https://doi.org/10.1038/s41566-019-0449-8

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of a laser frequency comb. This represents the first *f*–2*f* stabilization of a frequency comb using a single amorphous material and demonstrates how photonic waveguides can serve as an appealing platform for both $\chi^{(2)}$ and $\chi^{(3)}$

If the separated charges can be stabilized at trap sites or defects in the material, then the static electric field will induce a $\chi_{\mathrm{eff}}^{(2)}$ in the material that oscillates sinusoidally along the waveguide length with the correct period to quasi-phase-match SHG. The generated second-harmonic light interferes with the fundamental to produce more charge separation, which, in turn, enables stronger SHG. This positive feedback continues until the process saturates.

Group-velocity matching. In contrast to previous studies of photoinduced SHG in SiN waveguides[9,10], which observed SHG in any waveguide, regardless of geometry, we only generate the second harmonic across a small range of waveguide widths. This difference is

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Acknowledgements

The authors thank G. Moille, N. Sanford and the National Institute of Standards and Technology (NIST) Boulder Editorial Review Board for providing helpful feedback on this manuscript, and K. Dorney, J. Ellis, H. Kapteyn and M. Murnane for the timely loan of a polarizer. This work is supported by AFOSR under award no. FA9550-16-1-0016,