

Supporting Information

An electric field and strain tunable band gap in the germanene/ZnSe heterostructure

F. F. Hu,^{‡ab} H. Y. Ye,^{‡ab} H. Y. Tang,^{‡c}

^a *Key Laboratory of Optoelectronic Technology & Systems, Education Ministry of China, Chongqing University and College of Optoelectronic Engineering, Chongqing University, 400044 Chongqing, China.*

^b *College of Optoelectronic Engineering, Chongqing University, Chongqing 400044, China*

^c *Electronic Components, Technology and Materials, Delft University of Technology, Delft 2628 CD, The Netherlands.*

E-mail: h.ye@tudelft.nl.

Contents:

Figure S1: The electronic band structures of (a) AAI, (b) ABI, and (c) ABII patterns, respectively. (d), (e) and (f) the total and partial density of states (DOS & PDOS) of three patterns, respectively.

Figure S2: Charge density difference (CDD) of (a) AAI, (b) ABI and (c) ABII patterns in germanene/ZnSe heterostructures. The isosurface value is $0.003 e \text{ \AA}^{-3}$.

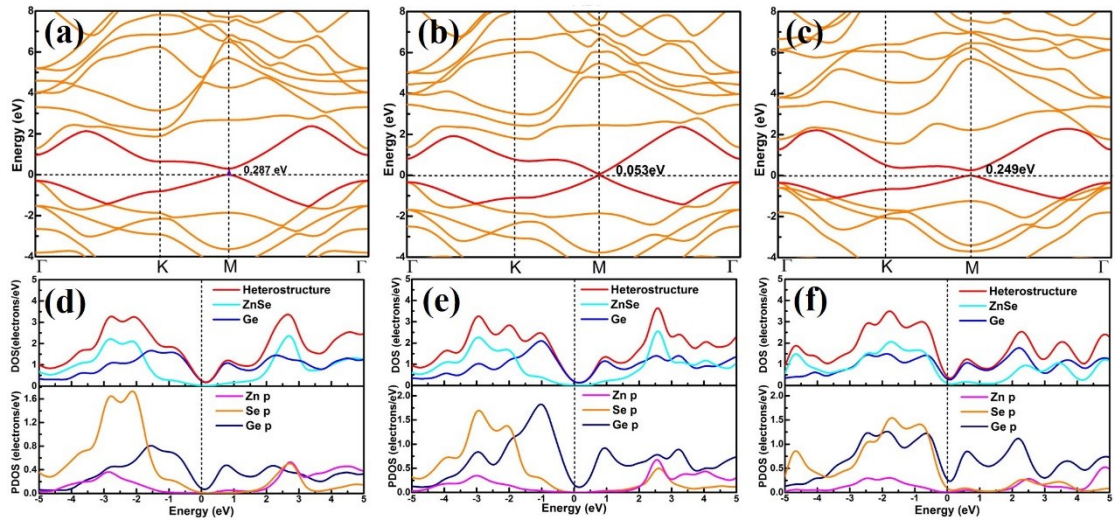


Figure S1: The electronic band structures of (a) AAI, (b) ABI, and (c) ABII patterns, respectively. (d), (e) and (f) the total and partial density of states (DOS & PDOS) of three patterns, respectively.

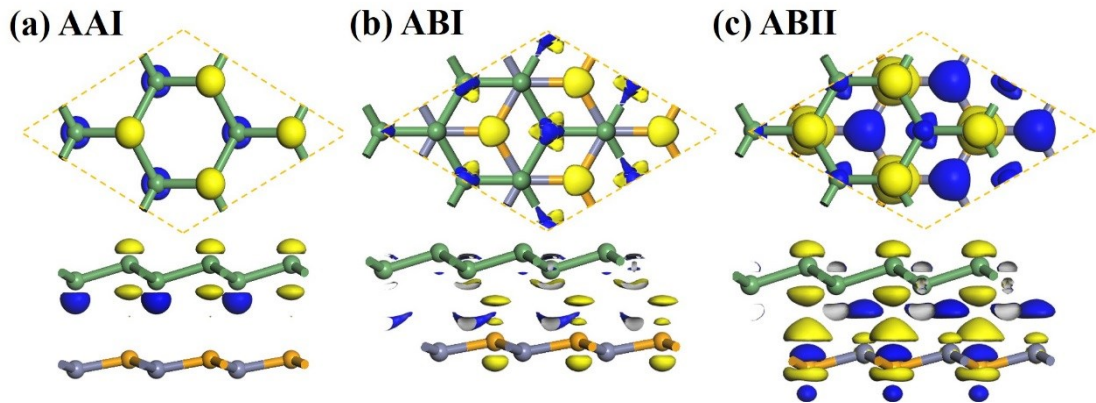


Figure S2: Charge density difference (CDD) of (a)AAI, (b) ABI and (c) ABII patterns in germanene/ZnSe heterostructures. The isosurface value is $0.003 \text{ e } \text{\AA}^{-3}$.