Errata

Erratum: GeSi alloys: A study of short-range order [Phys. Rev. B 22, 6294 (1980)]

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Equations (19) and (20) should read

$$
\begin{aligned}
\underline{t}^{\,i}_{aa} &= \left[E\underline{I} - \underline{H}^{\,0}_{aa} - P_{aa}\sum_{k}{}' \underline{V}^{\,k^T}_{aa}\underline{\bar{t}}^{\,k}_{aa} - Q_{aa}\sum_{k}{}' \underline{V}^{\,k^T}_{ab}\underline{t}^{\,k}_{ab}\right]^{-1}\underline{V}^{\,i^T}_{aa}\,, \\
\underline{\bar{t}}^{\,i}_{aa} &= \left[E\underline{I} - \underline{H}^{\,0}_{aa} - P_{aa}\sum_{j}{}' \underline{V}^{\,j}_{aa}\underline{t}^{\,j}_{aa} - Q_{aa}\sum_{j}{}' \underline{V}^{\,j}_{ab}\underline{t}^{\,j}_{ab}\right]^{-1}\underline{V}^{\,i}_{aa}\,, \\
\underline{t}^{\,i}_{ab} &= \left[E\underline{I} - \underline{H}^{\,0}_{bb} - P_{bb}\sum_{k}{}' \underline{V}^{\,k^T}_{bb}\underline{\bar{t}}^{\,k}_{bb} - Q_{bb}\sum_{k}{}' \bar{V}^{k^T}_{ba}\underline{\bar{t}}^{\,k}_{ba}\right]^{-1}\underline{V}^{\,i^T}_{ba}\,, \\
\underline{\bar{t}}^{\,i}_{ab} &= \left[E\underline{I} - \underline{H}^{\,0}_{bb} - P_{bb}\sum_{j}{}' \underline{V}^{\,j}_{bb}\underline{t}^{\,j}_{bb} - Q_{bb}\sum_{j}{}' \underline{V}^{\,j}_{ba}\underline{t}^{\,j}_{ba}\right]^{-1}\underline{V}^{\,i}_{ba}\,, \\
\underline{t}^{\,i}_{bb} &= \left[E\underline{I} - \underline{H}^{\,0}_{bb} - P_{bb}\sum_{k}{}' \underline{V}^{\,k^T}_{bb}\underline{\bar{t}}^{\,k}_{bb} - Q_{bb}\sum_{k}{}' \underline{V}^{\,k^T}_{ba}\underline{\bar{t}}^{\,k}_{ba}\right]^{-1}\bar{V}^{i^T}_{bb}\,, \\
\underline{\bar{t}}^{\,i}_{bb} &= \left[E\underline{I} - \underline{H}^{\,0}_{bb} - P_{bb}\sum_{j}{}' \underline{V}^{\,j}_{bb}\underline{t}^{\,j}_{bb} - Q_{bb}\sum_{j}{}' \underline{V}^{\,j}_{ba}\underline{t}^{\,j}_{ba}\right]^{-1}\underline{V}^{\,i}_{bb}\,, \\
\underline{t}^{\,i}_{ba} &= \left[E\underline{I} - \underline{H}^{\,0}_{aa} - P_{aa}\sum_{k}{}' \underline{V}^{\,k^T}_{aa}\underline{\bar{t}}^{\,k}_{aa} - Q_{aa}\sum_{k}{}' \underline{V}^{\,k^T}_{ab}\underline{\bar{t}}^{\,k}_{ab}\right]^{-1}\underline{V}^{\,i^T}_{ab}\,, \\
\underline{\bar{t}}^{\,i}_{ba} &= \left[E\underline{I} - \underline{H}^{\,0}_{aa} - P_{aa}\sum_{j}{}' \underline{V}^{\,j}_{aa}\underline{t}^{\,j}_{aa} - Q_{aa}\sum_{j}{}' \underline{V}^{\,j}_{ab}\underline{t}^{\,j}_{ab}\right]^{-1}\underline{V}^{\,i}_{ab}\,,
\end{aligned}
\tag{19}
$$

Here $\underline{t}^{\,i}_{aa}(\underline{\bar{t}}^{\,i}_{aa})$, $\underline{t}^{\,i}_{ab}(\underline{\bar{t}}^{\,i}_{ab})$, $\underline{t}^{\,i}_{ba}(\underline{\bar{t}}^{\,i}_{ba})$, and $\underline{t}^{\,i}_{bb}(\underline{\bar{t}}^{\,i}_{bb})$ are the transfer matrices along the Ge–Ge, Ge–Si, Si–Ge, and Si–Si bonds, respectively, in the direction i and $\sum'$ denotes summation over all the nearest neighbors of an atom except the one in the direction i.

The local Green's functions at Ge and Si atoms are, respectively,

$$
\begin{aligned}
\underline{G}_{aa} &= \left[E\underline{I} - \underline{H}^{\,0}_{aa} - P_{aa}\sum_{j=1}^{4} \underline{V}^{\,j}_{aa}\underline{t}^{\,j}_{aa} - Q_{aa}\sum_{j=1}^{4} \underline{V}^{\,j}_{ab}\underline{t}^{\,j}_{ab}\right]^{-1}, \\
\underline{G}_{bb} &= \left[E\underline{I} - \underline{H}^{\,0}_{bb} - P_{bb}\sum_{j=1}^{4} \underline{V}^{\,j}_{bb}\underline{t}^{\,j}_{bb} - Q_{bb}\sum_{j=1}^{4} \underline{V}^{\,j}_{ba}\underline{t}^{\,j}_{ba}\right]^{-1}.
\end{aligned}
\tag{20}
$$

The numerical results given in the paper are unaffected.