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Correction: A review of carrier thermoelectric-transport theory in organic semiconductors

Nianduan Lu,[ab] Ling Li*[ab] and Ming Liu[ab]

In the published paper, we described two definitions of the conductivity. One is defined by Mott (see eqn (7), $\sigma = -\int \sigma(E)\frac{\partial f}{\partial E}\mathrm{d}E$). The other is defined as the Kubo–Greenwood type conductivity (see eqn (22), $\sigma = \int \sigma(E)\mathrm{d}E$). 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 $\sigma = -\int \sigma_{\mathrm{E}}\frac{\partial f}{\partial E}\mathrm{d}E$, where σ_{E} is the Mott-type conductivity. At the same time, we change eqn (8) to $\sigma = e\int g(E)\mu(E)f(E)\mathrm{d}E$, 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 dE 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:

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

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.

[a] Key Laboratory of Microelectronic Devices & Integrated Technology, Institute of MicroElectronics of the Chinese Academy of Sciences, No. 3, Bei-Tu-Cheng West Road, Beijing 100029, China. E-mail: lingli@ime.ac.cn

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

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