Supplementary Information

Achieving Ohmic contact in graphene-based van der Waals heterostructures by intrinsic defects and inner polarized electric field of Janus AlGaSSe

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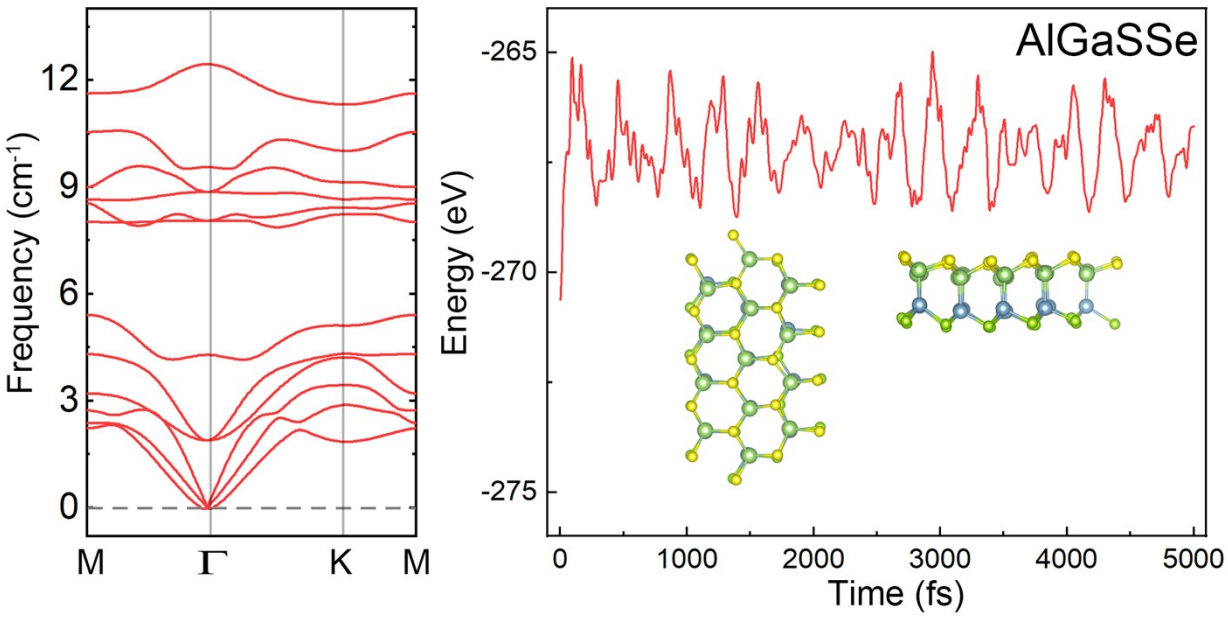

Fig. S1. The phonon dispersion curve and potential energy fluctuation of AlGaSSe monolayer as a function of simulation time at 400 K. The inset shows the corresponding structure at 400 K after the simulation for 5 ps.

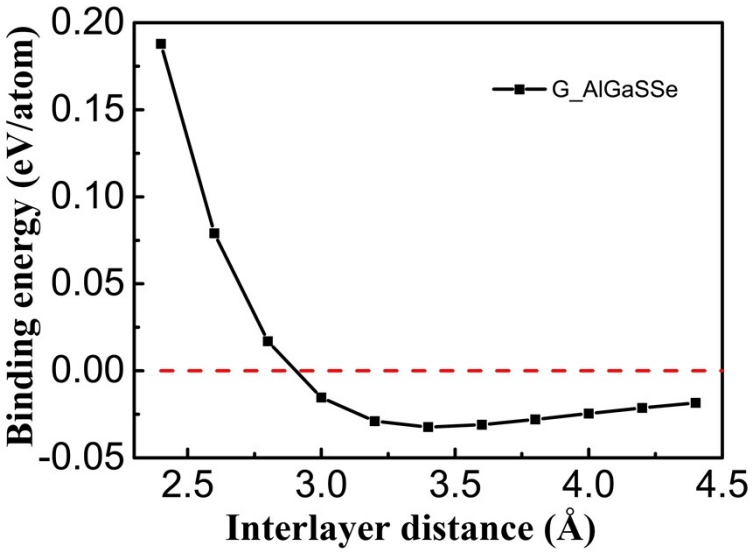

Fig. S2. Relationship between binding energy and interlayer distance of G/AlGaSSe.

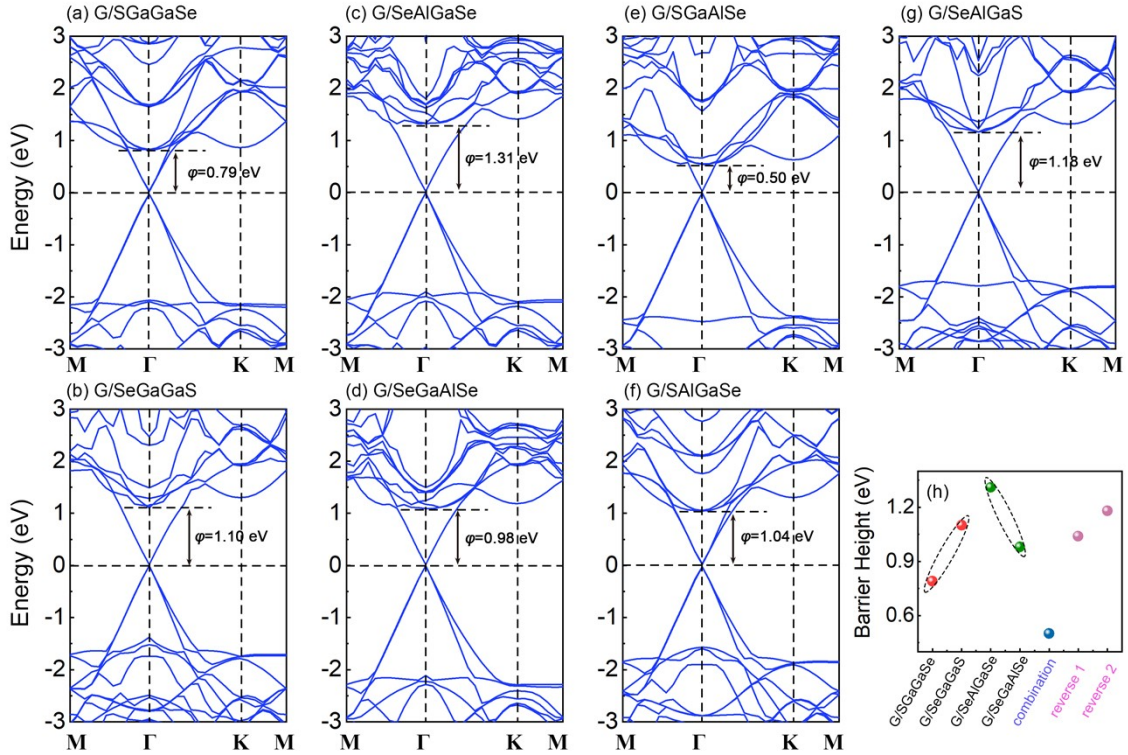

Fig. S3. Calculated band structures of (a) G/SGaGaSe, (b) G/SeGaGaS, (c) G/SeAlGaSe, (d) G/SeGaAlSe, (e) G/SGaAlSe, (f) G/SAlGaSe, and (g) G/SeAlGaS heterostructures by HSE06 method. (h) Summary of the barrier height.