Erratum: Analytic solution for electrons and holes in graphene under electromagnetic waves: Gap appearance and nonlinear effects [Phys. Rev. B 78, 201406 (2008)]

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One term was deleted in Eq. (9), as well as the corresponding discussion. Equation (9) must be corrected as follows:

$$-\hbar^2(v_F^2k^2-\omega^2)\frac{d^2\mathbf{F}(\phi)}{d\phi^2}+2i\hbar\eta\frac{d\mathbf{F}(\phi)}{d\phi}+[-2\xi v_F p_x\cos\phi-\xi v_F\hbar\sigma_z k\sin\phi+\xi^2\cos^2\phi-i\hbar\omega\xi\sigma_x\sin\phi]\mathbf{F}(\phi)=0. \quad (9)$$

The solution of Eq. (9) has the form $\mathbf{F}(\phi)=\exp(-i\phi B/2A)z(\phi)$, where $z(\phi)$ solves the equation $z''(\phi)+[(C(\phi)/A)-B^2/(4A^2)]z(\phi)=0$, and $A=-\hbar^2(v_F^2k^2-\omega^2)$, $B=2\hbar\eta$ and $C(\phi)=-2\xi v_F p_x\cos\phi-\xi v_F\hbar\sigma_z k\sin\phi+\xi^2\cos^2\phi-i\hbar\omega\xi\sigma_x\sin\phi$. With this correction, our main results are still valid, but now the energy gap and wave function are those of the long-wavelength limit case. This change does not affect the conclusions of the paper.

