Erratum: Quantum kinetic equations for the ultrafast spin dynamics of excitons in diluted magnetic semiconductor quantum wells after optical excitation [Phys. Rev. B **95, 245203 (2017)]**

F. Ungar, M. Cygorek, and V. M. Axt
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In Eq. (34b) there is a factor 2 missing in one of the terms proportional to $\delta(\omega_{xK} - \omega_{x_1K_1})$. The correct equation should read

$$\begin{aligned} \frac{\partial}{\partial t} \mathbf{s}_{x_1K_1}^\perp = & \mathbf{\Gamma}_E^\perp + \frac{\pi IN_{\text{Mn}}}{\hbar^2 V^2} \sum_{xK} \left\{ \delta(\omega_{xK} - \omega_{x_1K_1}) (\mathbf{s}_{xK}^\perp - \mathbf{s}_{x_1K_1}^\perp) [(2J_0^e - J_{sd}^2 b^\parallel) F_{\eta_h x x_1}^{\eta_h K K_1} + (J_{pd}^2 b^\parallel + 2J_0^h - J_{pd} J_0^h b^0) F_{\eta_e x x_1}^{\eta_e K K_1} \right. \\ & - (2J_{pd} J_0^e b^0 + J_{pd} J_0^h b^0 - 4J_0^e J_0^h) F_{-\eta_h x x_1}^{\eta_e K K_1}] - \left[\frac{b^-}{2} \delta\{\omega_{xK} - [\omega_{x_1K_1} + (\sigma_e^B \omega_e - \sigma_{\text{Mn}}^B \omega_{\text{Mn}})]\} \right. \\ & + \left. \frac{b^+}{2} \delta\{\omega_{xK} - [\omega_{x_1K_1} - (\sigma_e^B \omega_e - \sigma_{\text{Mn}}^B \omega_{\text{Mn}})]\} + 2b^\parallel \delta(\omega_{xK} - \omega_{x_1K_1}) \right] J_{sd}^2 F_{\eta_h x x_1}^{\eta_h K K_1} \mathbf{s}_{x_1K_1}^\perp \Big\} \\ & + (\boldsymbol{\omega}_e \times \mathbf{s}_{x_1K_1}^\perp) \left\{ 1 + \frac{1}{\omega_e} \frac{IN_{\text{Mn}}}{\hbar^2 V^2} \sum_{xK} \left[\frac{J_{sd}}{\omega_{xK} - \omega_{x_1K_1}} [(2J_{pd} b^\parallel - 2J_0^h b^0) F_{-\eta_h x x_1}^{\eta_e K K_1} - 2J_0^e b^0 F_{\eta_h x x_1}^{\eta_h K K_1}] \right. \right. \\ & + \left. \left. \left(\frac{b^+}{\omega_{xK} - [\omega_{x_1K_1} - (\sigma_e^B \omega_e - \sigma_{\text{Mn}}^B \omega_{\text{Mn}})]} - \frac{b^-}{\omega_{xK} - [\omega_{x_1K_1} + (\sigma_e^B \omega_e - \sigma_{\text{Mn}}^B \omega_{\text{Mn}})]} \right) \frac{1}{2} J_{sd}^2 F_{\eta_h x x_1}^{\eta_h K K_1} \right] \right\}. \end{aligned} \quad (34b)$$

Since only the parallel case is discussed in the paper and the equation for the perpendicular spin density was given merely for the sake of completeness, all results and discussions throughout the paper remain unaffected.

Furthermore, there are some typographical errors in Eqs. (B1) in Appendix B. The correct equations should read

$$\begin{aligned} \frac{\partial}{\partial t} q_{\eta l x_1 K_1}^{\uparrow/\downarrow x_2} = & -i \left(\omega_{x_1 K_1} \pm \frac{1}{2} \omega_e^z - \frac{1}{2} \omega_h^z + \frac{I(J_0^e + J_0^h) N_{\text{Mn}}}{\hbar V} \right) q_{\eta l x_1 K_1}^{\uparrow/\downarrow x_2} - i \frac{1}{2} \omega_e^\mp q_{\eta l x_1 K_1}^{\downarrow/\uparrow x_2} + \epsilon_{ijl} \omega_{\text{Mn}}^i q_{\eta j x_1 K_1}^{\uparrow/\downarrow x_2} \\ & - i \frac{IJ_{sd}}{2\hbar} F_{\eta x_2 x_1}^{-\eta_h 0 K_1} (\pm \langle S^l S^z \rangle y_{x_2}^{\uparrow/\downarrow} + \langle S^l S^\mp \rangle y_{x_2}^{\downarrow/\uparrow}) + i \frac{IJ_{pd}}{2\hbar} \langle S^l S^z \rangle F_{\eta x_2 x_1}^{\eta_e 0 K_1} y_{x_2}^{\uparrow/\downarrow} \\ & - i \frac{I}{\hbar} \langle S^l \rangle (J_0^e F_{\eta x_2 x_1}^{-\eta_h 0 K_1} + J_0^h F_{\eta x_2 x_1}^{\eta_e 0 K_1}) y_{x_2}^{\uparrow/\downarrow}, \end{aligned} \quad (B1d)$$

$$\begin{aligned} \frac{\partial}{\partial t} z_{\eta x_1 K_1}^{\uparrow/\downarrow x_2} = & -i \left(\omega_{x_1 K_1} \pm \frac{1}{2} \omega_e^z - \frac{1}{2} \omega_h^z + \frac{I(J_0^e + J_0^h) N_{\text{Mn}}}{\hbar V} \right) z_{\eta x_1 K_1}^{\uparrow/\downarrow x_2} - i \frac{1}{2} \omega_e^\mp z_{\eta x_1 K_1}^{\downarrow/\uparrow x_2} \\ & - i \frac{IJ_{sd}}{2\hbar} F_{\eta x_2 x_1}^{-\eta_h 0 K_1} (\pm \langle S^z \rangle y_{x_2}^{\uparrow/\downarrow} + \langle S^\mp \rangle y_{x_2}^{\downarrow/\uparrow}) + i \frac{IJ_{pd}}{2\hbar} \langle S^z \rangle F_{\eta x_2 x_1}^{\eta_e 0 K_1} y_{x_2}^{\uparrow/\downarrow} \\ & - i \frac{I}{\hbar} (J_0^e F_{\eta x_2 x_1}^{-\eta_h 0 K_1} + J_0^h F_{\eta x_2 x_1}^{\eta_e 0 K_1}) y_{x_2}^{\uparrow/\downarrow}. \end{aligned} \quad (B1e)$$

The errors in the two equations above only occurred during preparation of the paper and are not present in the numerical evaluation of the equations. Thus, all numerical results of the paper have been obtained using the correct equations and remain unchanged.