

Letters

Corrections to “Computational Modeling Evidence of a Nonthermal Electromagnetic Interaction Mechanism With Living Cells: Microwave Nonlinearity in the Cellular Sodium Ion Channel”

Nikolay S. Stoykov, Joseph W. Jerome,
Lauren C. Pierce, and Allen Taflove

In the above paper [1], we reported computational modeling evidence of microwave nonlinearity in the cellular sodium ion channel. In that study, we adapted and used with permission a code developed by C.-W. Shu, Brown University, Providence, RI. We have discovered that, during the adaptation, data errors were introduced into the code. After the errors were corrected, we were unable to reproduce the microwave nonlinearity at carrier frequencies in the 500-MHz–8-GHz range. Specifically, we observed no oscillations in the current density at the carrier frequency, contrary to the time course presented in [1, Fig. 1]. We did observe nonlinear behavior at carrier and modulation frequencies in the significantly higher terahertz region, but this will require additional study to confirm.

REFERENCES

- [1] N. S. Stoykov, J. W. Jerome, L. C. Pierce, and A. Taflove, “Computational modeling evidence of a nonthermal electromagnetic interaction mechanism with living cells: Microwave nonlinearity in the cellular sodium ion channel,” *IEEE Trans. Microw. Theory Tech.*, vol. 52, no. 8, pp. 2040–2045, Aug. 2004.

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N. S. Stoykov is with the Rehabilitation Institute of Chicago, Chicago, IL 60611 USA, and also with the Department of Physical Medicine and Rehabilitation, Northwestern University, Chicago, IL 60611 USA (e-mail: n-stoykov@northwestern.edu).

J. W. Jerome is with the Department of Mathematics, Northwestern University, Evanston, IL 60208 USA (e-mail: j-jerome@northwestern.edu).

L. C. Pierce is with the Feinberg School of Medicine, Northwestern University, Chicago, IL 60611 USA (e-mail: l-pierce@northwestern.edu).

A. Taflove is with the Department of Electrical Engineering and Computer Science, Northwestern University, Evanston, IL 60208 USA (e-mail: taflove@northwestern.edu).

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