Erratum

Armin Feldhoff* and Benjamin Geppert

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Due to not strictly distinguishing particle-flux density $\vec{j}_n$ from charge-current density $\vec{j}_q = q \cdot \vec{j}_n$, electrical charge q was not properly placed in eq. [1], which needs to be written as follows:

$$\begin{pmatrix} \vec{j}_q \\ \vec{j}_S \end{pmatrix} = \begin{pmatrix} \sigma_T & \frac{\sigma_T \cdot S^*}{q} \\ \frac{\sigma_T \cdot S^*}{q} & \frac{\sigma_T \cdot S^{*2}}{q^2} + \Lambda_{\vec{j}_q=0} \end{pmatrix} \cdot \begin{pmatrix} -\vec{\nabla}\left(\frac{\eta}{q}\right) \\ -\vec{\nabla}T \end{pmatrix} \quad [1]$$

Then eq. [2] is as follows:

$$M = \begin{pmatrix} \sigma_T & \frac{\sigma_T \cdot S^*}{q} \\ \frac{\sigma_T \cdot S^*}{q} & \frac{\sigma_T \cdot S^{*2}}{q^2} + \Lambda_{\vec{j}_q=0} \end{pmatrix} \quad [2]$$

And eq. [6] is as follows:

$$\begin{aligned} p = |\vec{j}_E| &= \left| \left(\frac{\eta(\vec{x})}{q}, T(\vec{x}) \right) \cdot \begin{pmatrix} \vec{j}_q \\ \vec{j}_S \end{pmatrix} \right| \\ &= \left| \frac{\eta(\vec{x})}{q} \cdot \vec{j}_q + T(\vec{x}) \cdot \vec{j}_S \right| \\ &= |\vec{j}_{E,\,\mathrm{electrical}}(\vec{x}) + \vec{j}_{E,\,\mathrm{thermal}}(\vec{x})| \end{aligned} \quad [6]$$

Sentence in front of eq. [7] needs to be read as follows:

Let us postulate that high efficiency can be achieved if the ratio of the entropy conductivity under short-circuit conditions Λ_η and the entropy conductivity under open-circuit conditions $\Lambda_{j_q=0}$ is large:

***Corresponding author: Armin Feldhoff,** Institute of Physical Chemistry and Electrochemistry, Leibniz Universität Hannover, Hannover, Lower Saxony, Germany, E-mail: armin.feldhoff@pci.uni-hannover.de
Benjamin Geppert, Institute of Physical Chemistry and Electrochemistry, Leibniz Universität Hannover, Hannover, Lower Saxony, Germany, E-mail: benjamin.geppert@pci.uni-hannover.de