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CORRECTION

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Correction: Realization of a piezoelectric quantum spin Hall phase with a large band gap in MBiH (M = Ga and In) monolayers

Y. H. Wang, S. Y. Lei,* F. Xu, J. Chen, N. Wan, Q. A. Huang and L. T. Sun

Correction for 'Realization of a piezoelectric quantum spin Hall phase with a large band gap in MBiH (M = Ga and In) monolayers' by Y. H. Wang *et al.*, *J. Mater. Chem. A*, 2022, **10**, 25683–25691, https://doi.org/10.1039/D2TA04206A.

The authors regret the following errors in the published article:

In the Results and discussion section, several expressions were erroneously included in the paragraph reading "Intriguingly, the monolayer containing a lighter element has a larger SOC-induced gap, which is quite different from previous studies. This eccentric phenomenon can be explained by orbital evolution. As shown in Fig. S5, the states near Fermi level mainly consist of S and P_{xy} originating from M and Bi elements. Without SOC, there are two degenerate P_{xy} levels which can be defined as $P1_{xy}$ and $P2_{xy}$. When involving the SOC effect, the degeneracy will be lifted with $|p_{x^2,y^2}, \pm 3/2\rangle P2_{x+iy,\uparrow}$ & $P2_{x-iy,\downarrow}$ sandwiched between $P1_{x+iy,\uparrow}$ & $P1_{x-iy,\downarrow}$ $|p_{x^1,y^1}, \pm 3/2\rangle$ and $P1_{x+iy,\downarrow}$ & $P1_{x-iy,\uparrow}$ $|p_{x^2,y^2}, \pm 1/2\rangle$. Because of the larger energy difference between the two initial degenerate states in the case of GaBiH, the split states $|p_{x^1,y^1}, \pm 3/2\rangle$ $P1_{x+iy,\uparrow}$ & $P1_{x-iy,\downarrow}$ and $|p_{x^2,y^2}, \pm 3/2\rangle$ $P2_{x+iy,\uparrow}$ & $P2_{x-iy,\downarrow}$ constitute a relatively larger QSH gap. Such particular double-degeneracy systems in MBiH (M = Ga and In) monolayers provide new perspectives and ways to design large-gap TIs."

The correct text of this paragraph should instead read as follows: "Intriguingly, the monolayer containing a lighter element has a larger SOC-induced gap, which is quite different from previous studies. This eccentric phenomenon can be explained by orbital evolution. As shown in Fig. S5, the states near Fermi level mainly consist of S and P_{xy} originating from M and Bi elements. Without SOC, there are two degenerate P_{xy} levels which can be defined as $P1_{xy}$ and $P2_{xy}$. When involving the SOC effect, the degeneracy will be lifted with $P2_{x+iy,\uparrow}$ & $P2_{x-iy,\downarrow}$ sandwiched between $P1_{x+iy,\uparrow}$ & $P1_{x-iy,\downarrow}$ and $P1_{x+iy,\downarrow}$ & $P1_{x-iy,\uparrow}$. Because of the larger energy difference between the two initial degenerate states in the case of GaBiH, the split states $P1_{x+iy,\uparrow}$ & $P1_{x-iy,\downarrow}$ and $P2_{x+iy,\uparrow}$ & $P2_{x-iy,\downarrow}$ constitute a relatively larger QSH gap. Such particular double-degeneracy systems in MBiH (M = Ga and In) monolayers provide new perspectives and ways to design large-gap TIs."

In addition, in Table 4, the value for InBiH with SOC effect was reported incorrectly. The correct version of Table 4 is shown below. These errors do not affect the overall conclusions of the article.

Table 4 The band gap without and with the SOC effect for MBiH bilayers

GaBiH	noSOC (eV)	SOC (eV)	InBiH	noSOC (eV)	SOC (eV)
A	0	0.224	A	0	0.270
B	0	0.482	B	0	0.336

The Royal Society of Chemistry apologises for these errors and any consequent inconvenience to authors and readers.

Key Laboratory of Microelectromechanical Systems of the Ministry of Education, Southeast University, Nanjing 210096, China. E-mail: lsy@seu.edu.cn