Errata for published works

(last updated August 3, 2022)

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1. J. Berk, et al. J. Lightwave Technol. 39, 3950-3960 (2021).

A sign error was made in the exponent appearing in Eq. (5), which should read

$$\widetilde{G}(\mathbf{k}_\parallel;\boldsymbol{\rho}'+\delta\boldsymbol{\rho},z,z'+\delta z)=\widetilde{G}(\mathbf{k}_\parallel;\boldsymbol{\rho}',z,z')e^{-i\mathbf{k}_\parallel\cdot\delta\boldsymbol{\rho}}e^{ik_z\delta z}. \quad (1)$$

Note that the sign of the k_z component remains unchanged since the observation point is in the lower half space, so the z component of the wavevector in the direction of the observation point is $-k_z$. As a result, Eq. (6) becomes

$$\widetilde{\mathbf{E}}_s(\mathbf{k}_\parallel;\mathbf{r}_p+\delta\mathbf{r})=e^{ik_{sp}\delta x}e^{-\kappa_w\delta z}e^{-i\mathbf{k}_\parallel\cdot\delta\boldsymbol{\rho}}e^{ik_z\delta z}\widetilde{\mathbf{E}}_s(\mathbf{k}_\parallel;\mathbf{r}_p), \quad (2)$$

while Eq. (8) becomes

$$\Psi(\phi;\delta\boldsymbol{\rho},\delta z)=k'_{sp}\delta x(1-\cos\phi)-k'_{sp}\delta y\sin\phi-\kappa''_w\delta z. \quad (3)$$

The remaining equations are unchanged. As a result of this error, fringe patterns shown in Fig. 2 were flipped. A corrected version is shown here. Corrections listed do not affect the claims or conclusions of the article.

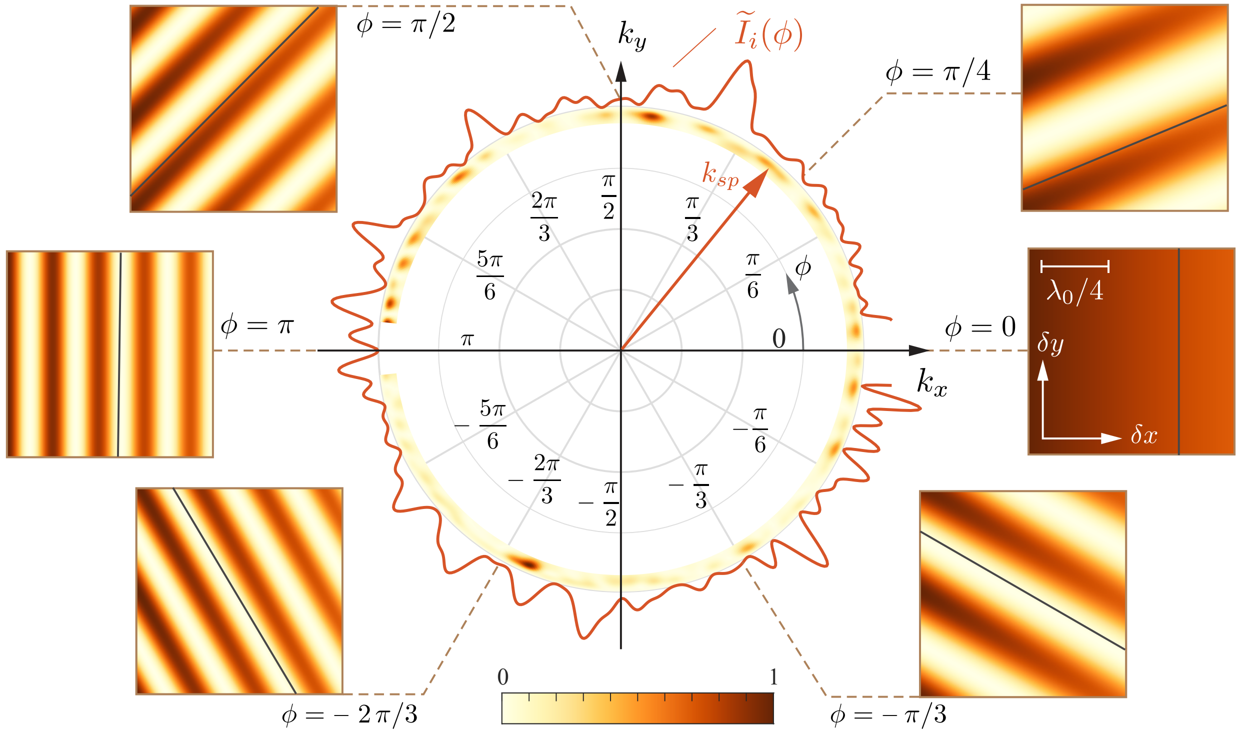

Fig. 1. (center) Example speckle intensity in the Fourier plane and corresponding cross-section $\widetilde{I}_i(\phi)$ taken at $\theta = \Theta$. Note only the scattered speckle intensity has been plotted. (panels) Fringe patterns one would see at different points on the ring from scanning the analyte particle in the x and y directions. In the $\phi = 0$ direction, no fringes are seen as the phase of $\mathbf{E}_s$ does not change, so only decay effects are seen. At each ϕ, the fringe pattern has an unknown offset, as depicted by the solid black lines, due to the random phase of the background speckle.

2. M. R. Foreman, Sci. Reps. 9, 8359 (2019).

- Above Eq. (8), the definition of the unit vector should read $\hat{\boldsymbol{\kappa}} = |\boldsymbol{\kappa}|/\kappa$.

3. F. Sedlmeir, et al. Phys. Rev. Applied 7, 024029 (2017).

- In Eq. (4), the k_z term in the exponent should be proportional to k_z^2 not to k_z.

4. E. Kim, et al. Appl. Phys. Lett 106, 161101 (2015).

- In Eq. (2) a factor of -1 has been omitted. It should read:

$$n_r x \left[-\frac{1}{\lambda}\frac{d\lambda}{dT} + \frac{1}{R}\frac{dR}{dT} + \frac{1}{n_r}\frac{dn_r}{dT} \right] = \frac{M}{(m^2-1)^{3/2}}\frac{dm}{dT}.$$

All presented data is nevertheless correct as this omission was not made in the numerical calculations.

5. M. R. Foreman and F. Vollmer, Phys. Rev. Lett. 114, 118001 (2015).

- In Eq. (11) a factor of $1/R_2$ has been omitted. It should read:

$$\frac{\Delta\omega_1}{\omega} \approx \frac{n_p\,(1-\bar{\nu}U_0\Delta R_{lq}/R_2)}{n_p+\bar{\nu}U_0(n_s-n_p)} - 1.$$

6. M. D. Baaske, et al. Nature Nanotech. 9, 933-939 (2014).

- Supplementary information - Section 2.3. The calculated size of the DNA strand was incorrect. Assuming a single base is 3.4 Å × 10 Å, and assuming the bases are arranged such that long edges of the bases are parallel, the total length of a 22 base strand is 7.84 nm, and not the 3.74 nm quoted. Accordingly the expected unenhanced resonance shift is calculated to be 0.00046 fm, whilst the enhanced resonance shift is then 0.37 fm.

- Supplementary information - Section 3. The sentence which reads "Noting the peak amplitude in the presence of the NP is ~ 4, as compared to the amplitude at the same position without the NP of ~ 0.25, the maximum intensity enhancement . . . " should read "Noting the peak amplitude in the presence of the NP is ~ 4, as compared to the amplitude at the same position without the NP of ~ 0.5, the maximum intensity enhancement . . . "

7. M. R. Foreman, et al. Eur. Phys. J. Spec. Top. 223, 1971-1988 (2014).

- In Table 1 of this article, a sign error was made in the calculation of the refractive index of polystyrene. The correct table polarisabilities are given in Table 1 below. We also note particle polarisabilities are calculated assuming particles are in air.

Table 1. Corrected polarisability for polystyrene particles.

		5 nm radius			50 nm radius		
Particle material	λ (nm)	$\Re[\alpha]$ (nm^3)	$\Im[\alpha]$ (nm^3)	$\|\alpha\|^2$ (10^6 nm^6)	$\Re[\alpha]$ (10^6 nm^3)	$\Im[\alpha]$ (10^3 nm^3)	$\|\alpha\|^2$ (10^{12} nm^6)
Poly-	1560*	504.0	-	0.2540	0.5051	-	0.2551
styrene	1080	516.3	-	0.2665	0.5187	-	0.2691
	670	526.0	-	0.2766	0.5317	-	0.2828
	405	561.2	-	0.3149	0.5675	-	0.3263

8. M. R. Foreman, et al. Opt. Express 22, 5491-5511 (2014).

- In Figure 1, the label on the vertical axis which is printed as "AI_0", should read "$(1-A)I_0$" to be consistent with the definition of the lineshape given in Eq. (1).

- The sentence reading "Furthermore, smaller cavities imply smaller mode volumes such that the variance of temperature fluctuations, σ_t, are also smaller [25]." is incorrect. The variance of temperature flucations according to [25] goes as $1/V$, such that smaller volumes imply larger fluctuations.

- Under Eq. (20), the permitivitty factor in the definition of the electromagnetic energy density should be that of the cavity, i.e. ϵ_c, such that the full expression reads $U = \frac{1}{2}\epsilon_0\epsilon_c \int |\mathbf{E}(\mathbf{r})|^2 dV$

9. M. R. Foreman and F. Vollmer, Phys. Rev. A 88, 023831 (2013)

- A sign error was made in Eq. (6). It should read:

$$k_{12}^2 - k_{12}(k_1 + k_2 + iJ) + k_1k_2 = -ik_1J - K$$

This error has also been propagated to Eq. (9).

10. M. R. Foreman and F. Vollmer, New J. Phys. 15, 083006 (2013)

- Inner radius of core shell nanoparticle is r_{IV}, whilst outer radius is r_{III}. The ratio of inner to outer ratio is thus $f = r_{IV}/r_{III} < 1$. On page 17 and on the horizontal axis of the inset of Figure 5, this ratio is incorrectly defined.

11. M. R. Foreman *Informational limits in optical polarimetry and vectorial imaging* (Springer, 2012).

- In Eq. (4.52) ϕ should be replaced with φ.
- In Eq. (4.55) a factor of -1 has been omitted.
- In the caption of Figs 4.6 and 4.7 the values of $\bar{\zeta}$ have been incorrectly quoted. q is quoted correctly throughout. The parameter values for curves in Fig 2 are (a), (b) and (c) are: $\bar{\zeta} = 1$ ($q = 0$, coherent), (b) $\bar{\zeta} = 2/3$ ($q = 0.62$), and (c) $\bar{\zeta} = 1/3$ ($q = 0.89$) and similarly for (d), (e) and (f). In Figure 3 the correct parameters running from top to bottom are $\bar{\zeta} = 1$ ($q = 0$, coherent), $\bar{\zeta} = 2/3$ ($q = 0.62$), and $\bar{\zeta} = 1/3$ ($q = 0.89$). Values of $\bar{\zeta}$ are also incorrectly quoted in the text following Eq. (4.88). The quoted values should be $\bar{\zeta} = 1, 2/3, 1/3$.

12. M. R. Foreman and P. Török, J. Mod. Opt. 58, 339-364 (2011)

- In Eq. (15c) a factor of -1 has been omitted.

13. M. R. Foreman and P. Török, Phys. Rev. A 82, 043835 (2010)

- The sentence which reads "...could be found by integrating the N_w-dimensional χ^2-squared probability distribution from 0 to c^2." should read "...could be found by integrating the N_w-dimensional χ^2-squared probability distribution from 0 to c_0^2."

14. M. R. Foreman and P. Török, J. Opt. Soc. Am. A 26, 2470-2479 (2009).

- In the caption of Figs 2. and 3 the values of $\bar{\zeta}$ have been incorrectly quoted. q is quoted correctly throughout. The parameter values for curves in Fig 2 are (a), (b) and (c) are: $\bar{\zeta} = 1$ ($q = 0$, coherent), (b) $\bar{\zeta} = 2/3$ ($q = 0.62$), and (c) $\bar{\zeta} = 1/3$ ($q = 0.89$) and similarly for (d), (e) and (f). In Figure 3 the correct parameters running from top to bottom are $\bar{\zeta} = 1$ ($q = 0$, coherent), $\bar{\zeta} = 2/3$ ($q = 0.62$), and $\bar{\zeta} = 1/3$ ($q = 0.89$). Values of $\bar{\zeta}$ are also incorrectly quoted in the text following Eqs. (43). The quoted values should be $\bar{\zeta} = 1, 2/3, 1/3$.

15. M. R. Foreman, C. Macias-Romero and P. Török, Opt. Lett. 33, 1020-1022 (2008).

- In Equation 2, extraneous factors of 2 where included in the expressions for a_1^z and a_2^z. The correct forms are $a_1^z = \sin\theta\cos\phi$ and $a_2^z = \sin\theta\sin\phi$.