

Stanford



Momchil Minkov

Postdoctoral Research Fellow, Electrical Engineering

Bio

HONORS AND AWARDS

- Chorafas Foundation Award, Weizmann Institute of Science (10/2015)
- EPFL Excellence Scholarship, EPFL Lausanne, Switzerland (09/2010-02/2012)

PROFESSIONAL EDUCATION

- Doctor of Philosophy, Ecole Polytechnique Federale Lausanne (2016)
- Bachelor of Science, Jacobs University Bremen (2010)
- Master of Science, Ecole Polytechnique Federale Lausanne (2012)

STANFORD ADVISORS

- Shanhui Fan, Postdoctoral Faculty Sponsor

Publications

PUBLICATIONS

- **Experimental Demonstration of Dynamical Input Isolation in Nonadiabatically Modulated Photonic Cavities** *ACS PHOTONICS*
Dutt, A., Minkov, M., Lin, Q., Yuan, L., Miller, D. B., Fan, S.
2019; 6 (1): 162–69
- **Zero-Index Bound States in the Continuum** *PHYSICAL REVIEW LETTERS*
Minkov, M., Williamson, I. D., Xiao, M., Fan, S.
2018; 121 (26)
- **Adjoint Method and Inverse Design for Nonlinear Nanophotonic Devices** *ACS PHOTONICS*
Hughes, T. W., Minkov, M., Williamson, I. D., Fan, S.
2018; 5 (12): 4781–87
- **Influence of Disorder and Finite-Size Effects on Slow Light Transport in Extended Photonic Crystal Coupled-Cavity Waveguides** *ACS PHOTONICS*
Mohamed, M., Lai, Y., Minkov, M., Savona, V., Badolato, A., Houdre, R.
2018; 5 (12): 4846–53
- **Nonreciprocal Optical Dissipation Based on Direction-Dependent Rabi Splitting** *IEEE JOURNAL OF SELECTED TOPICS IN QUANTUM ELECTRONICS*
Shi, Y., Lin, Q., Minkov, M., Fan, S.
2018; 24 (6)
- **Unidirectional light transport in dynamically modulated waveguides** *PHYSICAL REVIEW APPLIED*
Minkov, M., Fan, S.
2018; 10 (4)

- **Isotropic wavevector domain image filters by a photonic crystal slab device** *JOURNAL OF THE OPTICAL SOCIETY OF AMERICA A-OPTICS IMAGE SCIENCE AND VISION*
Guo, C., Xiao, M., Minkov, M., Shi, Y., Fan, S.
2018; 35 (10): 1685–91
- **Training of photonic neural networks through in situ backpropagation and gradient measurement** *OPTICA*
Hughes, T. W., Minkov, M., Shi, Y., Fan, S.
2018; 5 (7): 864–71
- **Low index contrast heterostructure photonic crystal cavities with high quality factors and vertical radiation coupling** *APPLIED PHYSICS LETTERS*
Ge, X., Minkov, M., Fan, S., Li, X., Zhou, W.
2018; 112 (14)
- **Photonic crystal slab Laplace operator for image differentiation** *OPTICA*
Guo, C., Xiao, M., Minkov, M., Shi, Y., Fan, S.
2018; 5 (3): 251–56
- **Localization and time-reversal of light through dynamic modulation** *PHYSICAL REVIEW B*
Minkov, M., Fan, S.
2018; 97 (6)
- **Room Temperature Photonic Crystal Surface Emitting Laser with Synthesized Monolayer Tungsten Disulfide**
Ge, X., Minkov, M., Choudhury, T., Chubarov, M., Fan, S., Redwing, J., Li, X., Zhou, W., IEEE
IEEE.2018: 167–68
- **Scaling towards Efficient Monolayer WS₂ Photonic Crystal Lasers**
Ge, X., Minkov, M., Li, X., Fan, S., Zhou, W., IEEE
IEEE.2018: 21–22
- **Nonreciprocal optical manipulation using dynamic modulation**
Shi, Y., Minkov, M., Fan, S., Lin, Q., IEEE
IEEE.2018
- **Broadband Slow Light in Genetically Optimized Coupled-Cavity Waveguides with GBP Exceeding 0.45**
Lai, Y., Gao, B., Abdel-Aliem, M., Minkov, M., Boyd, R. W., Savona, V., Houdre, R., Badolato, A., IEEE
IEEE.2017
- **Enhanced Light Emission from MoS₂ in Heterostructure Photonic Crystal Cavities**
Ge, X., Minkov, M., Chowdhury, F., Fan, S., Li, X., Zhou, W., IEEE Photon Soc
IEEE.2017: 461–62