

Erratum: Measuring the dynamics of circular dichroism in a pump-probe experiment with a Babinet-Soleil compensator

Claire Niezborala, François Hache

► **To cite this version:**

Claire Niezborala, François Hache. Erratum: Measuring the dynamics of circular dichroism in a pump-probe experiment with a Babinet-Soleil compensator. *Journal of the Optical Society of America B*, Optical Society of America, 2007, 24 (4), pp.1012. 10.1364/JOSAB.24.001012 . hal-00821502

HAL Id: hal-00821502

<https://hal-polytechnique.archives-ouvertes.fr/hal-00821502>

Submitted on 14 May 2014

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Measuring the dynamics of circular dichroism in a pump–probe experiment with a Babinet–Soleil compensator: erratum

Claire Niezborala and François Hache

Laboratoire d'Optique et Biosciences, Ecole Polytechnique-CNRS-INSERM-91128 Palaiseau cedex, France

Received December 21, 2006;

posted December 21, 2006 (Doc. ID 78362); published March 15, 2007

OCIS codes: 320.7120, 120.2130.

The calculation in Ref. 1 utilized the Jones matrix formalism developed in Ref. 2. Unfortunately, there has been a confusion in the definition of the right- and left-handed polarization of light, which results in a sign error in the formulas of Ref. 1. With the usual definition of the circular dichroism given in Eq. (3), η should be replaced by $-\eta$ in all the subsequent equations. The same is true for $\Delta\eta$. In particular, Eq. (8) should read

$$I^{out} = e^{-\alpha L} \left[\left(\epsilon - \frac{\delta}{2} \right)^2 + \left(X - \frac{\eta}{4} \right)^2 \right], \quad (1)$$

and Eq. (18) should read

$$LI = -\Delta\alpha LZ^2 - \frac{1}{2}\Delta\eta Z + K_8. \quad (2)$$

The signs of the experimental values of η and $\Delta\eta$ measured in the article are nevertheless correct.

A typo also occurred in Eq. (15), which should read

$$Z = Y - \frac{\Delta\eta e^{-\Delta\alpha L}}{4(e^{-\Delta\alpha L} + 1)}. \quad (3)$$

REFERENCES

1. C. Niezborala and F. Hache, "Measuring the dynamics of circular dichroism in a pump–probe experiment with a Babinet–Soleil compensator," *J. Opt. Soc. Am. B* **23**, 2418–2424 (2006).
2. X. Xie and J. D. Simon, "Picosecond circular dichroism spectroscopy: a Jones matrix analysis," *J. Opt. Soc. Am. B* **7**, 1673–1684 (1990).