



Cite this: *J. Mater. Chem. C*, 2022, 10, 11810

## Correction: “Heavy-atom effects” in the parent [1]benzochalcogenopheno[3,2-*b*][1]benzochalcogenophene system

Chengyuan Wang,<sup>a</sup> Mamatimin Abbas,<sup>b</sup> Guillaume Wantz,<sup>b</sup> Kohsuke Kawabata<sup>ac</sup> and Kazuo Takimiya<sup>\*ac</sup>

DOI: 10.1039/d2tc90146c

rsc.li/materials-c

Correction for “Heavy-atom effects” in the parent [1]benzochalcogenopheno[3,2-*b*][1]benzochalcogenophene system’ by Chengyuan Wang *et al.*, *J. Mater. Chem. C*, 2020, 8, 15119–15127, DOI: <https://doi.org/10.1039/D0TC01408G>.

The authors wish to point out that, in the published article (in the section titled “Effect of chalcogen atoms on intermolecular electronic coupling in the solid state and transport properties”) and also in the ESI (Fig. S14), the reported calculated effective mass of a set of compounds, BTBT (0.73), BSBS (0.44), and BTeBTe (0.52) were underestimated because of incorrect numerical treatment while extracting the values from the band diagrams in Fig. S14. The correct values are 2.61, 1.59, and 1.85 for BTBT, BSBS, and BTeBTe, respectively.

The primary purpose of calculating the effective mass and band structures of the compounds was to understand the reason why only BTeBTe showed no field-effect transistor behavior compared to BTBT and BSBS. It was concluded that the effective mass of BTeBTe is not a detrimental factor for carrier transport since the effective mass of BTeBTe is between those of BTBT and BSBS. The authors believe that this conclusion would not be affected even with the corrected effective mass because the relative values between the compounds are the same; namely, the effective mass of BTeBTe (1.85) is between those of BTBT (2.61) and BSBS (1.59). However, the incorrect absolute values of each effective mass may lead to readers misunderstanding the molecular system.

The electronic supplementary information (ESI) for the published article has been updated to show the corrected values in Fig. S14.

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

<sup>a</sup> Emergent Molecular Function Research Team, RIKEN Center for Emergent Matter Science (CEMS), 2-1 Hirosawa, Wako, Saitama 351-0198, Japan.  
E-mail: [takimiya@riken.jp](mailto:takimiya@riken.jp)

<sup>b</sup> Univ. Bordeaux, IMS, CNRS, UMR-5218, Bordeaux INP, ENSCBP, 33405 Talence, France

<sup>c</sup> Department of Chemistry, Graduate School of Science, Tohoku University, 6-3 Aoba, Aramaki, Aoba-ku, Sendai, Miyagi 980-8578, Japan

