AlAs/germanene heterostructure with tunable electronic and optical properties *via* external electric field and strain

Chunjian Tan,[a,b,‡] Qun Yang,[a,b,‡] Ruishen Meng,[a] Qiuhua Liang,[a] Junke Jiang,[a] Xiang Sun,[b] Huaiyu Ye,[a] and X. P. Chen[a,b,*]

[a]Key Laboratory of Optoelectronic Technology & Systems, Education Ministry of China, Chongqing University and College of Optoelectronic Engineering, Chongqing University, 400044 Chongqing, China

[b]Faculty of Mechanical and Electrical Engineering, Guilin University of Electronic Technology, 541004 Guilin, China

*Corresponding author: Xianping Chen (E-mail: xianpingchen@cqu.edu.cn; Phone: +86-23-65111178)

‡These authors contributed equally to this work.

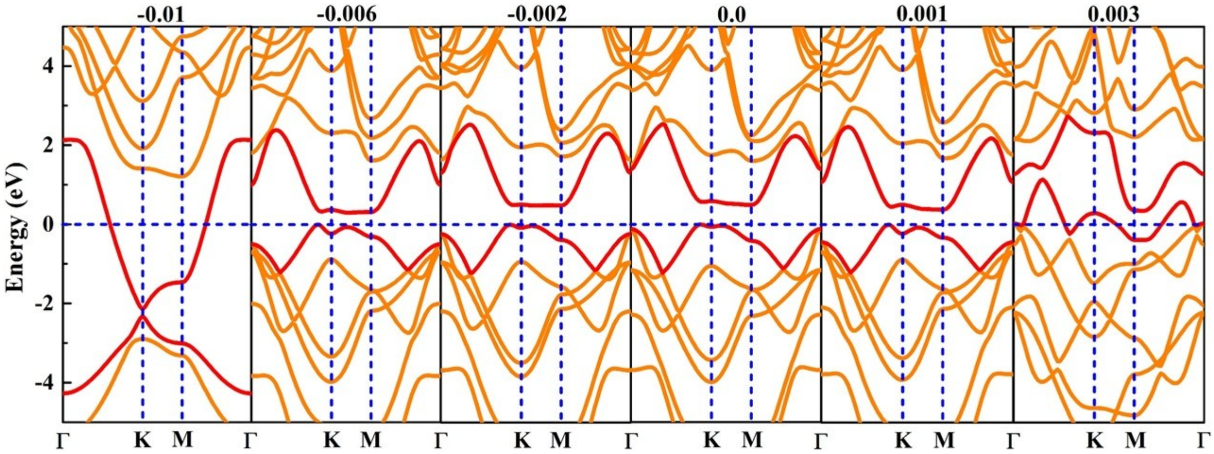

Figure SI. Variation of the band structures of the AAI-stacked heterostructure with the change of applied E-field.

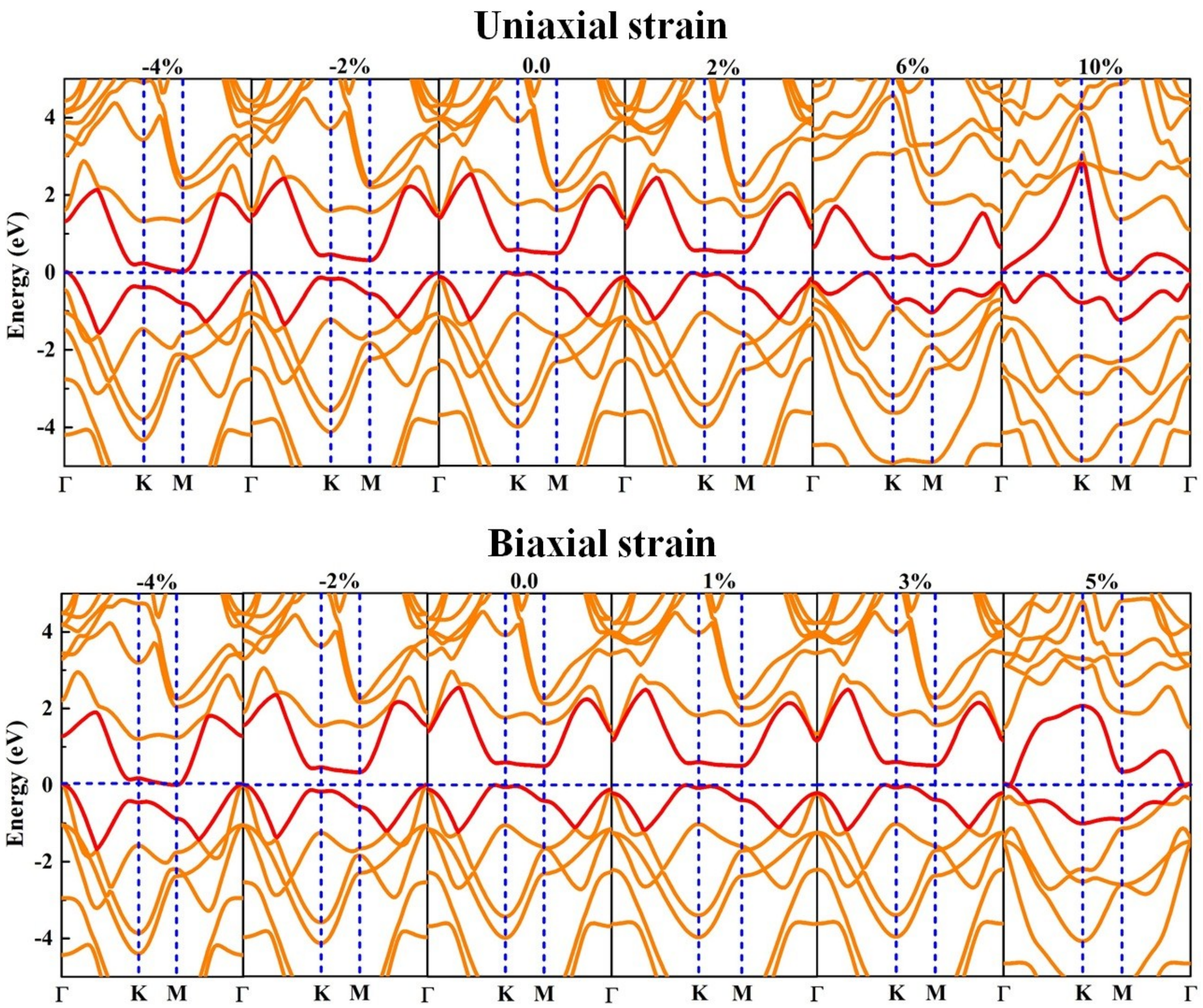

Figure SII. Variation of the band structures of the AAI-stacked heterostructure with the change of mechanical strain.