

Nikolay A. Gippius

Publications 2012-2016

1. Dyakov, S.A., Zhigunov, D.M., Marinins, A., Shcherbakov, M.R., Fedyanin A.A., Vorontsov, A.S., Kashkarov, P.K., Popov, S., Qiu, M., Zacharias, M., Tikhodeev, S.G., Gippius, N.A. Optical properties of silicon nanocrystals covered by periodic array of gold nanowires.- PHYSICAL REVIEW B Volume: 93 Issue: 20 Article Number: 205413 DOI: 10.1103/PhysRevB.93.205413 Published: MAY 6 2016
2. Lobanov, S.V., Tikhodeev, S.G., Gippius, N.A., Maksimov, A.A., Filatov, E.V., Tartakovskii, I.I., Kulakovskii, V.D., Weiss, T., Schneider, C., Gessler, J., Kamp, M., Hoefling, S. Controlling circular polarization of light emitted by quantum dots using chiral photonic crystal slabs: PHYSICAL REVIEW B Volume: 92 Issue: 20 Article Number: 205309 DOI: 10.1103/PhysRevB.92.205309 Published: NOV 23 2015
3. Brichkin, A. S., Tikhodeev, S.G., Gavrilov, S.S.), Gippius, N.A., Novikov, S. I., Larionov, A.V., Schneider, C., Kamp, M., Hoefling, S., Kulakovskii, V.D. Title: Transient optical parametric oscillations in resonantly pumped multistable cavity polariton condensates - PHYSICAL REVIEW B Volume: 92 Issue: 12 Article Number: 125155 DOI: 10.1103/PhysRevB.92.125155 Published: SEP 30 2015
4. Lobanov, Sergey V., Weiss, Thomas, Gippius, Nikolay A., Tikhodeev, Sergei G., Kulakovskii, Vladimir D., Konishi, Kuniaki, Kuwata Gonokami, Makoto. Polarization control of quantum dot emission by chiral photonic crystal slabs - OPTICS LETTERS Volume: 40 Issue: 7 Pages: 15281531, DOI: 10.1364/OL.40.001528 Published: APR 1 2015
5. Andreakou, P., Cronenberger, S., Scalbert, D., Nalitov, A., Gippius, N.A., Kavokin, A.V., Nawrocki, M., Leonard, J.R., Butov, L.V., Campman, K.L., Gossard, A.C., Vladimirova, M. Nonlinear optical spectroscopy of indirect excitons in coupled quantum wells - PHYSICAL REVIEW B Volume: 91 Issue: 12 Article Number: 125437 DOI: 10.1103/PhysRevB.91.125437 Published: MAR 30 2015
6. Gavrilov, S.S., Novikov, S.I., Kulakovskii, V.D., Gippius, N.A., Chernov, A.A., Tikhodeev, S.G. Transient spectroscopy of near condensate modes in the system of exciton polaritons in a semiconductor microcavity - JETP LETTERS Volume: 101 Issue: 1 Pages: 711 DOI: 10.1134/S0021364015010063 Published: JAN 2015
7. Nalitov, A.V., Solnyshkov, D.D., Gippius, N.A., Malpuech, G. Voltage control of the spin-dependent interaction constants of dipolaritons and its application to optical parametric oscillators - PHYSICAL REVIEW B Volume: 90 Issue: 23 Article Number: 235304 DOI: 10.1103/PhysRevB.90.235304 Published: DEC 1 2014
8. Marchant, Maite, Labesse Jied, Florence, Gippius, Nikolay A., Lapusta, Yuri, Modelling of a hydrogel diffraction grating used for pHsensing - COMPTES RENDUS MECANIQUE Volume: 342 Issue: 12 Pages: 706713 DOI: 10.1016/j.crme.2014.07.007 Published: DEC 2014
9. Farmer, D.J., Akimov, A.V., Gippius, N.A., Bailey, J., Sharp, J.S., Kent, A.J. High frequency acoustooptic effects in Bragg reflectors - OPTICS EXPRESS Volume: 22 Issue: 12 Pages: 1521815231 DOI: 10.1364/OE.22.015218 Published: JUN 16 2014
10. Nalitov, A.V., Vladimirova, M., Kavokin, A.V., Butov, L.V., Gippius, N.A. Nonlinear optical probe of indirect excitons - PHYSICAL REVIEW B Volume: 89 Issue: 15 Article Number: 155309 DOI: 10.1103/PhysRevB.89.155309 Published: APR 10 2014
11. Edee, Kofi, Abboud, Mira, Granet, Gerard, Cornet, Jean Francois, Gippius, Nikolay A. Mode solver based on Gegenbauer polynomial expansion for cylindrical structures with arbitrary cross sections - JOURNAL OF THE OPTICAL SOCIETY OF AMERICA A OPTICS IMAGE SCIENCE AND VISION Volume: 31 Issue: 4 Pages: 667676 DOI: 10.1364/JOSAA.31.000667 Published: APR 2014
12. Maksimov, A.A., Tartakovskii, I.I., Filatov, E.V., Lobanov, S.V., Gippius, N.A., Tikhodeev, S.G., Schneider, C., Kamp, M., Maier, S., Hoefling, S., Kulakovskii, V.D. Circularly polarized light emission from chiral spatiallystructured planar semiconductor Microcavities - PHYSICAL REVIEW B Volume: 89 Issue: 4 Article Number: 045316 DOI: 10.1103/PhysRevB.89.045316 Published: JAN 31 2014
13. Benchamekh, R., Gippius, N.A., Even, J., Nestoklon, M.O., Jancu, J.M., Ithurria, S., Dubertret, B., Efros, Al. L., Voisin, P. Tight binding calculations of image charge effects in colloidal nanoscale platelets

of CdSe - PHYSICAL REVIEW B Volume: 89 Issue: 3 Article Number: 035307 DOI: 10.1103/PhysRevB.89.035307 Published: JAN 13 2014

14. Lobanov, S.V., Weiss, T., Gippius, N.A., Tikhodeev, S.G., Kulakovskii, V.D., Konishi, K., Kuwata Gonokami, M. Emission of quantum dots from waveguides with chiral spatially modulated upper part - 2014 IEEE PHOTONICS CONFERENCE (IPC) Book Series: IEEE Photonics Conference Pages: 508509

15. Li, Galina V., Astrova, Ekaterina V., Zharova, Yulia A., Dyakov, Sergey A., Baldycheva, Anna V., Perova, Tatiana S., Gippius, Nilolay A., Tikhodeev, Sergei G. Tunable Microcavity Based on Macroporous Silicon: Feasibility of Fabrication - JOURNAL OF LIGHTWAVE TECHNOLOGY Volume: 31 Issue: 16 DOI: 10.1109/JLT.2013.2272037 Published: AUG 15 2013

16. Li, Galina V., Astrova, Ekaterina V., Dyakov, Sergey A., Baldycheva, Anna, Perova, Tatiana S., Tikhodeev, Sergey G., Gippius, Nikolay A. Surface Tamm states in a photonic crystal slab with asymmetric termination - Source: PHYSICA STATUS SOLIDIRAPID RESEARCH LETTERS Volume: 7 Issue: 7 Pages: 481484 DOI: 10.1002/pssr.201307151 Published: JUL 2013

17. Vishnevsky, D.V., Flayac, H., Nalitov, A.V., Solnyshkov, D.D., Gippius, N.A., Malpuech, G. Skyrmion Formation and Optical Spin Hall Effect in an Expanding Coherent Cloud of Indirect Excitons - PHYSICAL REVIEW LETTERS Volume: 110 Issue: 24 Article Number: 246404 DOI: 10.1103/PhysRevLett.110.246404 Published: JUN 12 2013

18. Gavrilov, S.S., Sekretenko, A.V., Gippius, N.A., Schneider, C., Hoefling, S., Kamp, M., Forchel, A., Kulakovskii, V.D. Spin multistability of cavity polaritons in a magnetic field - PHYSICAL REVIEW B Volume: 87 Issue: 20 Article Number: 201303 DOI: 10.1103/PhysRevB.87.201303 Published: MAY 28 2013

19. Berstermann, T., Brueggemann, C., Akimov, A.V., Bombeck, M., Yakovlev, D.R., Gippius, N.A., Scherbakov, A.V., Sagnes, I., Bloch, J., Bayer, M. Destruction and recurrence of excitons by acoustic shock waves on picosecond time scales - PHYSICAL REVIEW B Volume: 86 Issue: 19 Article Number: 195306 DOI: 10.1103/PhysRevB.86.195306 Published: NOV 6 2012

20. Dyakov, S.A., Baldycheva, A., Perova, T.S., Li, G.V., Astrova, E.V., Gippius, N.A., Tikhodeev, S.G. Surface states in the optical spectra of two dimensional photonic crystals with various surface terminations - PHYSICAL REVIEW B Volume: 86 Issue: 11 Article Number: 115126 DOI: 10.1103/PhysRevB.86.115126 Published: SEP 19 2012

21. Gavrilov, S.S., Gippius, N.A. Pulsed acoustooptic switching of a bistable cavity polariton system - PHYSICAL REVIEW B Volume: 86 Issue: 8 Article Number: 085317 DOI: 10.1103/PhysRevB.86.085317 Published: AUG 22 2012

22. Vishnevsky, D.V., Solnyshkov, D.D., Gippius, N.A., Malpuech, G. Multistability of cavity exciton polaritons affected by the thermally generated exciton reservoir - PHYSICAL REVIEW B Volume: 85 Issue: 15 Article Number: 155328 DOI: 10.1103/PhysRevB.85.155328 Published: APR 30 2012

23. Kulakovskii, V.D., Brichkin, A.S., Novikov, S.V., Schneider, C., Hoefling, S., Kamp, M., Forchel, A., Gippius, N.A. Magnetic field control of polarized polariton condensates in rectangular microcavity pillars - PHYSICAL REVIEW B Volume: 85 Issue: 15 Article Number: 155322 DOI: 10.1103/PhysRevB.85.155322 Published: APR 26 2012

24. Lobanov, S.V., Weiss, T., Dregely, D., Giessen, H., Gippius, N.A., Tikhodeev, S.G. Emission properties of an oscillating point dipole from a gold Yagi Uda nanoantenna array - PHYSICAL REVIEW B Volume: 85 Issue: 15 Article Number: 155137 DOI: 10.1103/PhysRevB.85.155137 Published: APR 24 2012

25. Gavrilov, S.S., Brichkin, A.S., Demenev, A.A., Dorodnyy, A.A., Novikov, S.I., Kulakovskii, V.D., Tikhodeev, S.G., Gippius, N.A. Bistability and nonequilibrium transitions in the system of cavity polaritons under nanosecond-long resonant excitation - PHYSICAL REVIEW B Volume: 85 Issue: 7 Article Number: 075319 DOI: 10.1103/PhysRevB.85.075319 Published: FEB 27 2012