PCCP

CORRECTION

Check for updates

Cite this: Phys. Chem. Chem. Phys., 2017, 19, 16283

Correction: A review of carrier thermoelectrictransport theory in organic semiconductors

Nianduan Lu,^{ab} Ling Li*^{ab} and Ming Liu^{ab}

DOI: 10.1039/c7cp90124k

Correction for 'A review of carrier thermoelectric-transport theory in organic semiconductors' by Nianduan Lu *et al.*, *Phys. Chem. Chem. Phys.*, 2016, **18**, 19503–19525.

rsc.li/pccp

In the published paper, we described two definitions of the conductivity. One is defined by Mott (see eqn (7), $\sigma = -\int \sigma(E) \frac{\partial f}{\partial E} dE$). The other is defined as the Kubo–Greenwood type conductivity (see eqn (22), $\sigma = \int \sigma(E) dE$). The definition of conductivity for both eqn (7) and (22) is equivalent. In order to better distinguish these two definitions, we change eqn (7) to $\sigma = -\int \sigma_E \frac{\partial f}{\partial E} dE$, where σ_E is the Mott-type conductivity. At the same time, we change eqn (8) to $\sigma = e \int g(E) \mu(E) f(E) dE$, and eqn (9) to $\sigma(E) = eg(E) \mu(E) f(E)$, in order to be consistent with eqn (22).

Additionally, we remove the differential term d*E* in eqn (23), so that eqn (23) should be modified to $\sigma(E) = eg(E)\mu(E)f(E)$.

Furthermore, in the published paper, R^3 was omitted in eqn (44). Therefore, the parameter R^3 should be added in eqn (44), as follows:

$$P(Z_{m}|E_{i}) = \frac{4\pi R^{3}}{3(2\alpha)^{3}} \times \begin{cases} \int_{\epsilon_{f}}^{\epsilon_{i}} \left(S_{c} - \epsilon_{j} + \epsilon_{f}\right)^{3}g(\epsilon_{j})d\epsilon_{j} + \int_{\epsilon_{i}}^{S_{c}+\epsilon_{f}} \left(S_{c} - \epsilon_{j} + \epsilon_{f}\right)^{3}g(\epsilon_{j})d\epsilon_{j} + \int_{\epsilon_{i}-S_{c}}^{\epsilon_{f}} \left(S_{c} - \epsilon_{i} + \epsilon_{j}\right)^{3}g(\epsilon_{j})d\epsilon_{j}, \epsilon_{i} > \epsilon_{f} \\ \int_{\epsilon_{i}}^{\epsilon_{f}} \left(S_{c} + \epsilon_{i} - \epsilon_{f}\right)^{3}g(\epsilon_{j})d\epsilon_{j} + \int_{\epsilon_{f}-S_{c}}^{\epsilon_{i}} \left(S_{c} + \epsilon_{i} - \epsilon_{f}\right)^{3}g(\epsilon_{j})d\epsilon_{j} + \int_{\epsilon_{f}}^{\epsilon_{i}+S_{c}} \left(S_{c} - \epsilon_{j} + \epsilon_{i}\right)^{3}g(\epsilon_{j})d\epsilon_{j}, \epsilon_{i} < \epsilon_{f} \end{cases}$$

We thank Dario Narducci for finding this error.

The Royal Society of Chemistry apologises for these errors and any consequent inconvenience to authors and readers.



^b Jiangsu National Synergetic Innovation Center for Advanced Materials (SICAM), Nanjing 210009, China