

List of publications

Dragomir N. Neshev

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Book chapters

1. **D. N. Neshev**, “*Nanostructured materials: implications for information technology*,” in Nanotechnology toward the Sustainocene. Ed. T. Faunce, Chapter 7, pp. 141–159, Pan Stanford (2014). ISBN 978-981-4463-76-8 (Hardcover), 978-981-4463-77-5 (eBook).
2. **D. N. Neshev**, A. A. Sukhorukov, and Yu. S. Kivshar, “*Nonlinear manipulation of multi-color beams in coupled optical waveguides*,” in Nonlinear Photonics and Novel Optical Phenomena, Series: Springer Series in Optical Sciences, Vol. 170 Eds. Z. Chen and R. Morandotti, Chapter 4, pp. 111–132, Springer, New York (2012). ISBN 978-1-4614-3537-2.
3. **D. N. Neshev**, A. A. Sukhorukov, W. Z. Krolikowski, and Yu. S. Kivshar, “*Polychromatic light localization in periodic structures*,” in Nonlinearities in Periodic Structures and Metamaterials, Eds. C. Denz, S. Flach, and Yu. S. Kivshar, Chapter 8, pp. 145–162, Springer-Verlag Berlin (2009). ISBN 13: 9783642020650, ISBN 10: 3642020658.

Journal articles

1. M. Rahmani, L. Xu, A. E. Miroshnichenko, A. Komar, R. Camacho-Morales, H. Chen, Y. Zarate, Dr. S. Kruk, Prof. **D. N. Neshev**, Prof. Y. S. Kivshar “*Reversible thermal tuning of all-dielectric metasurfaces*,” accepted Adv. Fun. Mat. (2017)
2. R. Guo, M. Decker, F. Setzpfandt, X. Gai, D.-Y. Choi, R. Kiselev, A. Chipouline, I. Staude, T. Pertsch, **D. N. Neshev**, Yu. S. Kivshar, “*High bit-rate ultra-compact light routing with mode-selective on-chip nanoantennas*,” accepted Science Adv. (2017)
3. S. S. Kruk, R. Camacho-Morales, L. Xu, M. Rahmani, D. Smirnova, L. Wang, H. H. Tan, C. Jagadish, **D. N. Neshev**, and Yu. S. Kivshar, “*Nonlinear optical magnetism revealed by second-Harmonic generation in nanoantennas*,” Nano Lett. **17**, DOI: 10.1021/acs.nanolett.7b01488 (2017).
4. K. Wang, Yu Shi, A. S. Solntsev, S. Fan, A. A. Sukhorukov, and **D. N. Neshev**, “*Non-reciprocal geometric phase in nonlinear frequency conversion*,” Opt. Lett. **42**, 1990–1993 (2017).
5. M. Guasoni, L. Carletti, **D. N. Neshev**, and C. De Angelis, “*Theoretical model for pattern engineering of harmonic generation in all-dielectric nanoantennas*,” IEEE Journal of Quantum Electronics **53**, 6100205(1–5) (2017).
6. H. Chen, V. Corboliou, A. S. Solntsev, D.-Y. Choi, M. A. Vincenti, D. de Ceglia, C. De Angelis, Y. Lu, and **D. N. Neshev**, “*Enhanced second harmonic generation from two-dimensional MoSe₂ on a silicon waveguide*,” Light: Science & Applications, doi: 10.1038/lsa.2017.60 (2017).
7. R. Rajasekharan, M. Sun, X. He, E. Balaur, A. Minovich, **D. N. Neshev**, S. Skafidas, A. Roberts, “*Plasmonic colour filters based on coaxial holes in aluminium*,” Materials **10**, 383(1–6) (2017).
8. N. Bontempi, K. E. Chong, H. W. Orton, I. Staude, D.-Y. Choi, I. Alessandri, Y. S. Kivshar, and **D. N. Neshev**. “*Highly sensitive biosensors based on all-dielectric nanoresonators*,” Nanoscale **9**, 4972–4980 (2017).
9. L. Stoyanov, N. Dimitrov, I. Stefanov, **D. N. Neshev**, and A. Dreischuh, “*Optical waveguiding by necklace and azimuthon beams in nonlinear media*,” J. Opt. Soc. Am. B **34**, 801–807 (2017).
10. M. Rahmani, A. Shorokhov, B. Hopkins, A. Miroshnichenko, M. Shcherbakov, R. Camacho-Morales, A. Fedyanin, **D. N. Neshev**, and Y. S. Kivshar, “*Nonlinear symmetry breaking in symmetric oligomers*,” ACS Photon. **4**, 454–461 (2017).

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 12. L. Wang, S. Kruk, L. Xu, M. Rahmani, D. Smirnova, A. Solntsev, I. Kravchenko, **D. N. Neshev**, and Y. Kivshar, “*Shaping the third-harmonic radiation from silicon nanodimers*,” Nanoscale **9**, 2201–2206 (2017).
 13. E. V. Melik-Gaykazyan, M. R. Shcherbakov, A. S. Shorokhov, I. Staude, I. Brener, **D. N. Neshev**, Yu. S. Kivshar, and A. A. Fedyanin, “*Third-harmonic generation from Mie-type resonances of isolated all-dielectric nanoparticles*,” Philosophical Transactions A, **375**, 20160281(1–9) (2017).
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16. L. Wang, S. Kruk, H. Tang, T. Li, I. Kravchenko, **D. N. Neshev**, and Y. S. Kivshar, “*Greyscale transparent metasurface holograms*,” Optica **3**, 1504–1505 (2016).
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 18. T. Liu, A. S. Solntsev, A. Boes, T. Nguyen, C. Will, A. Mitchell, **D. N. Neshev**, and A. A. Sukhorukov, “*Experimental demonstration of bidirectional light transfer in adiabatic waveguide structures*,” Opt. Lett. **41**, 5278–5281 (2016).
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 22. S. Kruk, B. Hopkins, I. Kravchenko, A. Miroschnichenko, **D. N. Neshev**, and Yu. S. Kivshar “*Broadband highly-efficient dielectric metasurfaces for polarization control*,” APL Photon. **1**, 030801 (2016); front cover for Issue 3, vol. 1, June 2016
 23. L. Carletti, A. Locatelli, **D. N. Neshev**, and C. De Angelis, “*Shaping the radiation pattern of second harmonic generation from AlGaAs dielectric nanoantennas*,” ACS Photonics **3**, 1500–1507 (2016).
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Patents

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