

# Dielectric antennas - a suitable platform for controlling magnetic dipolar emission: errata

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**Abstract:** We report and correct misprints in our manuscript.

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## References and links

1. M. K. Schmidt, R. Esteban, J. J. Sáenz, I. Suárez-Lacalle, S. Mackowski, and J. Aizpurua, "Dielectric antennas - a suitable platform for controlling magnetic dipolar emission," *Opt. Express* **20**(13), 13636–13650 (2012).
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There is an error in the lower limit of the summation indices in Eqs. (1)-(8). Summations in all those expressions should be for  $n = 1, 2, \dots$  instead of  $n = 0, 1, \dots$ . Also, expressions in parentheses in Eqs. (3) and (7) were mistakenly squared. Corrected equations are listed:

$$\frac{\Gamma_{RAD}^{\perp,e}}{\Gamma_0} = \frac{3}{2} \sum_{n=1}^{\infty} (2n+1)n(n+1) \left| \frac{j_n(kz) - a_n h_n^{(1)}(kz)}{kz} \right|^2, \quad (1)$$

$$\frac{\Gamma_{TOT}^{\perp,e}}{\Gamma_0} = 1 - \frac{3}{2} \Re \sum_{n=1}^{\infty} (2n+1)n(n+1) a_n \left[ \frac{h_n^{(1)}(kz)}{kz} \right]^2, \quad (2)$$

$$\frac{\Gamma_{RAD}^{\parallel,e}}{\Gamma_0} = \frac{3}{4} \sum_{n=1}^{\infty} (2n+1) \left[ |j_n(kz) - b_n h_n^{(1)}(kz)|^2 + \left| \frac{\psi_{n'}(kz) - a_n \zeta_{n'}(kz)}{kz} \right|^2 \right], \quad (3)$$

$$\frac{\Gamma_{TOT}^{\parallel,e}}{\Gamma_0} = 1 - \frac{3}{4} \sum_{n=1}^{\infty} (2n+1) \Re \left[ a_n \left[ \frac{\zeta_{n'}(kz)}{kz} \right]^2 + b_n [h_n^{(1)}(kz)]^2 \right], \quad (4)$$

$$\frac{\Gamma_{RAD}^{\perp,m}}{\Gamma_0} = \frac{3}{2} \sum_{n=1}^{\infty} (2n+1)n(n+1) \left| \frac{j_n(kz) - b_n h_n^{(1)}(kz)}{kz} \right|^2, \quad (5)$$

$$\frac{\Gamma_{TOT}^{\perp,m}}{\Gamma_0} = 1 - \frac{3}{2} \Re \sum_{n=1}^{\infty} (2n+1)n(n+1) b_n \left[ \frac{h_n^{(1)}(kz)}{kz} \right]^2, \quad (6)$$

$$\frac{\Gamma_{RAD}^{\parallel,m}}{\Gamma_0} = \frac{3}{4} \sum_{n=1}^{\infty} (2n+1) \left[ |j_n(kz) - a_n h_n^{(1)}(kz)|^2 + \left| \frac{\psi_{n'}(kz) - b_n \zeta_{n'}(kz)}{kz} \right|^2 \right], \quad (7)$$

$$\frac{\Gamma_{TOT}^{n,m}}{\Gamma_0} = 1 - \frac{3}{4} \sum_{n=1}^{\infty} (2n+1) \Re \left[ b_n \left[ \frac{\zeta_n(kz)}{kz} \right]^2 + a_n [h_n^{(1)}(kz)]^2 \right]. \quad (8)$$

The relations between dipolar polarizabilities and respective Mie coefficients right after Eq. (15) in the paper have been misprinted. In the correct form those should state:

$$a_1 = -ik^3 / (6\pi)\alpha_E,$$

$$b_1 = -ik^3 / (6\pi)\alpha_M.$$

The misprints have no influence on the results presented in our publication [1], since right expressions were used to perform the calculations.