



OPEN

Author Correction: 3D hydrogen-like screening effect on excitons in hBN-encapsulated monolayer transition metal dichalcogenides

S. Takahashi, S. Kusaba, K. Watanabe, T. Taniguchi, K. Yanagi & K. Tanaka

Correction to: *Scientific Reports* <https://doi.org/10.1038/s41598-024-77625-x>, published online 8 November 2024

The original version of this Article contained an error in References 27, 28, 30, 45 and 57, which were incorrectly given as:

“27. Voigt, J., Spiegelberg, F. & Senoner, M. Band parameters of CdS and CdSe single crystals determined from optical exciton spectra. *Phys. Status Solidi* 91, 189–199 (1979).

28. Senger, R. T. & Bajaj, K. K. Binding energies of excitons in II–VI compound-semiconductor based quantum well structures. *Phys. Status Solidi Basic. Res.* 241, 1896–1900 (2004).

30. Yang, Z. et al. Unraveling the exciton binding energy and the dielectric constant in single-crystal methylammonium lead tri-iodide perovskite. *J. Phys. Chem. Lett.* 8, 1851–1855 (2017).

45. Bieniek, M., Sadecka, K., Szulakowska, L. & Hawrylak, P. Theory of excitons in atomically thin semiconductors: Tight-binding approach. *Nanomaterials* 12, 1584 (2022).

57. Wilson, N. P., Finley, J. J. & Dery, H. Breakdown of the static dielectric screening approximation of Coulomb interactions in atomically thin semiconductors. Preprint at [arXiv:2402.18639](https://arxiv.org/abs/2402.18639) (2024).”

The correct References are listed below:

“27. Voigt, J., Spiegelberg, F. & Senoner, M. Band parameters of CdS and CdSe single crystals determined from optical exciton spectra. *Phys. Status Solidi (b)* 91, 189–199 (1979).

28. Senger, R. T. & Bajaj, K. K. Binding energies of excitons in II–VI compound-semiconductor based quantum well structures. *Phys. Status Solidi (b)* 241, 1896–1900 (2004).

30. Yang, Z. et al. Unraveling the exciton binding energy and the dielectric constant in single-crystal methylammonium lead triiodide perovskite. *J. Phys. Chem. Lett.* 8, 1851–1855 (2017).

45. Bieniek, M., Sadecka, K., Szulakowska, L. & Hawrylak, P. Theory of excitons in atomically thin semiconductors: Tight-binding approach. *Nanomaterials* 12, 1582 (2022).

57. Mhenni, A. B. et al. Breakdown of the static dielectric screening approximation of Coulomb interactions in atomically thin semiconductors. Preprint at [arXiv:2402.18639](https://arxiv.org/abs/2402.18639) (2024).”

In addition, the legend of Table 1 contained an error in the spectral resolution.

As a result, the legend of Table 1

“The errors of the experimental values are determined by the spectral resolution (~ 6 meV) and the fitting error. The experimental data for 1L-WSe₂ are from our previous report²⁰.”

now reads,

Published online: 14 January 2025

“The errors of the experimental values are determined by the spectral resolution (~ 0.6 meV) and the fitting error. The experimental data for 1L-WSe₂ are from our previous report²⁰.”

The original Article has been corrected.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

© The Author(s) 2025