

Supplementary Information

Near-Zero Poisson's Ratio Monolayer Bismuthene

Lingling Bai¹, Runqing Zhang², Huafeng Dong^{3*}, Huan Ma¹

1 School of Electronics and Electrical Engineering, Zhaoqing University,
Zhaoqing 526061, China

2 School of Physics and Electronic Engineering, Hanshan Normal
University, Chaozhou, Guangdong, 521000, China

3 School of Physics and Optoelectronic Engineering, Guangdong
University of Technology, Guangzhou 510006, China

*Corresponding author: Huafeng Dong

E-mail: hfdong@gdut.edu.cn

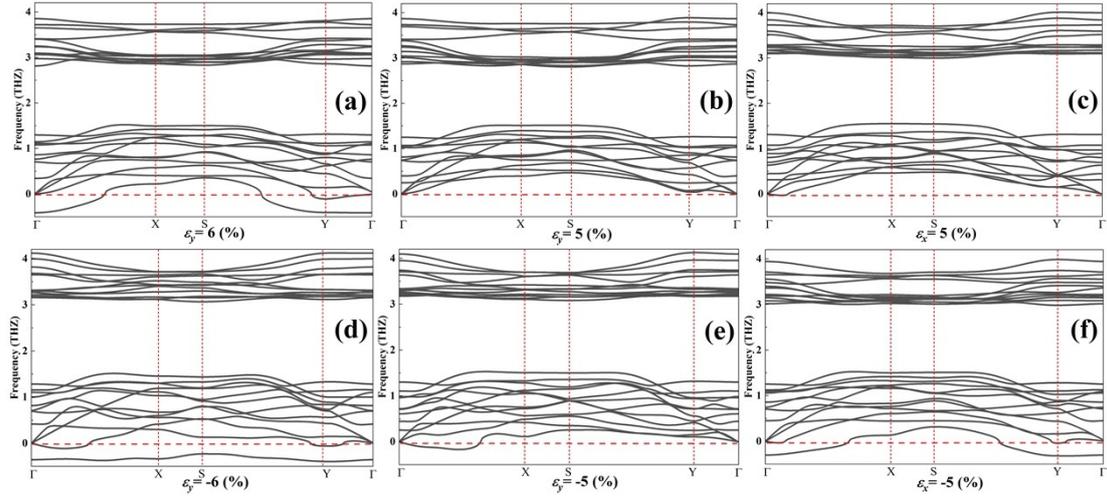


Figure. S1. Phonon spectra of monolayer $P2/m$ -Bi under uniaxial strain along different directions: (a) +6% strain along Y, (b) +5% strain along Y, (c) +5% strain along X, (d) -6% strain along Y, (e) -5% strain along Y, and (f) -5% strain along X.



Figure. S2. Band structure of monolayer $P2/m$ -Bi under different strain conditions in X direction:

(a) 1%, (b) 1.5%, (c) 2%, (d) - 2.5%, (e) - 3%, (f) - 5%. (Fermi level is set to 0 eV)

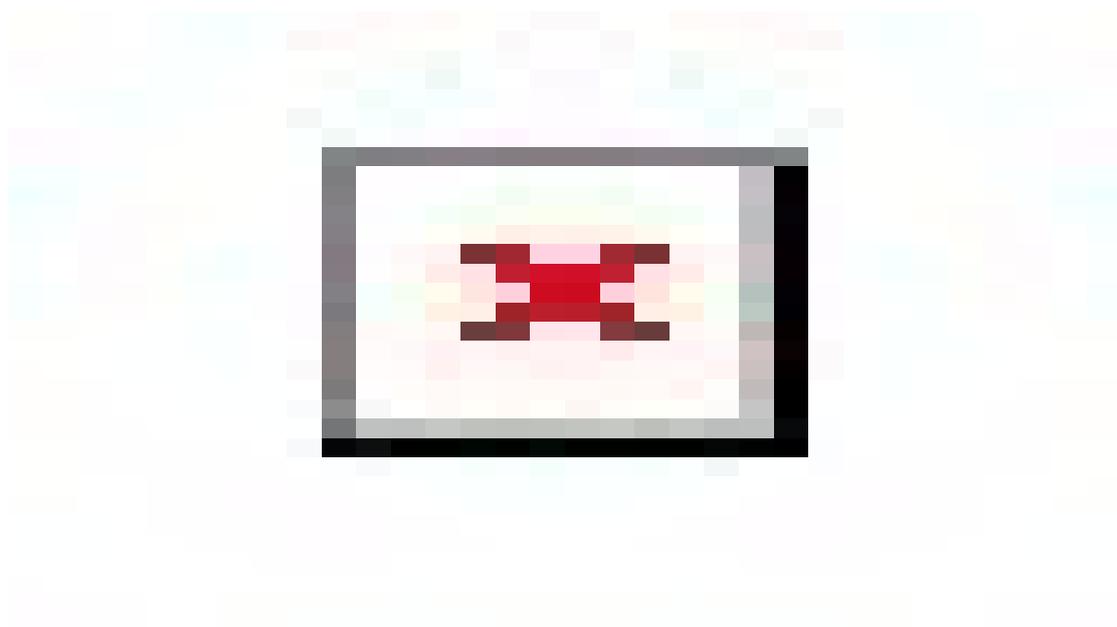


Figure. S3. Band structure of monolayer $P2/m$ -Bi under different strain conditions in Y direction:

(a) -3.5%, (b) -3%, (c) -2%, (d) -1.5%, (e) 2%, (f) 2.5%. (Fermi level is set to 0 eV)