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Список основных научных публикаций по специальности 1.3.19 – лазерная физика за последние 5 лет:

1. Pushkin, Andrey, and **Fedor Potemkin**. "High-gain broadband laser amplification of mid-IR pulses in Fe: CdSe crystal at 5 μm with millijoule output energy and multigigawatt peak power." *Optics Letters* 47.22 (2022): 5762-5765.
2. Mareev, E., Pushkin, A., Migal, E., Lvov, K., Stremoukhov, S., & **Potemkin, F.** Single-shot femtosecond bulk micromachining of silicon with mid-IR tightly focused beams. *Scientific Reports*, 12(1), 1-12 (2022).
3. Mareev, E., & **Potemkin, F.** Dynamics of ultrafast phase transitions in MgF₂ triggered by laser-induced THz coherent phonons. *Scientific Reports*, 12(1), 1-8 (2022).
4. Rumiantsev, B. V., Mikheev, K. E., Pushkin, A. V., Migal, E. A., Stremoukhov, S. Y., & **Potemkin, F. V.** Optical Harmonics Generation under the Interaction of Intense (up to 1014 W/cm²) Mid-Infrared Femtosecond Laser Radiation of a Fe: ZnSe Laser System with a Dense Laminar Gas Jet. *JETP Letters*, 115(7), 390-395 (2022).
5. E. A. Migal, A.V. Pushkin, N.G. Minaev, B.G. Bravy and **F. Potemkin**, "Control of spectral shift, broadening, and pulse compression during mid-IR self-guiding in high-pressure gases and their mixtures," *Optics Letters*, Vol. 47, Issue 4, pp. 985-988 47(4), 985–988 (2022).
6. A.Pushkin, E. Migal, D. Suleimanova, E. Mareev, and **F. Potemkin**, "High-Power Solid-State Near- and Mid-IR Ultrafast Laser Sources for Strong-Field Science," *Photonics* 2022, Vol. 9, Page 90 9(2), 90 (2022).
7. B.V. Rumiantsev, E. I. Mareev, A. S. Bychkov, A. A. Karabutov, E. B. Cherepetskaya, V. A. Makarov, and **F. V. Potemkin**, "Three-dimensional hybrid optoacoustic imaging of the laserinduced plasma and deposited energy density under optical breakdown in water," *Applied Physics Letters* 118(1), (2021).
8. E. I. Mareev, K. v. Lvov, B. v. Rumiantsev, E. A. Migal, I. D. Novikov, S. Y. Stremoukhov, and **F. V. Potemkin**, "Effect of pulse duration on the energy delivery under nonlinear propagation of tightly focused Cr:forsterite laser radiation in bulk silicon," *Laser Physics Letters* 17(1), (2020).

9. E. A. Migal, S. Y. Stremoukhov, and **F. V. Potemkin**, "Ionization-free resonantly enhanced low-order harmonic generation in a dense gas mixture by a mid-IR laser field," *Physical Review A* 101(2), (2020).
10. E. Migal, E. Mareev, E. Smetanina, G. Duchateau, and **F. Potemkin**, "Role of wavelength in photocarrier absorption and plasma formation threshold under excitation of dielectrics by highintensity laser field tunable from visible to mid-IR," *Scientific Reports* 10(1), (2020).
11. E. Migal, A. Pushkin, B. Bravy, V. Gordienko, N. Minaev, A. Sirotkin, and **F. Potemkin**, "3.5-mJ 150-fs Fe:ZnSe hybrid mid-IR femtosecond laser at 4.4 μm for driving extreme nonlinear optics," *Optics Letters* 44(10), 2550 (2019).
12. E. A. Migal, **F.V. Potemkin**, and V. M. Gordienko, "Efficient strong-field low-order harmonic generation in xenon microplasma by a tightly focused Cr:Forsterite laser," *Laser Physics Letters* 16(4), (2019).
13. E. I. Mareev, E. A. Migal, and **F.V. Potemkin**, "Ultrafast third harmonic generation imaging of microplasma at the threshold of laser-induced plasma formation in solids," *Applied Physics Letters* 114(3), (2019).
14. E. A. Migal and **F. V. Potemkin**, "Generation of Broadband Near-Infrared (2–2.5 μm) Radiation from an Optical Parametric Amplifier Driven by a Cr:Forsterite Laser Near Dispersion Anomalies of Tuning Curves," *JETP Letters* 107(5), 285–288 (2018).
15. **F. V. Potemkin**, E. I. Mareev, and E. O. Smetanina, "Influence of wave-front curvature on supercontinuum energy during filamentation of femtosecond laser pulses in water," *Physical Review A* 97(3), (2018).

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