

ERRATA

Erratum: One-electron formalism for second-harmonic generation in crystalline semiconductors
[Phys. Rev. B 42, 3567 (1990)]

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In the second line of Eq. (5.10), $+i$ should be $-i$.

The sentence at the bottom of p. 3571, "In Eq. (5.13), the Green's operators may be (a) unrestricted, (b) projected away from the state $|n\mathbf{k}\rangle$, or (c) projected away from all states of energy $\epsilon_{n\mathbf{k}}$," applies only to the long-wave terms of Eq. (5.13) (i.e., its first three lines). For the mixed and short-wave terms, the Green's operator must be unrestricted.

The sentence on p. 3572, "The rules for restricting the Green's operator are the same as for Eq. (5.13)." should be omitted; the Green's operators must be unrestricted in Eq. (5.14).

Equation (5.15) should contain the following additional terms:

$$\begin{aligned}
 & -14\tilde{\phi}_{1m}^{(1)}\mathcal{R}[\langle n\mathbf{k}|\tilde{\phi}_{1m}^{(1s)}|n\mathbf{k}\rangle\langle n\mathbf{k}|H_1G_{n\mathbf{k}}^4H_1|n\mathbf{k}\rangle] \\
 & -16\tilde{\phi}_{1m}^{(1)}\mathcal{R}[\langle n\mathbf{k}|H_1|n\mathbf{k}\rangle\langle n\mathbf{k}|H_1G_{n\mathbf{k}}^4\tilde{\phi}_{1m}^{(1s)}|n\mathbf{k}\rangle] \\
 & +6i\mathcal{F}[\langle n\mathbf{k}|\tilde{\phi}_{1m}^{(1s)}|n\mathbf{k}\rangle\langle n\mathbf{k}|H_1G_{n\mathbf{k}}^3\tilde{\phi}_{1m}^{(1s)}|n\mathbf{k}\rangle].
 \end{aligned}$$

The requirements that the conditions stated in Eqs. (5.16) and (5.18) vanish is not correct. Equations (5.16) and (5.18) do vanish as stated and the argument of Sec. VI supporting this conclusion is correct; however, only the "virtual-electron" or "ccv" part of the actual required conditions were presented. Equation (5.16) should have the following terms appended:

$$\begin{aligned}
 & -2\mathcal{R}[\langle n\mathbf{k}|\tilde{\phi}_{1m}^{(1s)}|n\mathbf{k}\rangle\langle n\mathbf{k}|H_1G_{n\mathbf{k}}^2H_1|n\mathbf{k}\rangle] \\
 & -4\mathcal{R}[\langle n\mathbf{k}|H_1|n\mathbf{k}\rangle\langle n\mathbf{k}|H_1G_{n\mathbf{k}}^2\tilde{\phi}_{1m}^{(1s)}|n\mathbf{k}\rangle].
 \end{aligned}$$

We shall show that this revised term vanishes elsewhere.¹

Equations (5.17)–(5.20) are also subject to correction [although the long-wave terms of Eq. (5.19)—i.e., the first seven lines—are correct as presented]. Due to the length of these formulas, I note that these equations are correct if the Green's operators are restricted to the conduction bands. They describe correctly the "virtual-electron" or "ccv" processes.

¹Zachary H. Levine and D. C. Allan (unpublished).

Erratum: Charge-density-wave dynamics in $(\text{Ta}_{1-x}\text{Nb}_x\text{Se}_4)_2\text{I}$ alloys
[Phys. Rev. B 43, 6315 (1991)]

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