**Erratum: Three-Particle Correlation from a Many-Body Perspective:
Trions in a Carbon Nanotube
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In a recent work, Torche and Bester [1] investigated trions by using a method which we had discussed in [2]. The authors of Ref. [1] emphasize that their method differs from our method by two additional terms (last two lines in Eq. (4) in Ref. [1]), which should be included in the Hamiltonian, but did not occur in Eq. (2) of our publication [2]. We have checked our previous work and realized that the two terms in question had already been included in our numerical treatment [2], in contradiction to Eq. (2) where they were omitted. Therefore, Eq. (2) has to be changed to

$$\begin{aligned} \langle \mathbf{v}\mathbf{c}_1\mathbf{c}_2 | \hat{H}^{(eeh)} | \mathbf{v}'\mathbf{c}'_1\mathbf{c}'_2 \rangle = & (\epsilon_{\mathbf{c}_1} + \epsilon_{\mathbf{c}_2} - \epsilon_{\mathbf{v}}) \delta_{\mathbf{c}_1,\mathbf{c}'_1} \delta_{\mathbf{c}_2,\mathbf{c}'_2} \delta_{\mathbf{v},\mathbf{v}'} + (W_{\mathbf{c}_1\mathbf{c}_2,\mathbf{c}'_1\mathbf{c}'_2} - W_{\mathbf{c}_1\mathbf{c}_2,\mathbf{c}'_2\mathbf{c}'_1}) \delta_{\mathbf{v},\mathbf{v}'} - (W_{\mathbf{v}'\mathbf{c}_1,\mathbf{v}\mathbf{c}'_1} - V_{\mathbf{v}'\mathbf{c}_1,\mathbf{c}'_1\mathbf{v}}) \delta_{\mathbf{c}_2,\mathbf{c}'_2} \\ & - (W_{\mathbf{v}'\mathbf{c}_2,\mathbf{v}\mathbf{c}'_2} - V_{\mathbf{v}'\mathbf{c}_2,\mathbf{c}'_2\mathbf{v}}) \delta_{\mathbf{c}_1,\mathbf{c}'_1} + (W_{\mathbf{v}'\mathbf{c}_1,\mathbf{v}\mathbf{c}'_2} - V_{\mathbf{v}'\mathbf{c}_1,\mathbf{c}'_2\mathbf{v}}) \delta_{\mathbf{c}_2,\mathbf{c}'_1} + (W_{\mathbf{v}'\mathbf{c}_2,\mathbf{v}\mathbf{c}'_1} - V_{\mathbf{v}'\mathbf{c}_2,\mathbf{c}'_1\mathbf{v}}) \delta_{\mathbf{c}_1,\mathbf{c}'_2}, \end{aligned}$$

as well as the corresponding Eqs. (S17) and (S18) in the Supplemental Material of the original Letter [2]. Since the two terms were in fact used in our numerical treatment, all numerical results and all interpretation and conclusions of Ref. [2] (and our further works citing this reference) remain unchanged.

We thank Torche and Bester for bringing this issue to our attention.

- [1] A. Torche and G. Bester, First-principles many-body theory for charged and neutral excitations: Trion fine structure splitting in transition metal dichalcogenides, *Phys. Rev. B* **100**, 201403(R) (2019).
- [2] T. Deilmann, M. Drüppel, and M. Rohlfing, Three-Particle Correlation from a Many-Body Perspective: Trions in a Carbon Nanotube, *Phys. Rev. Lett.* **116**, 196804 (2016).