## Journal of Materials Chemistry A



## CORRECTION

View Article Online
View Journal | View Issue



Cite this: J. Mater. Chem. A, 2023, 11, 1513

## 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

DOI: 10.1039/d2ta90300h

rsc.li/materials-a

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  $P_{xy}$  and  $P_{xy}$ . When involving the SOC effect, the degeneracy will be lifted with  $|p_{x^2,y^2}, \pm 3/2\rangle P_{x+iy,\uparrow} \otimes P_{x-iy,\downarrow}$  sandwiched between  $P_{x+iy,\uparrow} \otimes P_{x-iy,\downarrow} \otimes P_$ 

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  $P1_{x+iy,\uparrow}$  &  $P1_{x-iy,\downarrow}$  and  $P2_{x+iy,\uparrow}$  &  $P1_{x-iy,\downarrow}$  and  $P2_{x+iy,\uparrow}$  &  $P1_{x-iy,\downarrow}$  and  $P2_{x+iy,\uparrow}$  &  $P1_{x-iy,\downarrow}$  and  $P2_{x+iy,\uparrow}$  &  $P1_{x-iy,\downarrow}$  and  $P1_{x+iy,\uparrow}$  &  $P1_{x-iy,\downarrow}$  and  $P1_{x+iy,\downarrow}$  and

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
В	0	0.482	В	0	0.336

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