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Author Correction: Picosecond pulsed laser illumination: an ultimate solution for photonic versus thermal processes' contest in SOI photo-activated modulator

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Correction to: *Scientific Reports* https://doi.org/10.1038/s41598-021-04710-w, published online 28 January 2022

The original version of this Article contained errors.

The paragraph following Eq. 34 was incomplete.

"The numerical solution must meet these two boundary conditions."

now reads:

"Note that x_{end} refers to the end of the semiconductor model, at the insulator layer (x_{ins}). The numerical solution must meet these two boundary conditions."

Additionally, Eq. 35 was incorrect and contained a duplication of the term dx'.

$$\frac{\partial^2\phi}{\partial x^2} = -\frac{\partial E}{\partial x} = -\frac{\rho}{\epsilon} \Rightarrow \phi(x) - \phi(0) = -\int_0^x E dx = -\frac{1}{\epsilon}\int_0^x\int_0^{x'} \rho dx' dx' \tag{35}$$

now reads:

$$\frac{\partial^2\phi}{\partial x^2} = -\frac{\partial E}{\partial x} = -\frac{\rho}{\epsilon} \Rightarrow \phi(x) - \phi(0) = -\int_0^x E dx = -\frac{1}{\epsilon}\int_0^x\int_0^{x'} \rho dx'' dx' \tag{35}$$

Lastly, in the Numerical results section, under subheading 'Identifying optimal parameters',

"One can see (Fig. 11), that the smaller wavelength the temperature is smaller."

now reads:

"One can see (Fig. 11), that the longer the wavelength, the smaller the temperature."

The original Article has been corrected.

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