Erratum: Theory of the energy-spectrum dependence of the electronic thermoelectric tunneling coefficients of a quantum dot [Phys. Rev. B 78, 165327 (2008)]

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Correction 1. A minus sign that is missing in (2.27) has been incorrectly added to (2.28). The corrected expressions are as follows:

$$K = -\frac{1}{e^2 T} L^{(2)}. \tag{2.27}$$

The electron thermal conductance, κ, is given by the expression:

$$\kappa = \frac{1}{e^2 T}\left[L^{(2)} - L^{(1)}\left(L^{(0)}\right)^{-1} L^{(1)}\right]. \tag{2.28}$$

Correction 2. The factors $(\frac{\Delta E_{1,2}}{k_B T})$ in (3.16) should be $(\Delta E_{1,2})$. The corrected equation (3.16) is as follows:

$$S = -\frac{1}{eT}\left\{\Delta - \frac{C_{\ell g}}{[G/(e^2\gamma/k_B T)]}\left(\zeta_p g_p(\Delta E_1)e^{-\Delta E_1/k_B T}e^{\Delta/k_B T} - \zeta_n g_n \frac{\ell}{g-\ell+1}(\Delta E_2)e^{-\Delta E_2/k_B T}\right)\right\}. \tag{3.16}$$

Correction 3. The condition $\Delta \mathrm{E} \ll \mathrm{k_B T}$ in (A4) and (A5) is a typing error. The inequality should be reversed. Due to this typing error, the first sentence of the text above (A4): "In Eq. (A3) the second equality holds in the quantum regime for $\Delta \mathrm{E} \ll \mathrm{k_B T}$. Nevertheless, it has been found that as ΔE increases and becomes of the order of $k_B T$, …" should also be corrected as follows: "In Eq. (A3) the second equality holds in the quantum regime for $\Delta \mathrm{E} \gg \mathrm{k_B T}$. Nevertheless, it has been found that as ΔE decreases and becomes of the order of $k_B T$, …."

Therefore, the correct paragraph is as follows: In Eq. (A3) the second equality holds in the quantum regime for $\Delta E \gg k_B T$. Nevertheless, it has been found that as ΔE decreases and becomes of the order of $k_B T$, better agreement can be obtained by keeping the exact expression of the first equality when calculating the transport coefficients. To take care of this, in the analytical expressions of the main text the functions ζ have been introduced and they are defined as follows:

(i) For $p < N_{\min} - \ell + 1$:

$$\zeta_p = \begin{cases} 1 & \text{for } \Delta E \gg k_B T \\ \dfrac{1}{1 + e^{(\Delta_p + \Delta)/k_B T}} & \text{elsewhere} \end{cases}. \tag{A4}$$

(ii) For $p > N_{\min} - \ell + g$:

$$\zeta_n = \begin{cases} 1 & \text{for } \Delta E \gg k_B T \\ \dfrac{e^{(\Delta_p + \Delta)/k_B T}}{1 + e^{(\Delta_p + \Delta)/k_B T}} & \text{elsewhere} \end{cases}. \tag{A5}$$

