

## Supporting Information

### Two dimensional polarized MoTe<sub>2</sub>/GeS heterojunction with intrinsic electric field for photocatalytic water-splitting

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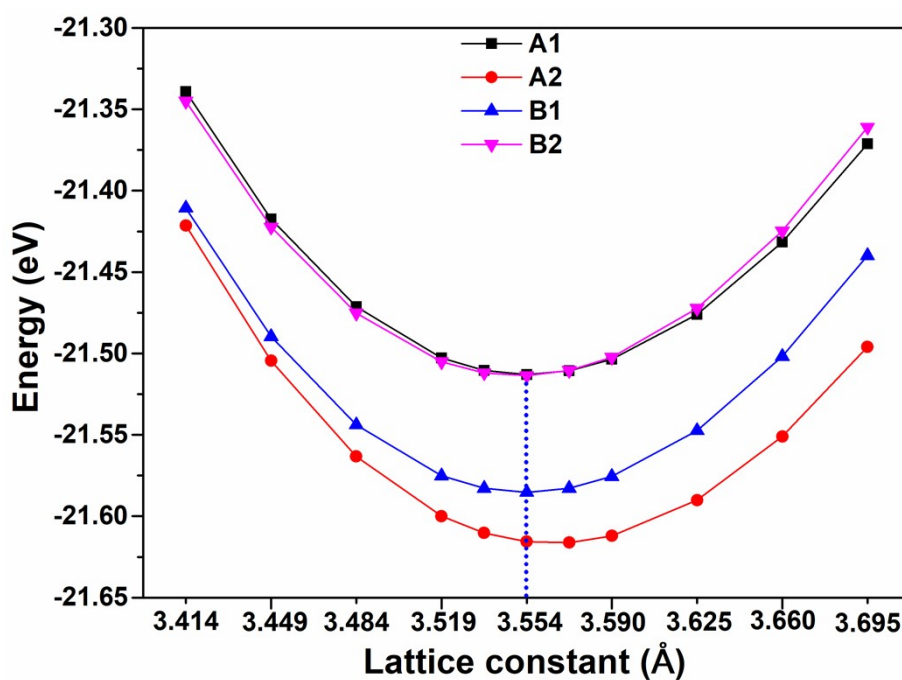


Figure S1. The energy as a function of lattice constant of MoTe<sub>2</sub>/GeS heterojunction.

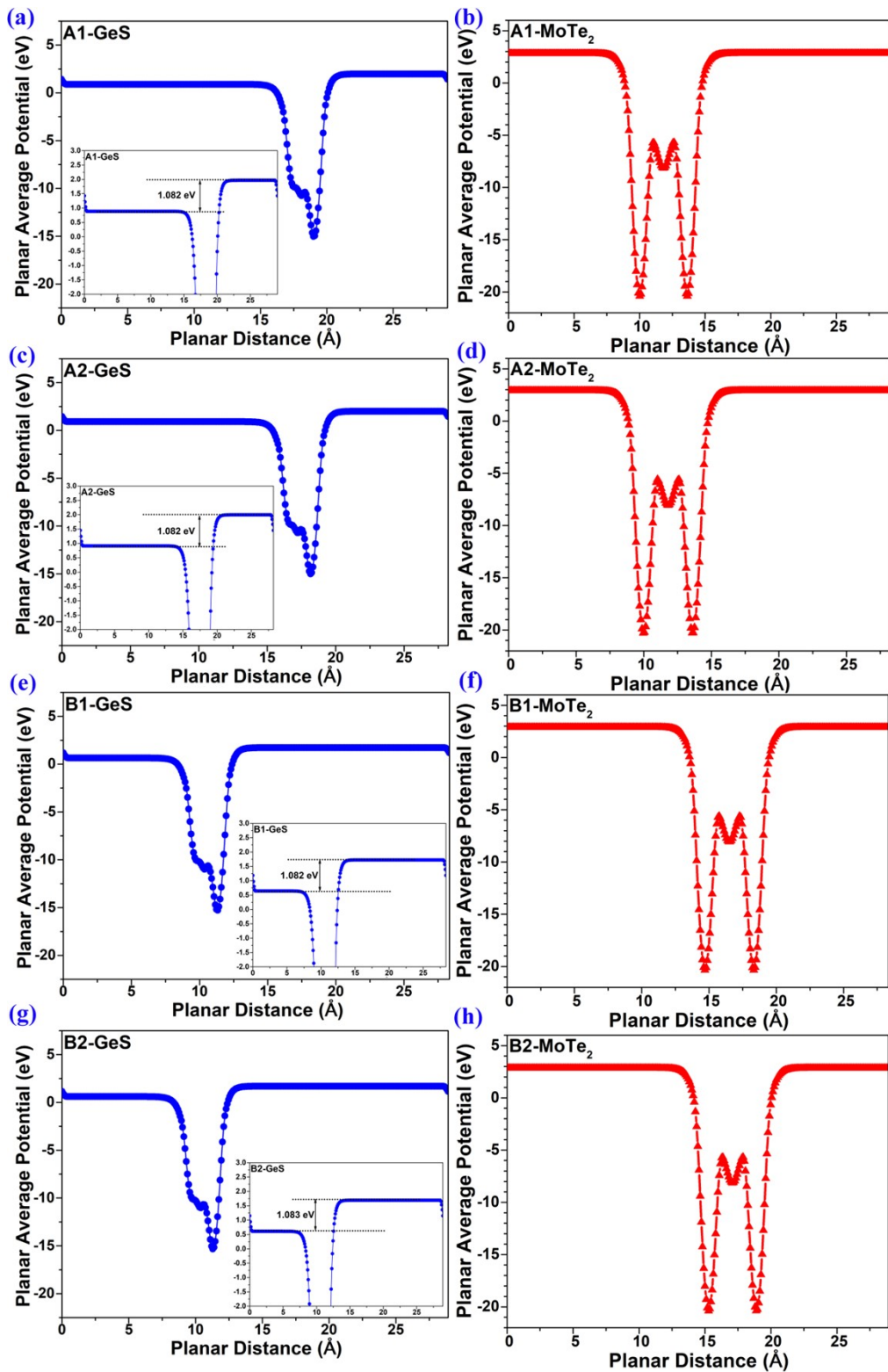


Figure S2. The planar average potential of isolated monolayer GeS and isolated monolayer MoTe<sub>2</sub> for (a,b) A1-, (c,d) A2-, (e,f) B1- and (g,h) B2- stacking structures of MoTe<sub>2</sub>/GeS heterojunction.