

Supporting information

## Tight-binding model for the electronic structure of MXene monolayers

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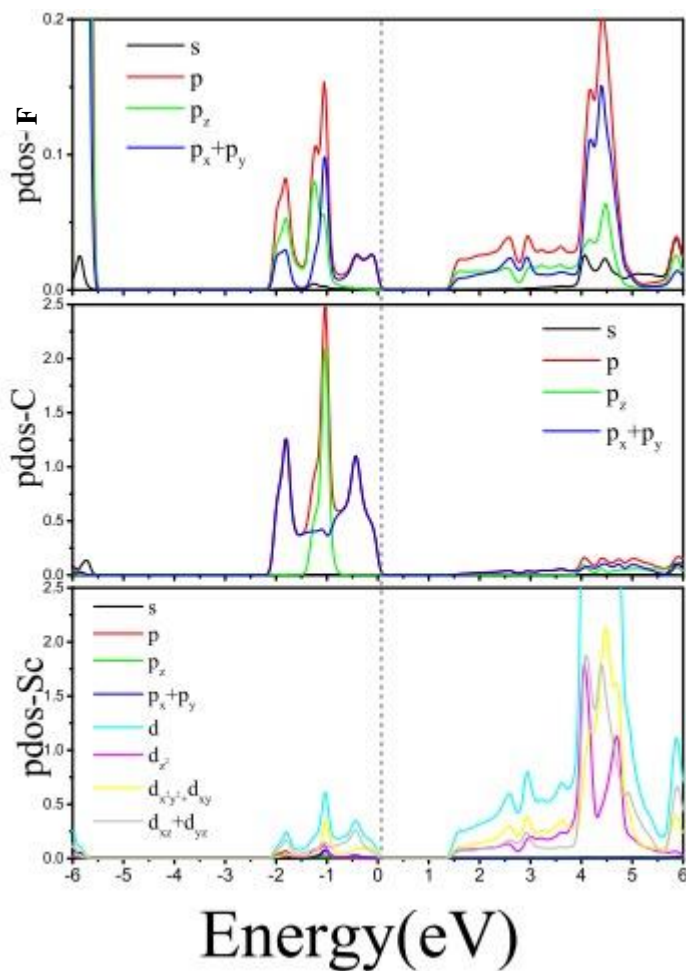


Fig. S11: The projected density of states (PDOS) on atomic orbitals of Sc, F, and C atoms of Sc<sub>2</sub>CF<sub>2</sub>, respectively. Fermi energy is located at zero.

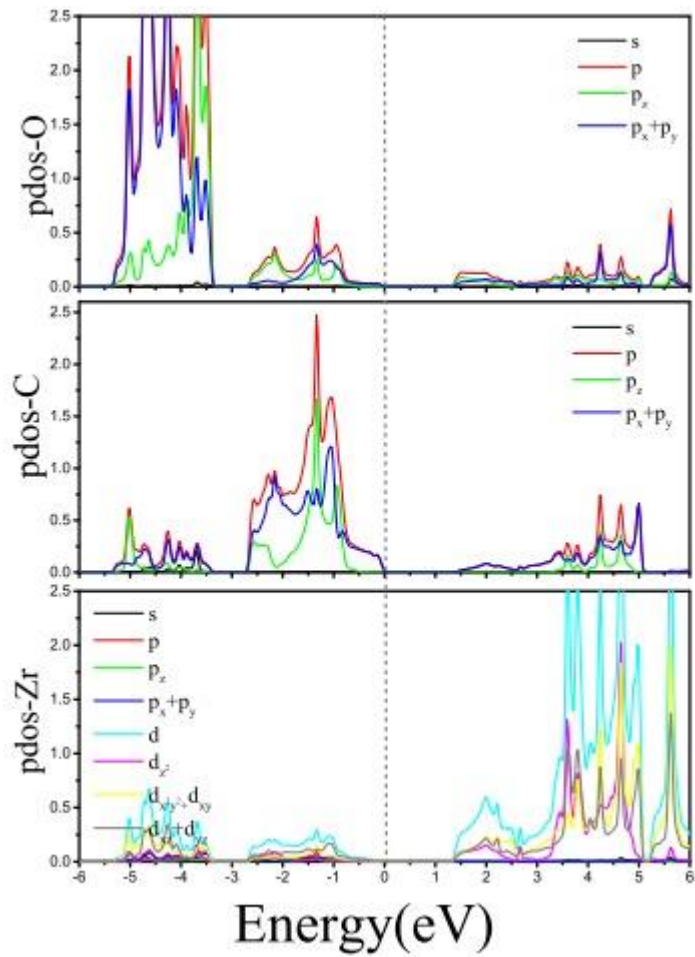


Fig. S12: The projected density of states (PDOS) on atomic orbitals of Zr, O, and C atoms of Zr<sub>2</sub>CO<sub>2</sub>, respectively. Fermi energy is located at zero.

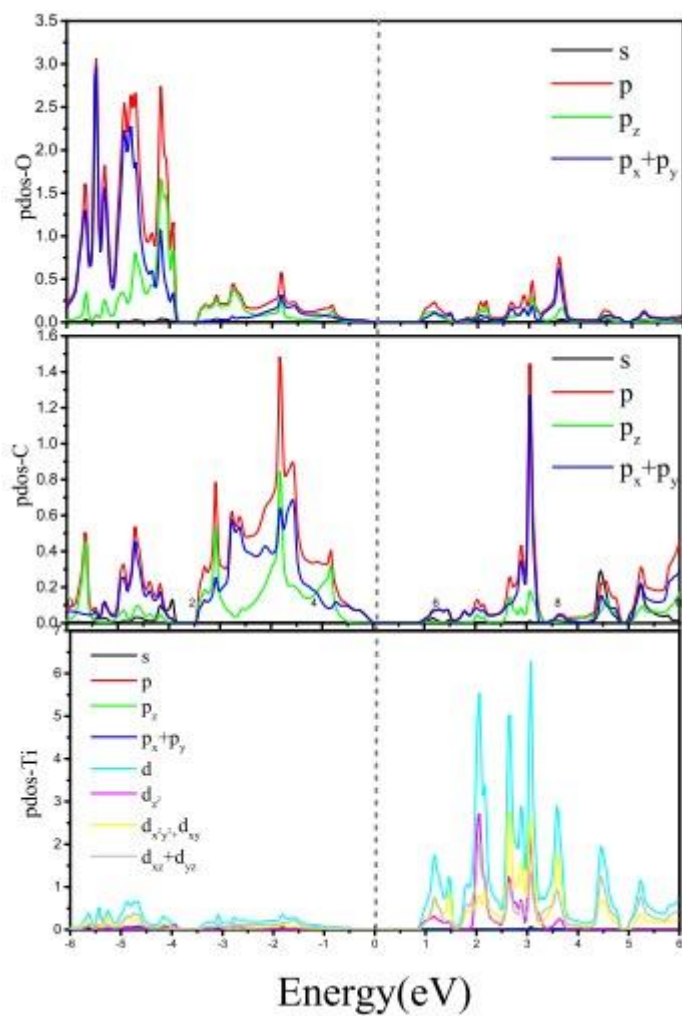


Fig. SI3: The projected density of states (PDOS) on atomic orbitals of Ti, O, and C atoms of  $\text{Ti}_2\text{CO}_2$ , respectively. Fermi energy is located at zero.