Supporting Information

$Fe_3GaTe_2/MoSe_2$ Ferromagnet/Semiconductor 2D van der Waals Heterojunction for Room-Temperature Spin-Valve Devices

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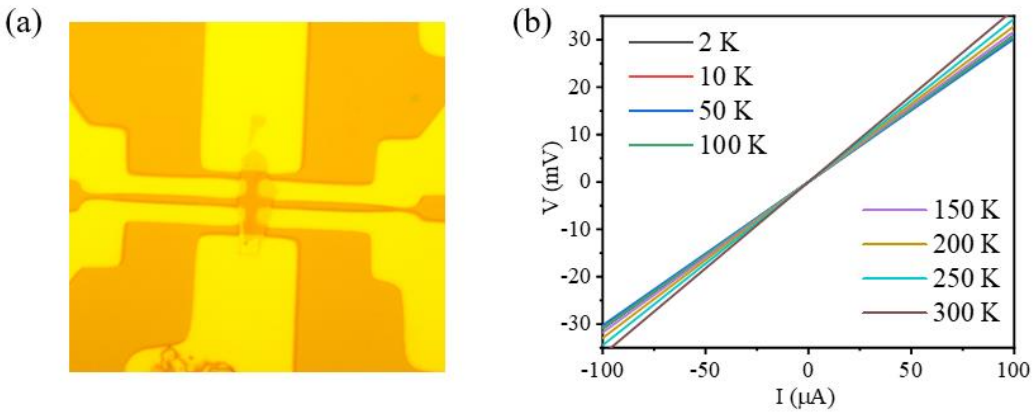

Figure S1. Optical image and Electrical properties of the Fe_3GaTe_2 Hall bar device. (a) Optical image of the Hall bar device. (b) I-V curves of the Fe_3GaTe_2 the Hall bar device at different temperatures.

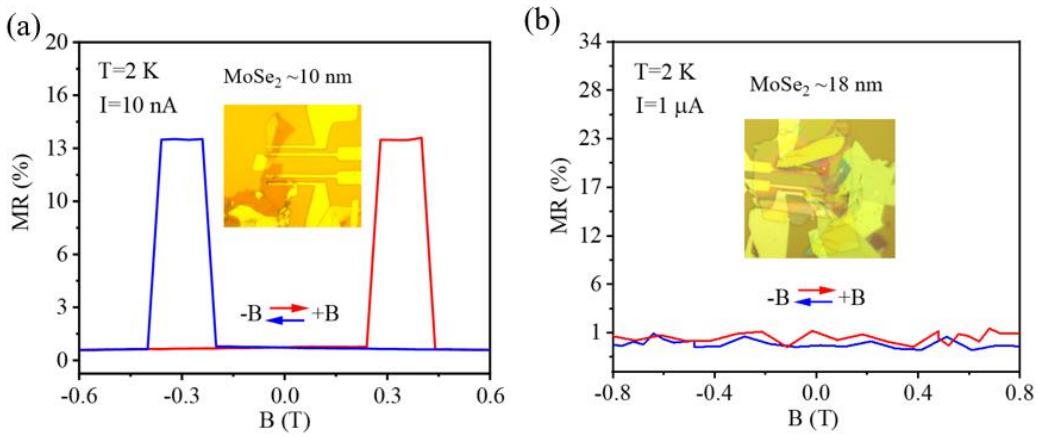

Figure S2. The representative MR signals of spin valves with different $MoSe_2$ thicknesses. The thicknesses of $MoSe_2$ spacer layer are about (a) 10 nm, (b) 18 nm, respectively. The insets in (a) and (b) are optical images of the corresponding devices.