Supporting Information (SI)

First principles prediction of two-dimensional Janus XMoGeN2 (X = S, Se and Te) materials

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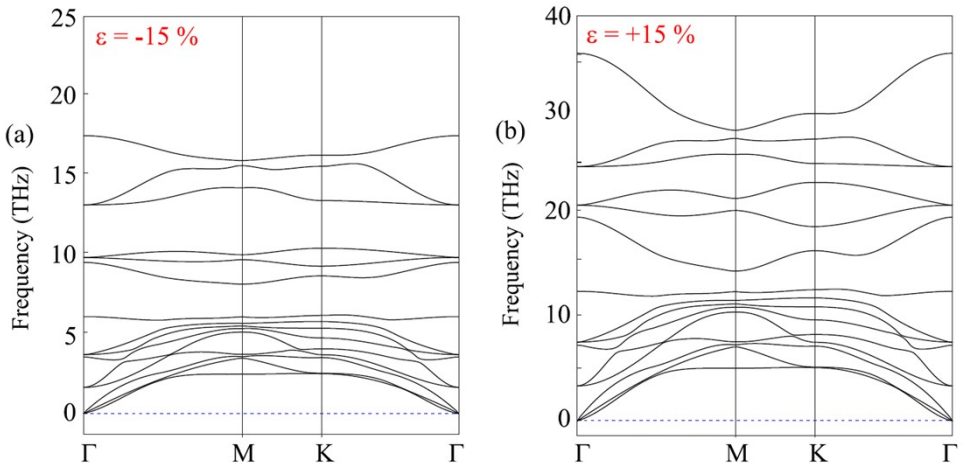

Fig. S1. Phonon spectrum of TeMoGeN2 monolayer under strain of (a) -15 % and (b) +15 %.

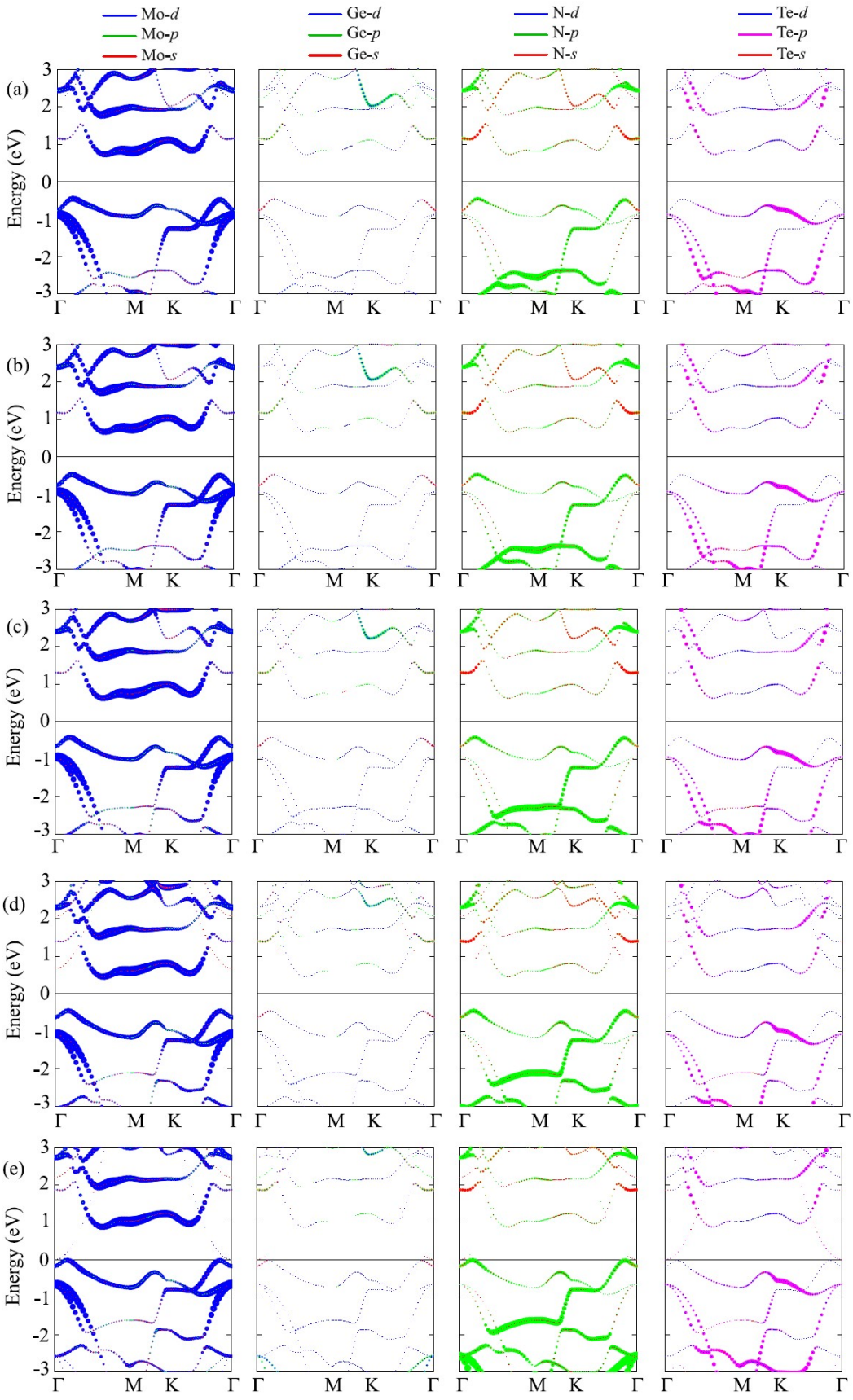

Fig. S2. Orbital projected band structures for $TeMoGeN_2$ monolayer under different strengths of electric field of (a) E = -1.0 V/nm, (b) E = -0.7 V/nm, (c) E = 0 V/nm, (d) = +0.7 V/nm and (e) E = +. 1.0 V/nm.

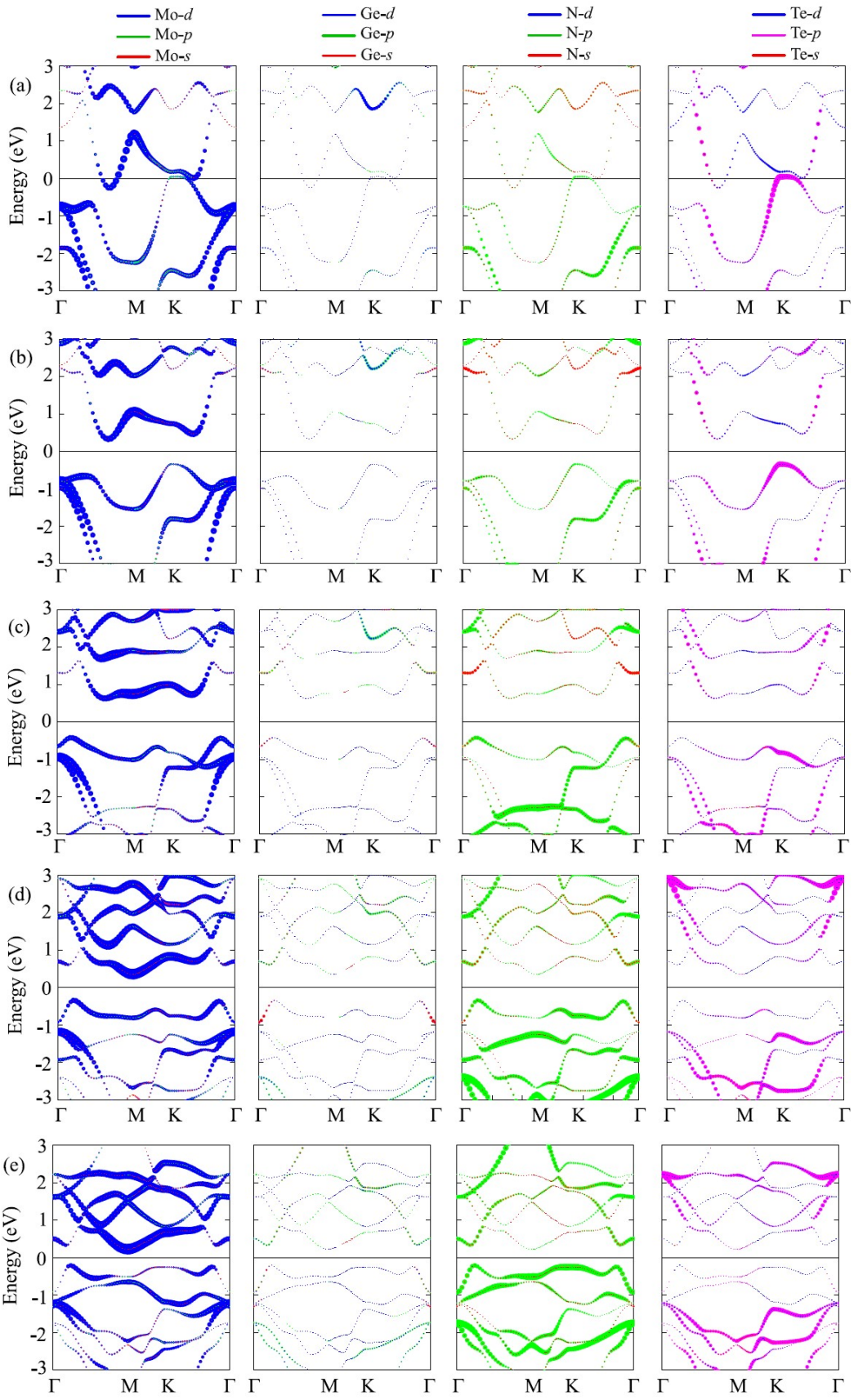

Fig. S3. Orbital projected band structures for $TeMoGeN_2$ monolayer under different strengths of electric field of different strains of (a) ε = -15 %, (b) ε = -8 %, (c) ε = 0 %, (d) ε = +8 %, and (e) ε = +15 %.