

## Supplementary Information for

### **Large valley polarization in monolayer MoTe<sub>2</sub> on a magnetic substrate**

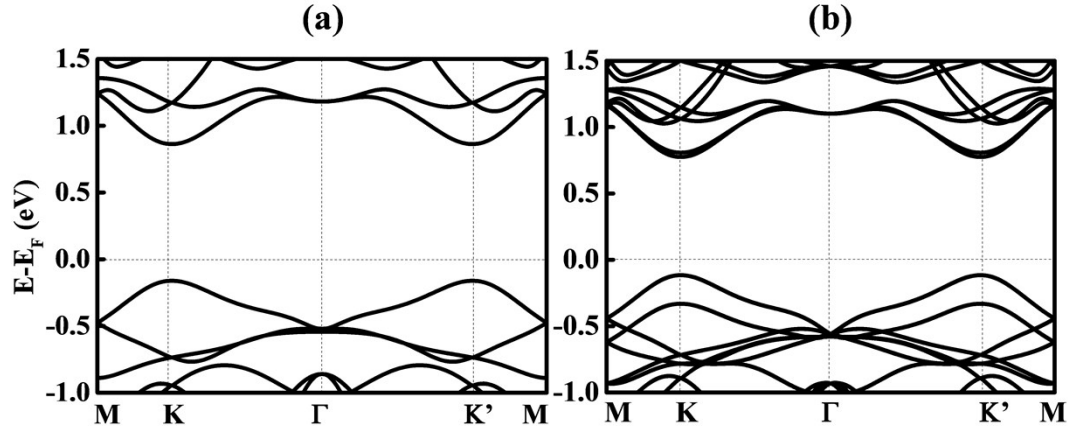
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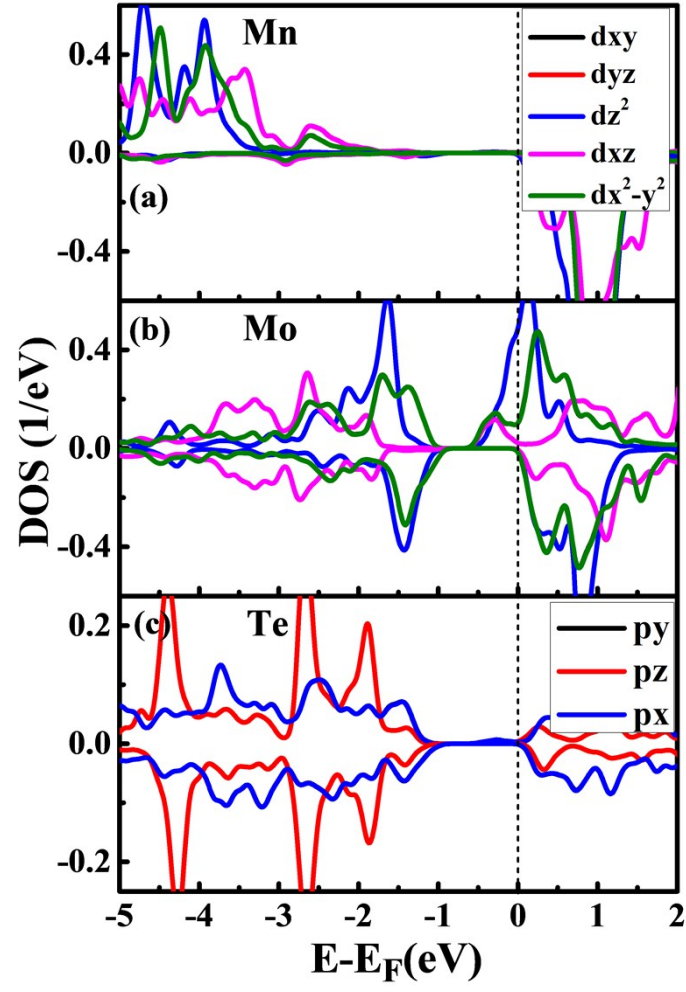
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**Fig. S1.** Band structures for the pristine MoTe<sub>2</sub> monolayer without (a) and with (b) SOC.



**Fig. S2.** The partial densities of states of Mo 4d (a), Mn 3d (b), and Te 5p (c) orbitals. The atoms chosen are the same as in Fig. 2(d).