

Full list of journal publications

- [1] T. W. Hughes, I. A. D. Williamson, M. Minkov, and S. Fan, “Wave physics as an analog recurrent neural network,” Under review in *Science Advances*.
- [2] M. Minkov, D. Gerace, and S. Fan, “Doubly resonant $\chi^{(2)}$ nonlinear photonic crystal cavity based on a bound state in the continuum,” *Optica* **8**, 1039 (2019). Featured online: Stanford, phys.org, LFW.
- [3] A. Dutt, M. Minkov, Q. Lin, L. Yuan, D. A. B. Miller, and S. Fan, “Experimental band structure spectroscopy along a synthetic dimension,” *Nature Comm.* **10**, 3122 (2019).
- [4] I. A. D. Williamson, T. W. Hughes, M. Minkov, B. Bartlett, S. Pai, and S. Fan, “Re-programmable electro-optic nonlinear activation functions for optical neural networks,” *IEEE JSTQE* **26**, 7700412 (2019).
- [5] M. Minkov, M. Pinkwart, and P. Schupp, “Entropy methods for CMB analysis of anisotropy and non-Gaussianity,” *99*, 103501 (2019).
- [6] X. Ge, M. Minkov, S. Fan, X. Li, and W. Zhou, “Laterally confined photonic crystal surface emitting laser incorporating monolayer tungsten disulfide,” *npj 2D Materials and Applications* **3**, 16 (2019).
- [7] S. Buddhiraju, Y. Shi, A. Song, C. Wojcik, M. Minkov, I. A. D. Williamson, A. Dutt, and S. Fan, “Absence of unidirectionally propagating surface plasmon-polaritons in nonreciprocal plasmonics,” Under review in *Nature Photonics*.
- [8] A. Dutt, M. Minkov, Q. Lin, L. Yuan, D. A. Miller, and S. Fan, “Experimental demonstration of dynamical input isolation in nonadiabatically modulated photonic cavities,” *ACS Photonics* **6**, 162–169 (2018).
- [9] M. Minkov, I. A. D. Williamson, M. Xiao, and S. Fan, “Zero-index bound states in the continuum,” *Phys. Rev. Lett.* **121**, 263901 (2018).
- [10] T. W. Hughes[†], M. Minkov[†], I. A. D. Williamson, and S. Fan, “Adjoint method and inverse design for nonlinear nanophotonic devices,” *ACS Photonics* **5**, 4781–4787 (2018).
[†]authors contributed equally.
- [11] M. S. Mohamed, Y. Lai, M. Minkov, V. Savona, A. Badolato, and R. Houdré, “Influence of disorder and finite-size effects on slow light transport in extended photonic crystal coupled-cavity waveguides,” *ACS Photonics* **5**, 4846–4853 (2018).
- [12] M. Minkov and S. Fan, “Unidirectional light transport in dynamically modulated waveguides,” *Phys. Rev. Applied* **10**, 044028 (2018).
- [13] Y. Lai, M. S. Mohamed, B. Gao, M. Minkov, R. W. Boyd, V. Savona, R. Houdré, and A. Badolato, “Ultra-wide-band structural slow light,” *Sci. Rep.* **8**, 14811 (2018).
- [14] C. Guo, M. Xiao, M. Minkov, Y. Shi, and S. Fan, “Isotropic wavevector domain image filters by a photonic crystal slab device,” *J. Opt. Soc. Am. A* **35**, 1685–1691 (2018).
- [15] T. W. Hughes, M. Minkov, Y. Shi, and S. Fan, “Training of photonic neural networks through *in situ* backpropagation and gradient measurement,” *Optica* **5**, 864–871 (2018). Featured online: OSA, Stanford, phys.org.

- [16] M. Minkov and S. Fan, “Localization and time-reversal of light through dynamic modulation,” *Phys. Rev. B* *97*, 060301 (2018).
- [17] Y. Shi, Q. Lin, M. Minkov, and S. Fan, “Nonreciprocal Optical Dissipation Based on Direction-Dependent Rabi Splitting,” *IEEE JSTQE* *24*, 3500107 (2018).
- [18] C. Guo, M. Xiao, M. Minkov, Y. Shi, and S. Fan, “Photonic crystal slab Laplace operator for image differentiation,” *Optica* *5*, 251–256 (2018).
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- [21] M. Minkov, Y. Shi, and S. Fan, “Exact solution to the steady-state dynamics of a periodically modulated resonator,” *APL Photonics* *2*, 076101 (2017).
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