

List of Publications

Anton Nalitov

1. I. Chestnov, Y. G. Rubo, [A. Nalitov](#), and A. Kavokin
Pseudoconservative dynamics of coupled polariton condensates
Phys. Rev. Research **3**, 033187 (2021)
2. D. D. Solnyshkov, L. Bessonart, [A. Nalitov](#), and G. Malpuech
Kibble-Zurek mechanism in polariton graphene
Phys. Rev. B **104**, 035423 (2021)
3. S. Mukherjee, V. K. Kozin, [A. V. Nalitov](#), I. A. Shelykh, Z. Sun, D. M. Myers, B. Ozden, J. Beaumariage, M. Steger, L. N. Pfeiffer, K. West, and D. W. Snoke
Dynamics of spin polarization in tilted polariton rings
Phys. Rev. B **103**, 165306 (2021)
4. S. V. Koniakhin, G. Malpuech, D. Solnyshkov, and [A. V. Nalitov](#)
Topological turbulence in spin-orbit-coupled driven-dissipative quantum fluids of light generates high-angular-momentum states
Europhysics Letters, **133**, 6 (2021)
5. E. D. Cherotchenko, H. Sigurdsson, A. Askitopoulos, and [A. V. Nalitov](#)
Optically controlled polariton condensate molecules
Phys. Rev. B **103**, 115309 (2021)
6. D. D. Solnyshkov, C. Leblanc, L. Bessonart, [A. Nalitov](#), Jiahuan Ren, Qing Liao, Feng Li, and G. Malpuech
Quantum metric and wave packets at exceptional points in non-Hermitian systems
Phys. Rev. B **103**, 125302 (2021)
7. A. V. Yulin, [A. V. Nalitov](#), and I. A. Shelykh
Spinning polariton vortices with magnetic field
Phys. Rev. B **101**, 104308 (2020)
8. H. Sigurdsson, Y. S. Krivosenko, I. V. Iorsh, I. A. Shelykh, and [A. V. Nalitov](#)
Spontaneous topological transitions in a honeycomb lattice of exciton-polariton condensates due to spin bifurcations
Phys. Rev. B **100**, 235444 (2019)
9. A. V. Yulin, V. K. Kozin, [A. V. Nalitov](#), and I. A. Shelykh
Resonant excitation of acoustic waves in one-dimensional exciton-polariton systems
Phys. Rev. A **100**, 043610 (2019)
10. [A. V. Nalitov](#), H. Sigurdsson, S. Morina, Y. S. Krivosenko, I. V. Iorsh, Y. G. Rubo, A. V. Kavokin, and I. A. Shelykh
Optically trapped polariton condensates as semiclassical time crystals
Phys. Rev. A **99**, 033830 (2019)
11. M. Klaas, O. A. Egorov, T. C. H. Liew, [A. Nalitov](#), V. Marković, H. Suichomel, T. H. Harder, S. Betzold, E. A. Ostrovskaya, A. Kavokin, S. Klembt, S. Höfling, and C. Schneider
Nonresonant spin selection methods and polarization control in exciton-polariton condensates
Phys. Rev. B **99**, 115303 (2019)
12. I. A. Shelykh, [A. V. Nalitov](#), and I. V. Iorsh
Optical analog of Rashba spin-orbit interaction in asymmetric polariton waveguides
Phys. Rev. B **98**, 155428 (2018)
13. M. Waldherr, N. Lundt, M. Klaas, S. Betzold, M. Wurdack, V. Baumann, E. Estrecho, [A. Nalitov](#), E. Cherotchenko, H. Cai, E. A. Ostrovskaya, A. V. Kavokin, S. Tongay, S. Klembt, S. Höfling, and C. Schneider
Observation of bosonic condensation in a hybrid monolayer MoSe₂-GaAs microcavity
Nat. Comm. **9**, 3286 (2018)
14. V. K. Kozin, I. A. Shelykh, [A. V. Nalitov](#), and I. V. Iorsh
Topological metamaterials based on polariton rings
Phys. Rev. B **98**, 125115 (2018)
15. A. Askitopoulos, [A. V. Nalitov](#), E. S. Sedov, L. Pickup, E. D. Cherotchenko, Z. Hatzopoulos, P. G. Savvidis, A. V. Kavokin, and P. G. Lagoudakis
All-optical quantum fluid spin beam splitter

- Phys. Rev. B **97**, 235303 (2018)
16. S. V. Andreev, [A. V. Nalitov](#)
Hanle model of a spin-orbit coupled Bose-Einstein condensate of excitons in semiconductor quantum wells
Phys. Rev. B **97**, 165139 (2018)
 17. T. Gao, G. Li, E. Estrecho, T. C. H. Liew, D. Comber-Todd, [A. Nalitov](#), M. Steger, K. West, L. Pfeiffer, D. Snoke, A. V. Kavokin, A. G. Truscott, E. A. Ostrovskaya
Chiral modes at exceptional points in exciton-polariton quantum fluids
Phys. Rev. Lett. **120**, 065301 (2018)
 18. N. Lundt, S. Stoll, P. Nagler, [A. Nalitov](#), S. Klemmt, S. Betzold, J. W. Goddard, E. Frieling, A.V. Kavokin, C. Schüller, T. Korn, S. Höfling, C. Schneider
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 19. N. Lundt, P. Nagler, [A. Nalitov](#), S. Klemmt, M. Wurdack, S. Stoll, T.H. Harder, S. Betzold, V. Baumann, A.V. Kavokin, C. Schüller, T. Korn, S. Höfling, C. Schneider
Valley polarized relaxation and upconversion luminescence from Tamm-Plasmon Trion-Polaritons with a MoSe₂ monolayer
2D Materials, **4**(2), 025096 (2017)
 20. [A. V. Nalitov](#), S. De Liberato, P. Lagoudakis, P. G. Savvidis, A. V. Kavokin
Bosonic cascades of indirect excitons
Superlattices Microstruct. **108**, 27-31 (2017)
 21. S. V. Koniakhin, O. I. Utesov, I. N. Terterov, and [A. V. Nalitov](#)
Substrate-induced reduction of graphene thermal conductivity
Phys. Rev. B **95**, 045418 (2017)
 22. [A. V. Nalitov](#), T. C. H. Liew, A. V. Kavokin, B. L. Altshuler, and Y. G. Rubo
Spontaneous polariton currents in periodic lateral chains
Phys. Rev. Lett. **119**, 067406 (2017)
 23. S. V. Koniakhin, [A. V. Nalitov](#)
Drag of electrons in graphene by substrate surface polar phonons
Phys. Rev. B **94**, 125403 (2016)
 24. N. Lundt, S. Klemmt, E. Cherotchenko, S. Betzold, O. Iff, [A. V. Nalitov](#), M. Klaas, C. P. Dietrich, A. V. Kavokin, S. Höfling, and C. Schneider
Room-temperature Tamm-plasmon exciton-polaritons with a WSe₂ monolayer
Nat. Comm. **7**,13328 (2016)
 25. P. Andreakou, A. V. Mikhailov, S. Cronenberger, D. Scalbert, [A. Nalitov](#), A. V. Kavokin, M. Nawrocki, L. V. Butov, K. L. Campman, A. C. Gossard, and M. Vladimirova
Influence of magnetic quantum confined Stark effect on the spin lifetime of indirect excitons
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 26. D. Solnyshkov, [A. Nalitov](#), B. Teklu, L. Franck, G. Malpuech
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 27. S. Dufferwiel, S. Schwarz, F. Withers, A. A. P. Trichet, F. Li, M. Sich, O. Del Pozo-Zamudio, C. Clark, [A. Nalitov](#), D. D. Solnyshkov, G. Malpuech, K. S. Novoselov, J. M. Smith, M. S. Skolnick, D. N. Krizhanovskii, A. I. Tartakovskii
Exciton-polaritons in van der Waals heterostructures embedded in tunable microcavities
Nat. Comm. **6**, 8579 (2015)
 28. D. D. Solnyshkov, [A. V. Nalitov](#), G. Malpuech
Kibble-Zurek mechanism in topologically non-trivial zigzag chains of polariton micropillars
Phys. Rev. Lett. **116**, 046402 (2015)
 29. [A. V. Nalitov](#), D. D. Solnyshkov, G. Malpuech
Polariton Z Topological Insulator
Phys. Rev. Lett. **114**, 116401 (2015)

30. E. D. Cherotchenko, T. Espinosa-Ortega, [A. V. Nalitov](#), I. A. Shelykh, A. V. Kavokin
Superconductivity in Semiconductor Structures: the Excitonic Mechanism
Superlattices and Microstructures **90**, 170-175 (2015)
31. [A. V. Nalitov](#), G. Malpuech, H. Terças, D. Solnyshkov
Spin-orbit coupling and optical spin Hall effect in photonic graphene
Phys. Rev. Lett. **114**, 026803 (2015)
32. V. G. Sala, D. D. Solnyshkov, I. Carusotto, T. Jacqmin, A. Lemaître, H. Terças, [A. Nalitov](#), M. Abbarchi,
E. Galopin, I. Sagnes, J. Bloch, G. Malpuech, A. Amo
Engineering spin-orbit coupling for photons and polaritons in microstructures
Phys. Rev. X **5**, 011034 (2015)
33. P. Andreakou, S. Cronenberger, D. Scalbert, [A. Nalitov](#), N. A. Gippius, A. V. Kavokin, M. Nawrocki,
J. R. Leonard, L. V. Butov, K. L. Campman, A. C. Gossard, M. Vladimirova
Nonlinear optical spectroscopy of indirect excitons in biased coupled quantum wells
Phys. Rev. B **91**, 125437 (2015)
34. [A. V. Nalitov](#), D. D. Solnyshkov, N. A. Gippius, and G. Malpuech
Voltage control of the spin-dependent interaction constants of dipolaritons and its application to optical parametric oscillators
Phys. Rev. B **90**, 235304 (2014)
35. [A. V. Nalitov](#), M. Vladimirova, A. V. Kavokin, L. V. Butov, and N. A. Gippius
Nonlinear optical probe of indirect excitons
Phys. Rev. B **89**, 155309 (2014)
36. J. Cuadra, D. Sarkar, L. Viña, J. M. Hvam, [A. Nalitov](#), D. Solnyshkov, and G. Malpuech
Polarized emission in polariton condensates: Switching in a one-dimensional natural trap versus inversion in two dimensions
Phys. Rev. B **88**, 235312 (2013)
37. D. V. Vishnevsky, H. Flayac, [A. V. Nalitov](#), D. D. Solnyshkov, N. A. Gippius, and G. Malpuech
Skyrmion Formation and Optical Spin-Hall Effect in an Expanding Coherent Cloud of Indirect Excitons
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38. L.E. Golub, [A.V. Nalitov](#), E.L. Ivchenko, P. Olbrich, J. Kamann, J. Eroms, D. Weiss, S.D. Ganichev,
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39. [A. V. Nalitov](#), L. E. Golub, and E. L. Ivchenko
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