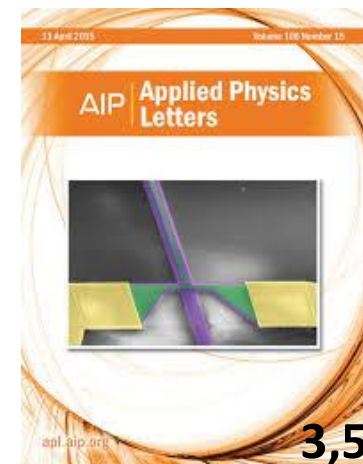
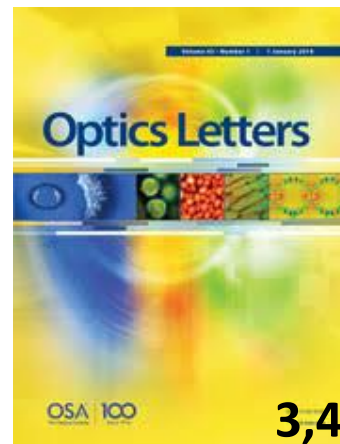
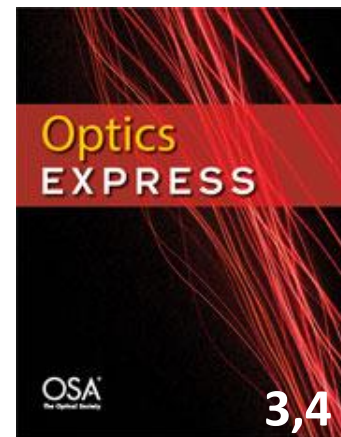
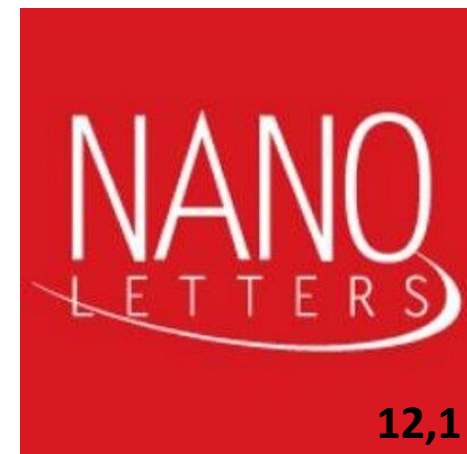
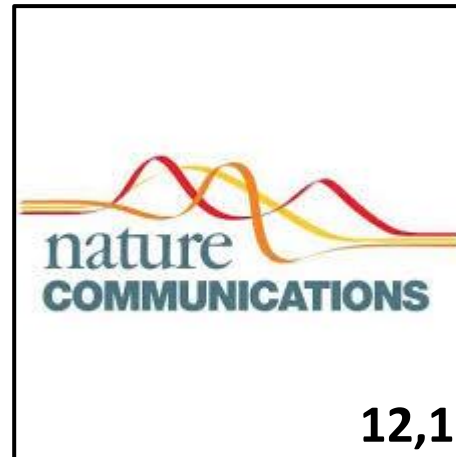
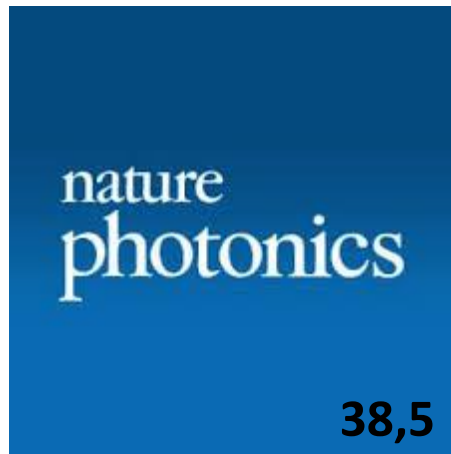


# Публикации



- [1] W. H. P. Pernice, C. Schuck, O. Minaeva, M. Li, G. N. Goltsman, A. V. Sergienko, and H. X. Tang, “High-speed and high-efficiency travelling wave single-photon detectors embedded in nanophotonic circuits,” *Nat. Commun.*, vol. 3, p. 1325, 2012.
- [2] C. Schuck, W. H. P. Pernice, O. Minaeva, M. Li, G. Gol'tsman, A. V. Sergienko, and H. X. Tang, “Matrix of integrated superconducting single-photon detectors with high timing resolution,” *IEEE Trans. Appl. Supercond.*, vol. 23, no. 3, 2013.
- [3] V. Kovalyuk, W. Hartmann, O. Kahl, N. Kaurova, A. Korneev, G. Goltsman, and W. H. P. Pernice, “Absorption engineering of NbN nanowires deposited on silicon nitride nanophotonic circuits,” *Opt. Express*, vol. 21, no. 19, pp. 22683–92, 2013.
- [4] S. Ferrari, O. Kahl, V. Kovalyuk, G. N. Goltsman, A. Korneev, and W. H. P. Pernice, “Waveguide-integrated single- and multi-photon detection at telecom wavelengths using superconducting nanowires,” *Appl. Phys. Lett.*, vol. 106, no. 15, p. 151101, 2015.
- [5] O. Kahl, S. Ferrari, V. Kovalyuk, G. N. Goltsman, A. Korneev, and W. H. P. Pernice, “Waveguide integrated superconducting single-photon detectors with high internal quantum efficiency at telecom wavelengths,” *Sci. Rep.*, vol. 5, p. 10941, 2015.
- [6] S. Khasminskaya, F. Pyatkov, K. Słowik, S. Ferrari, O. Kahl, V. Kovalyuk, P. Rath, A. Vetter, F. Henrich, M. M. Kappes, G. Gol'tsman, A. Korneev, C. Rockstuhl, R. Krupke, and W. H. P. Pernice, “Fully integrated quantum photonic circuit with an electrically driven light source,” *Nat. Photonics*, vol. 10, pp. 727–733, 2016.
- [7] A. Vetter, S. Ferrari, P. Rath, R. Alaee, O. Kahl, V. Kovalyuk, S. Diewald, G. N. Goltsman, A. Korneev, C. Rockstuhl, and W. H. P. Pernice, “Cavity-Enhanced and Ultrafast Superconducting Single-Photon Detectors,” *Nano Lett.*, vol. 16, no. 11, pp. 7085–7092, 2016.
- [8] P. Rath, A. Vetter, V. Kovalyuk, S. Ferrari, O. Kahl, C. Nebel, G. N. Goltsman, A. Korneev, and W. H. P. Pernice, “Travelling-wave single-photon detectors integrated with diamond photonic circuits: Operation at visible and telecom wavelengths with a timing jitter down to 23 ps,” in *Proceedings of SPIE - The International Society for Optical Engineering*, 2016, vol. 9750.
- [9] Y. Lobanov, M. Shcherbatenko, A. Semenov, V. Kovalyuk, O. Kahl, S. Ferrari, A. Korneev, R. Ozhegov, N. Kaurova, B. Voronov, W. Pernice, and G. Gol'tsman, “Superconducting Nanowire Single Photon Detector for Coherent Detection of Weak Signals,” *IEEE Trans. Appl. Supercond.*, vol. 27, no. 4, pp. 1–1, 2016.
- [10] O. Kahl, S. Ferrari, V. Kovalyuk, A. Vetter, C. Nebel, A. Korneev, G. Goltsman, and W. Pernice, “Spectrally resolved imaging with hybrid superconducting - nanophotonic circuits,” *arXiv:1609.07857v1*, 2016.

- [11] Elmanova, A., An, P., Kovalyuk, V., Golikov, A., Elmanov, I., Goltsman, G., "Study of silicon nitride O-ring resonator for gas-sensing applications", (2020) Journal of Physics: Conference Series, 1695 (1), DOI: 10.1088/1742-6596/1695/1/012124.
- [12] Komrakova, S., Kovalyuk, V., An, P., Golikov, A., Rybin, M., Obratsova, E., Goltsman, G., "Effective absorption coefficient of a graphene atop of silicon nitride nanophotonic circuit", (2020) Journal of Physics: Conference Series, 1695 (1), DOI: 10.1088/1742-6596/1695/1/012135.
- [13] Shurakov, A., Prikhodko, A., Mikhailov, D., Belikov, I., Kaurova, N., Voronov, B., Goltsman, G., "Efficiency of a microwave reflectometry for readout of a THz multipixel Schottky diode direct detector", (2020) Journal of Physics: Conference Series, 1695 (1), DOI: 10.1088/1742-6596/1695/1/012156.
- [14] Prokhotsov, A., Kovalyuk, V., An, P., Golikov, A., Shakhovoy, R., Sharoglazova, V., Udaltsov, A., Kurochkin, Y., Goltsman, G., "Silicon nitride Mach-Zehnder interferometer for on-chip quantum random number generation", (2020) Journal of Physics: Conference Series, 1695 (1), DOI: 10.1088/1742-6596/1695/1/012118.
- [15] Elmanov, I., Sardi, F., Xia, K., Kornher, T., Kovalyuk, V., Prokhotsov, A., An, P., Kuzin, A., Elmanova, A., Goltsman, G., Kolesov, R., "Development of focusing grating couplers for lithium niobate on insulator platform", (2020) Journal of Physics: Conference Series, 1695 (1), DOI: 10.1088/1742-6596/1695/1/012127.
- [16] Zvagelsky, R.D., Chubich, D.A., Kolymagin, D.A., Korostylev, E.V., Kovalyuk, V.V., Prokhotsov, A.I., Tarasov, A.V., Goltsman, G.N., Vitukhnovsky, A.G., "Three-dimensional polymer wire bonds on a chip: morphology and functionality", (2020) Journal of Physics D: Applied Physics, 53 (35), DOI: 10.1088/1361-6463/ab8e7f.
- [17] Sidorova, M., Semenov, A., Hubers, H.-W., Ilin, K., Siegel, M., Charaev, I., Moshkova, M., Kaurova, N., Goltsman, G.N., Zhang, X., Schilling, A., "Electron energy relaxation in disordered superconducting NbN films", (2020) Physical Review B, 102 (5), DOI: 10.1103/PhysRevB.102.054501.
- [18] Tretyakov, I., Svyatodukh, S., Perepelitsa, A., Ryabchun, S., Kaurova, N., Shurakov, A., Smirnov, M., Ovchinnikov, O., Goltsman, G., "Ag<sub>2</sub>S QDS/Si heterostructure-based ultrasensitive swir range detector", (2020) Nanomaterials, 10 (5), DOI: 10.3390/nano10050861.
- [19] Matyushkin, Y., Kaurova, N., Voronov, B., Goltsman, G., Fedorov, G., "On chip carbon nanotube tunneling spectroscopy", (2020) Fullerenes Nanotubes and Carbon Nanostructures, 28 (1), pp. 50-53, DOI: 10.1080/1536383X.2019.1671365.

- [20] Elmanova, A., Elmanov, I., Kovalyuk, V., An, P., Goltsman, G., "Integrated contra-directional coupler for NV-centers photon filtering", (2020) 32nd European Modeling and Simulation Symposium, EMSS 2020, pp. 354-360, DOI: 10.46354/i3m.2020.emss.052.
- [21] Elmanov, I., Elmanova, A., Kovalyuk, V., An, P., Goltsman, G., "Silicon nitride photonic crystal cavity coupled with NV-centers in nanodiamonds", (2020) 32nd European Modeling and Simulation Symposium, EMSS 2020, pp. 344-348, DOI: 10.46354/i3m.2020.emss.050.
- [22] Kuzin, A., Elmanov, I., Kovalyuk, V., An, P., Goltsman, G., "Silicon nitride focusing grating coupler for input and output light of NV-centers", (2020) 32nd European Modeling and Simulation Symposium, EMSS 2020, pp. 349-353, DOI: 10.46354/i3m.2020.emss.051.
- [23] Elmanova, A., Elmanov, I., An, P., Kovalyuk, V., Kuzin, A., Golikov, A., & Goltsman, G. (2021). Characterization of focusing grating couplers for telecom wavelengths in the first and second diffraction order. *Journal of Physics. Conference Series*, 2086(1), 012052. <https://doi.org/10.1088/1742-6596/2086/1/012052>
- [24] Elmanova, Anna. (2021). Integrated optical gas sensor based on O-ring resonator and loop waveguide mirror on silicon nitride platform. *Proceedings of the 33rd European Modeling & Simulation Symposium*.
- [25] Komrakova, S., An, P., Kovalyuk, V., Golikov, A., Gladush, Y., Mkrтчan, A., Nasibulin, A., & Goltsman, G. (2021). Thermo-optical properties of nanophotonic devices with carbon nanotube films. *Journal of Physics. Conference Series*, 2086(1), 012149. <https://doi.org/10.1088/1742-6596/2086/1/012149>
- [26] Lazarenko, P., Kovalyuk, V., An, P., Prokhodtsov, A., Golikov, A., Sherchenkov, A., Kozyukhin, S., Fradkin, I., Chulkova, G., & Goltsman, G. (2021). Size effect of the Ge<sub>2</sub>Sb<sub>2</sub>Te<sub>5</sub> cell atop the silicon nitride O-ring resonator on the attenuation coefficient. *APL Materials*, 9(12), 121104. <https://doi.org/10.1063/5.0066387>
- [27] Prokhodtsov, A., Kovalyuk, V., An, P., Golikov, A., Konyshchov, Y., Shakhovoy, R., Sharoglazova, V., Udaltsov, A., Kurochkin, Y., & Goltsman, G. (2021). Thermo-optical properties of silicon nitride Mach-Zehnder interferometer for the on-chip quantum random number generator. *Journal of Physics. Conference Series*, 2086(1), 012164. <https://doi.org/10.1088/1742-6596/2086/1/012164>
- [28] Solomonov, A. I., Pavlov, S. I., Lazarenko, P. I., Kovalyuk, V. V., Golikov, A. D., Prokhodtsov, A. I., Goltsman, G. N., Kozyukhin, S. A., Dyakov, S. A., Gippius, N. A., Tikhodeev, S. G., & Pevtsov, A. B. (2021). Spectral Fourier-microscopy of the periodic structures based on Ge<sub>2</sub>Sb<sub>2</sub>Te<sub>5</sub>. *Journal of Physics. Conference Series*, 2103(1), 012173. <https://doi.org/10.1088/1742-6596/2103/1/012173>
- [29] Venediktov, I. O., Elezov, M. S., Prokhodtsov, A. I., Kovalyuk, V. V., An, P. P., Golikov, A. D., Shcherbatenko, M. L., Sych, D. V., & Goltsman, G. N. (2021). Performance of microheaters for tunable on-chip interferometer. *Journal of Physics. Conference Series*, 2086(1), 012173. <https://doi.org/10.1088/1742-6596/2086/1/012173>