

Supporting materials

Factors Affecting the Negative Poisson's Ratio of Black Phosphorus and Black Arsenic: Electron Effect

Yifan Gao, Minru Wen, Xin Zhang, Fugen Wu, Qinglin Xia, Haoyi Wu, Huafeng
Dong*

Contact information:

Corresponding author: Huafeng Dong

Email: hfdong@gdut.edu.cn

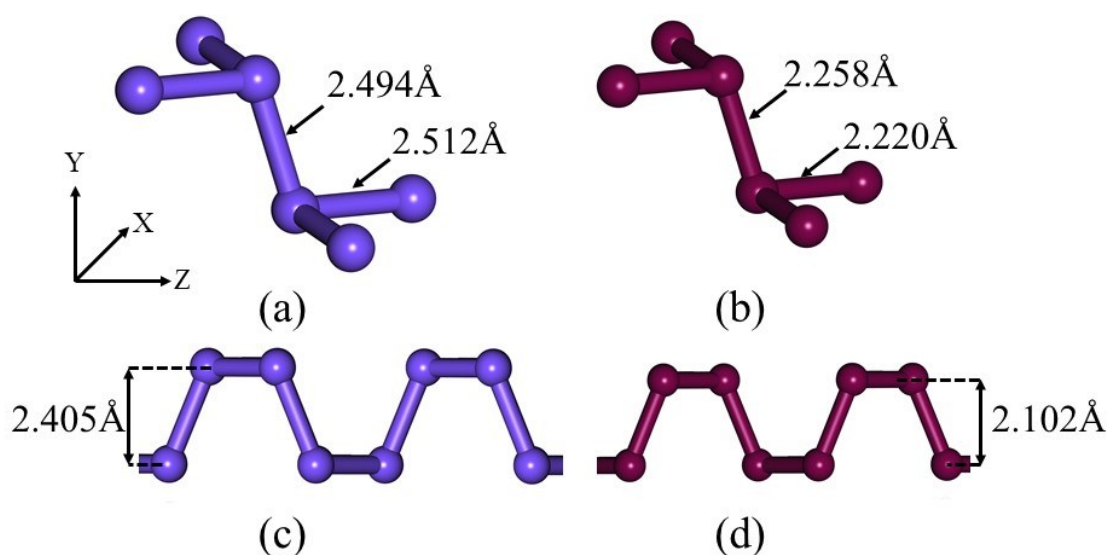
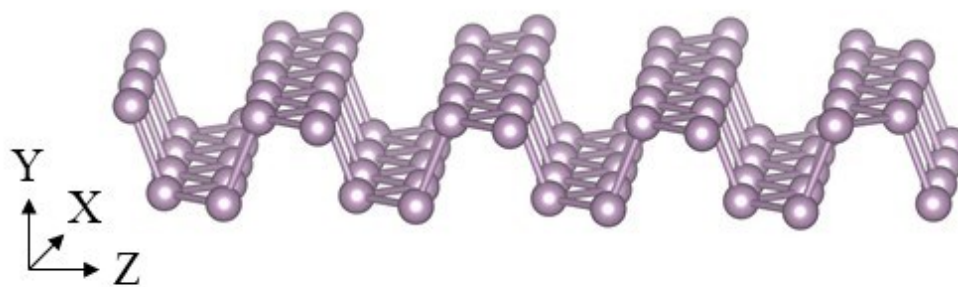
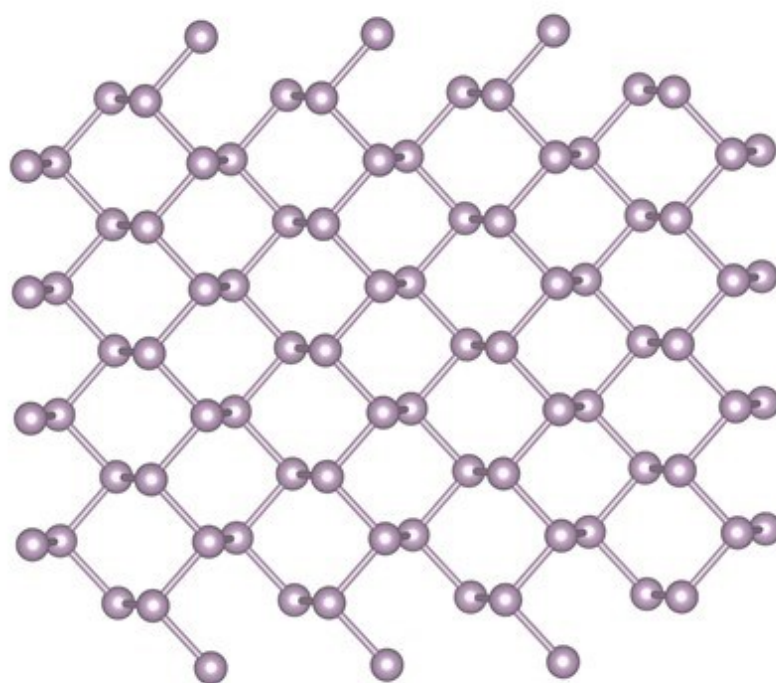


Figure S1. (a) Atomic structure of single-layer β -As. (b) Atomic structure of single-layer BP. (c) Thickness of single-layer β -As in the vacuum layer direction. (d) Thickness of single-layer BP in the vacuum layer direction.



(a)



(b)

Figure S2. Single-layer BP (a) side view. (b) Top view

Table S1. The strain of BP and β -As along the X and Y directions.

ε_x (BP)	ε_y	ε_x (β -As)	ε_y
-5%	-0.00646	-5%	-0.01718
-4%	-0.00642	-4%	-0.01481
-3%	-0.00539	-3%	-0.01044
-2%	-0.00415	-2%	-0.00835
-1%	-0.00315	-1%	-0.00450
0%	0	0%	0
1%	0.00086	1%	0.00413
2%	0.00487	2%	0.00892
3%	0.00646	3%	0.01338
4%	0.01041	4%	0.01817
5%	0.01330	5%	0.02102