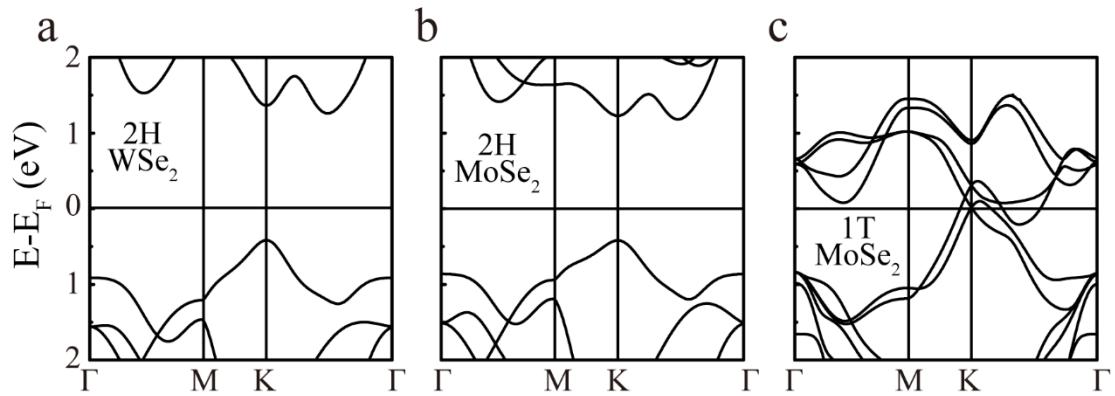


Figure S1 The band structure of 2H WSe₂, 2H MoSe₂ and 1T MoSe₂.

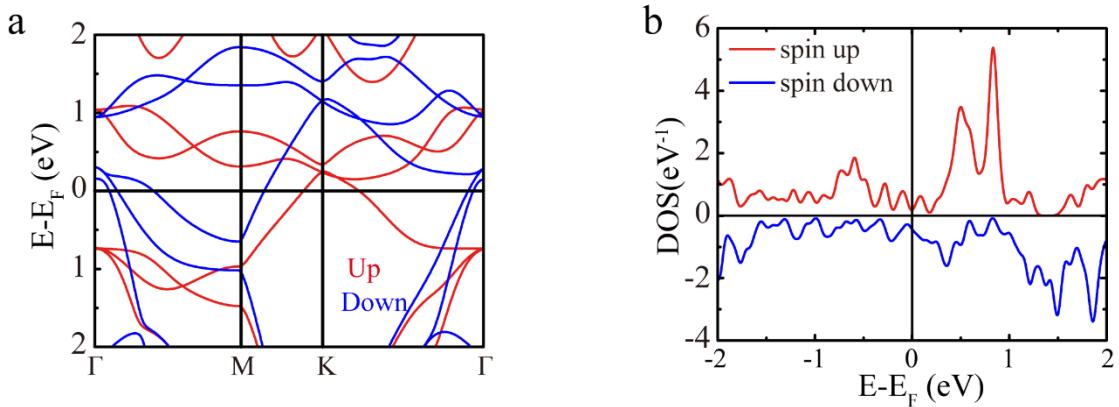


Figure S2 The electronic property of 1T VSe₂. a) The band structure of VSe₂. b) The spin-resolved density of state (DOS) of VSe₂.

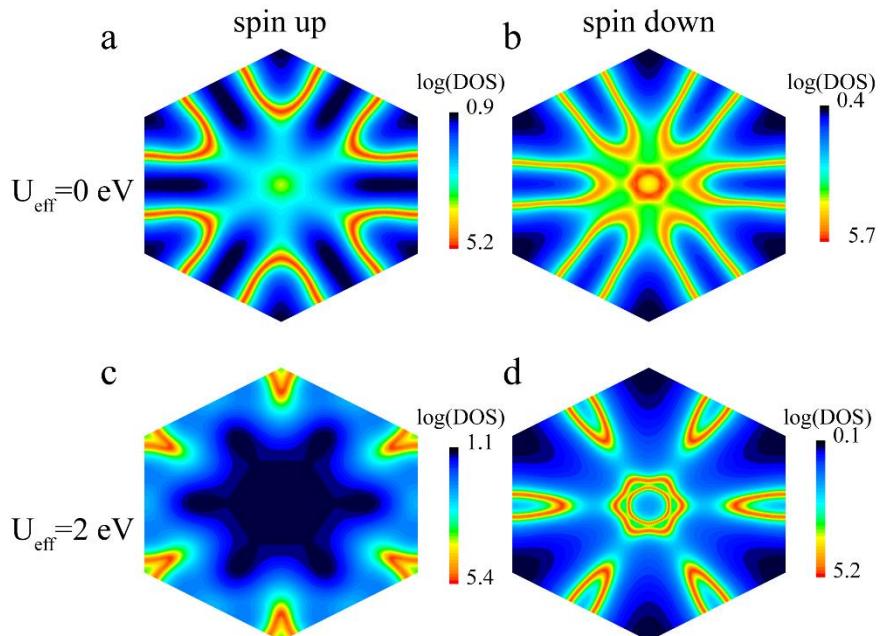


Figure S3 The influence of Hubbard term on electronic property of 1T-VSe₂. a & b) The spin up (a) and spin down (b) states with $U_{\text{eff}}=0$ eV. c & d) The spin up (c) and spin down (d) states with $U_{\text{eff}}=2$ eV.

