Author Correction: Comprehensive Modeling of Multimode Fiber Sensors for Refractive Index Measurement and Experimental Validation

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The original version of this Article contained errors in Equation 7, which was incorrectly given as:

$$T = \frac{\alpha \sin \theta \cos \theta}{\pi n_m^2 \cos^2 \theta_{\text{cm}} \sqrt{\cos^2 \theta_{\text{cm}} - \cos^2 \theta}}$$

The correct Equation 7 appears below.

$$T = \frac{\alpha \sin \theta \cos \theta}{\pi n_m^2 \cos^2 \theta_{\text{cm}} \sqrt{\cos^2 \theta_{\text{cm}} - \cos^2 \theta}}$$

As a result of the changes to Equation 7, the Abstract,

“The sensors can be employed over a very wide dynamic RI range from 1.316 to over 1.608 at a wavelength of 1550 nm, with the best resolution of $2.2447 \times 10^{-5}$ RIU obtained in Zone II for a 1-cm sensor length.”

now reads:

“The sensors can be employed over a very wide dynamic RI range from 1.316 to over 1.608 at a wavelength of 1550 nm, with the best resolution of $2.2406 \times 10^{-5}$ RIU obtained in Zone II for a 1-cm sensor length.”

Additionally, in Figure 5a, the unit of fiber diameter "μm" was incorrectly given as "mm".

The original Figure 5 and accompanying legend appear below.

In the final paragraph of the Discussion,

“It is also in this Zone that the 2.5-cm and 4-cm sensors have the best relative resolutions of $2.9919 \times 10^{-5}$ RIU and $3.2634 \times 10^{-5}$ RIU, respectively, compared to the other two Zones. For Zone I, the best resolution is achieved by the 4-cm long sensor with a minimum detection level of $1.5438 \times 10^{-3}$ RIU while the 1-cm and 2.5-cm sensors are capable of resolutions of $5.1952 \times 10^{-3}$ RIU and $1.7462 \times 10^{-3}$ RIU, respectively.”

now reads:

“It is also in this Zone that the 2.5-cm and 4-cm sensors have the best relative resolutions of $2.9919 \times 10^{-5}$ RIU and $3.2634 \times 10^{-5}$ RIU, respectively, compared to the other two Zones. For Zone I, the best resolution is achieved by the 4-cm long sensor with a minimum detection level of $1.5438 \times 10^{-3}$ RIU while the 1-cm and 2.5-cm sensors are capable of resolutions of $5.1952 \times 10^{-3}$ RIU and $1.7462 \times 10^{-3}$ RIU, respectively.”
“It is also in this Zone that the 2.5-cm and 4-cm sensors have the best relative resolutions of $2.9847 \times 10^{-5}$ RIU and $3.2517 \times 10^{-5}$ RIU, respectively, compared to the other two Zones. For Zone I, the best resolution is achieved by the 4-cm long sensor with a minimum detection level of $1.6116 \times 10^{-3}$ RIU while the 1-cm and 2.5-cm sensors are capable of resolutions of $5.5905 \times 10^{-3}$ RIU and $1.7528 \times 10^{-3}$ RIU, respectively.

In the second paragraph of the Conclusions,

“For Zone II, the best sensor resolution of $2.2447 \times 10^{-5}$ RIU is achieved for the 1-cm sensor.”

now reads:

“For Zone II, the best sensor resolution of $2.2406 \times 10^{-5}$ RIU is achieved for the 1-cm sensor.”

Lastly, as a result of the changes to Equation 7, the data in Table S1, S2, S3, S5, S6 and S7 in the Supplementary Information was incorrect.

The original Supplementary Information file is available below.

The original Article and accompanying Supplementary Information file has now been corrected.
