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Correction: Distinct spin-lattice and spin-phonon interactions in monolayer magnetic CrI₃

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Correction for 'Distinct spin-lattice and spin-phonon interactions in monolayer magnetic CrI₃' by Lucas Webster *et al.*, *Phys. Chem. Chem. Phys.*, 2018, **20**, 23546–23555, <https://doi.org/10.1039/C8CP03599G>.

In the published manuscript, we studied the spin-lattice and spin-phonon interactions in monolayer CrI₃ by using density functional theory calculations. There were several mistakes in the mode symmetries in the original manuscript.

Specifically, the monolayer CrI₃ possesses a D_{3d} point group of symmetry and the irreducible representations of the phonon modes at Γ should be decomposed into $\Gamma_{D_{3d}} = 2A_{1g} + 2A_{2g} + A_{1u} + 3A_{2u} + 4E_g + 4E_u$, instead of $\Gamma_{D_{3d}} = 2A_{1g} + 2A_{2g} + 2A_{1u} + 2A_{2u} + 4E_g + 4E_u$, as in the manuscript (Section 3.3).

The acoustic modes are E_u + A_{2u}, *i.e.*, the doubly degenerate E_u mode, and one A_{2u} mode, not E_u + A_{1u}. In addition, the A_{2g} mode at 217.6 cm⁻¹ is neither Raman active nor IR active, thus is a silent mode.

Finally, as shown in Fig. 4(j), the mode at 134.5 cm⁻¹ is an A_{1u} mode, while the mode at 264.7 cm⁻¹ (Fig. 4(n)) should be an A_{2u} mode. The conclusions in the published manuscript are not affected by these corrections.

We are grateful to Liu *et al.*¹ who pointed out these mistakes in our manuscript.

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

References

- Y. C. Liu, H. B. Niu and J.B. Lin, "Comment on 'Distinct spin-lattice and spin-phonon interactions in monolayer magnetic CrI₃' by L. Webster, L. Liang and J.-A. Yan, *Phys. Chem. Chem. Phys.*, 2018, **20**, 23546", *Phys. Chem. Chem. Phys.*, 2022, DOI: [10.1039/D2CP00720G](https://doi.org/10.1039/D2CP00720G).

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