

# Erratum for: Why you should not use the electric field to quantize in nonlinear optics

Nicolás Quesada

Equation (22) of Ref. [1] reads

$$\tilde{H}_{NL} = \frac{2}{3} \int d\mathbf{r} \chi^{(2)} \tilde{\mathbf{E}}^3 = -\frac{2}{3} \int d\mathbf{r} \eta^{(2)} \mathbf{D}^3 \quad (1)$$

It should read

$$\tilde{H}_{NL} = \frac{2}{3} \epsilon_0 \int d\mathbf{r} \chi^{(2)} \tilde{\mathbf{E}}^3 = -\frac{2}{3} \int d\mathbf{r} \eta^{(2)} \mathbf{D}^3 \quad (2)$$

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- [1] Nicolás Quesada and J. E. Sipe. Why you should not use the electric field to quantize in nonlinear optics. *Opt. Lett.*, 42(17):3443–3446, Sep 2017. doi: 10.1364/OL.

42.003443. URL <http://ol.osa.org/abstract.cfm?URI=ol-42-17-3443>.