

Список опубликованных научных работ сотрудников ведущей организации, близких к теме диссертации.

Институт физики микроструктур РАН — филиал Федерального государственного бюджетного учреждения науки «Институт прикладной физики Российской академии наук», Нижний Новгород

1. Dubinov A. A., Aleshkin V. Y. Model of a Terahertz Quantum-Cascade Laser Based on Two-Dimensional Plasmons //Semiconductors. – 2021. – Т. 55. – №. 11. – С. 828-830.
2. Dubinov A. A., Aleshkin V. Y., Morozov S. V. Lowering the Lasing Threshold by Doping in Mid-Infrared Lasers Based on HgCdTe with HgTe Quantum Wells //Semiconductors. – 2018. – Т. 52. – №. 9. – С. 1221-1224.
3. Aleshkin V. Y. et al. Submonolayer InGaAs/GaAs quantum dots grown by MOCVD //Semiconductors. – 2019. – Т. 53. – №. 8. – С. 1138-1142.
4. Aleshkin V. Y. et al. Stimulated Emission at 1.3- μ m Wavelength in Metamorphic InGaAs/InGaAsP Structure with Quantum Wells Grown on Ge/Si (001) Substrate //Technical Physics Letters. – 2018. – Т. 44. – №. 8. – С. 735-738.
5. Khabibullin R. A., Shchavruk N. V., Ponomarev D. S., Ushakov D. V., Afonenko A. A., Maremyanin K. V., ... & Dubinov A. A. The operation of THz quantum cascade laser in the region of negative differential resistance //Opto-Electronics Review. – 2019. – Т. 27. – №. 4. – С. 329-333.
6. Ushakov, D. V., Afonenko, A. A. E., Dubinov, A. A., Gavrilenko, V. I., Volkov, O. Y., Shchavruk, N. V. E., ... & Khabibullin, R. A. Balance-equation method for simulating terahertz quantum-cascade lasers using a wave-function basis with reduced dipole moments of tunnel-coupled states //Quantum Electronics. – 2019. – Т. 49. – №. 10. – С. 913.
7. Ushakov, D. V., Afonenko, A. A. E., Dubinov, A. A., Gavrilenko, V. I., Vasil'evskii, I. S., Shchavruk, N. V. E., ... & Khabibullin, R. A. Mode loss spectra in THz quantum-cascade lasers with gold-and silver-based double metal waveguides //Quantum Electronics. – 2018. – Т. 48. – №. 11. – С. 1005.
8. Khabibullin, R. A., Shchavruk, N. V., Ponomarev, D. S., Ushakov, D. V., Afonenko, A. A., Volkov, O. Y., ... & Dubinov, A. A. Limiting factors to the performance and operation frequency range of THz quantum cascade laser based on GaAs/AlGaAs heterostructures //AIP Conference Proceedings. – AIP Publishing LLC, 2021. – Т. 2359. – №. 1. – С. 020014.
9. Aleshkin V. Y. et al. Hot holes in strained MQW InGaAs/GaAs and Ge/GeSi heterostructures //Compound Semiconductors 1996. – CRC Press, 2020. – С. 61-64.
10. Maremyanin, K. V., Parshin, V. V., Serov, E. A., Rumyantsev, V. V., Kudryavtsev, K. E., Dubinov, A. A., ... & Morozov, S. V. Investigation into microwave absorption in semiconductors for frequency-multiplication devices and radiation-output control of continuous and pulsed gyrotrons //Semiconductors. – 2020. – Т. 54. – №. 9. – С. 1069-1074.
11. Afonenko, A. A. E., Ushakov, D. V., Aleshkin, V. Y., Dubinov, A. A., Dikareva, N. V. E., Nekorkin, S. M., & Zvonkov, B. N. Power characteristics of lasers with quantum-well waveguides and blocking layers //Quantum Electronics. – 2018. – Т. 48. – №. 4. – С. 390.
12. Kudryavtsev, K. E., Dubinov, A. A., Aleshkin, V. Y., Yurasov, D. V., Gorlachuk, P. V., Ryaboshtan, Y. L., ... & Krasilnik, Z. F. Kudryavtsev K. E. et al. Stimulated Emission in the 1.3–1.5 μ m Spectral Range from AlGaInAs Quantum Wells in Hybrid Light-Emitting III-V Heterostructures on Silicon Substrates //Semiconductors. – 2018. – Т. 52. – №. 11. – С. 1495-1499.
13. Baidus, N. V., Aleshkin, V. Y., Dubinov, A. A., Krasilnik, Z. F., Kudryavtsev, K. E., Nekorkin, S. M., ... & Yurasov, D. V. On the Application of Strain-Compensating GaAsP

- Layers for the Growth of InGaAs/GaAs Quantum-Well Laser Heterostructures Emitting at Wavelengths above 1100 nm on Artificial Ge/Si Substrates //Semiconductors. – 2018. – Т. 52. – №. 12. – С. 1547-1550.
14. Andreev, B. A., Kudryavtsev, K. E., Yablonskiy, A. N., Lobanov, D. N., Bushuykin, P. A., Krasilnikova, L. V., ... & Krasilnik, Z. F. Towards the indium nitride laser: Obtaining infrared stimulated emission from planar monocrystalline InN structures //Scientific reports. – 2018. – Т. 8. – №. 1. – С. 1-8.
15. Aleshkin V. Y. et al. On the stimulated emission of InGaAs/GaAs/AlGaAs laser structures grown by MOCVD on exact and inclined Ge/Si (001) substrates //Semiconductors. – 2017. – Т. 51. – №. 5. – С. 663-666.