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| Год начала обучения | 2019 |
| Форма обучения | очная |
| Направление подготовки | 03.06.01 - Физика и астрономия |
| Профиль подготовки | 01.04.08 –Физика плазмы |
| Отдел | 120 |
| Научный руководитель | Сидоров Александр Васильевич |
| Тема диссертации | Пробой газа в сфокусированных пучках электромагнитных волн субмиллиметрового диапазона. |
| Публикации | <p>1. Gas breakdown by a focused CW 263 GHz beam. Alexander V. Vodopyanov, Alexander V. Sidorov, Sergey V. Razin, Alexander I. Tsvetkov, Andrey P. Fokin, Alexey P. Veselov, Sergey V. Golubev, and Mikhail Yu. Glyavin. Published in: 2016 41st International Conference on Infrared, Millimeter, and Terahertz waves (IRMMW-THz) DOI: 10.1109/IRMMW-THz.2016.7758613</p> <p>2. A Point-Like Plasma, Sustained by Powerful Radiation of Terahertz Gyrotrons, as a Source of Ultraviolet Light. Alexander V. Vodopyanov, Alexander V. Sidorov, Sergey V. Razin, Dmitry S. Sidorov, Alexey G. Luchinin, Andrey P. Fokin, Alexander I. Tsvetkov, Alexey P. Veselov, Mikhail Yu. Glyavin, Sergey V. Golubev, Published in: 2017 42nd International Conference on Infrared, Millimeter, and Terahertz Waves (IRMMW-THz) DOI: 10.1109/IRMMW-THz.2017.8067071</p> <p>3. Gas breakdown and dynamics of the discharge maintained by a powerful terahertz-band radiation. A.V. Sidorov, S.V. Razin, S.V. Golubev, A.P. Fokin, A.P. Veselov, D.S. Sidorov, A.G. Luchinin, A.V. Vodopyanov, and M.Yu. Glyavin. Published in: 2017 42nd International Conference on Infrared, Millimeter, and Terahertz Waves (IRMMW-THz) DOI: 10.1109/IRMMW-THz.2017.8066853</p> <p>4. Gas breakdown by a focused beam of THz waves A.V. Sidorov, S.V. Razin, A.G. Luchinin, A.I. Tsvetkov, A.P. Fokin, D.S. Sidorov, A.P. Veselov, A.V. Vodopyanov and M.Yu. Glyavin January 2017 The European Physical Journal Conferences 149(7):02031 Volume 149, 2017. 10th International Workshop 2017 “Strong Microwaves and Terahertz Waves: Sources and Applications”.DOI: 10.1051/epjconf/201714902031</p> <p>5. Gas Breakdown by a Focused Beam of CW THz Radiation. Alexander V. Sidorov, Sergey V. Razin, Alexander I. Tsvetkov, Andrey P. Fokin, Alexey P. Veselov, Sergey V. Golubev, Alexander V. Vodopyanov, and Mikhail Yu Glyavin. Published in: 2017 Progress In Electromagnetics Research Symposium - Spring (PIERS) DOI: 10.1109/PIERS.2017.8262191</p> <p>6. Gas discharge powered by the focused beam of the high-intensive electromagnetic waves of the terahertz frequency band. A V Sidorov, S V Golubev, S V Razin, A P Veselov, A V Vodopyanov, A P Fokin, A G Luchinin and M Yu Glyavin. Published 6 September 2018 © 2018 IOP Publishing Ltd. Journal of Physics D: Applied Physics, Volume 51, Number 46 DOI: https://doi.org/10.1088/1361-6463/aadb3c</p> |

7. Dynamics of the Gas Discharge Sustained by the Powerful Radiation of Pulsed and CW Terahertz Gyrotrons. A.V. Sidorov, S.V. Razin, A.P. Veselov, A.V. Vodopyanov, A.G. Luchinin, A.P. Fokin, M.V. Morozkin, A.I. Tsvetkov, M.Yu. Glyavin. September 2018. Conference: 2018 43rd International Conference on Infrared, Millimeter, and Terahertz Waves (IRMMW-THz2018)
DOI: 10.1109/IRMMW-THz.2018.8510027

8. Emission properties of a point-like discharge in an inhomogeneous gas flow supported by sub-THz radiation. Vodopyanov, A., Sidorov, A., Razin, S., Sidorov, D., Morozkin, M., Tsvetkov, A., Fokin, A., Veselov, A., Malygin, V., Kuftin, A., Glyavin, M., Golubev, S. 45th EPS Conference on Plasma Physics, EPS 2018 Volume 2018-July, 2018, Pages 57-60 45th EPS Conference on Plasma Physics, EPS 2018; Prague; Czech Republic; 2 July 2018 до 6 July 2018; Код 141703

9. Gas breakdown in a focused beam of powerful sub-THz gyrotron Sidorov, A., Kuftin, A., Morozkin, M., Malygin V., Razin S., Tsvetkov, A., Fokin A., Veselov, A., Vodopyanov A., Glyavin M. 45th EPS Conference on Plasma Physics, EPS 2018 Volume 2018-July, 2018, Pages 1388-1391 45th EPS Conference on Plasma Physics, EPS 2018; Prague; Czech Republic; 2 July 2018 до 6 July 2018; Код 141703

10. Breakdown of the heavy noble gases in a focused beam of powerful sub-THz gyrotron. A. Sidorov, S. Razin, A. Veselov, A. Vodopyanov, M. Morozkin, and M. Glyavin. Submitted: 09 May 2019. Accepted: 31 July 2019. Published Online: 19 August 2019 Phys. Plasmas 26, 083510 (2019). DOI: 10.1063/1.5109526

11. Dynamics of the gas discharge sustained by the powerful radiation of 0.67 THz gyrotron. A. Sidorov, S. Razin, A. Veselov, M. Viktorov, A. Vodopyanov, A. Luchinin, M. Glyavin 46th EPS Conference on Plasma Physics, 2019, July 8-12, Milan, Italy, P. O5.302 DOI: <http://ocs.ciemat.es/EPS2019PAP/pdf/O5.302.pdf>

12. Theoretical and experimental study of THz discharge threshold in various gases. A.P. Veselov, A.V. Sidorov, S.V. Razin, A.V. Vodopyanov, M.Yu. Glyavin, A.G. Luchinin, M.V. Morozkin. 46th EPS Conference on Plasma Physics, 2019, July 8-12, Milan, Italy, P. P5.3010 DOI: <http://ocs.ciemat.es/EPS2019PAP/pdf/P5.3010.pdf>

13. On the Prospects for the Study of a Point Discharge Sustained by a Terahertz Free Electron Laser Radiation in an Inhomogeneous Gas Flow. Alexander V. Vodopyanov, Alexander V. Sidorov, Alexey P. Veselov, Vitaly V. Kubarev, Oleg A. Shevchenko, Yaroslav I. Gorbachev. 44th International Conference on Infrared, Millimeter, and Terahertz Waves (IRMMW-THz), 2019, September 1-6, Paris, France, P. 8874193. DOI: 10.1109/IRMMW-THz.2019.8874193

14. Dynamics of a Sub-terahertz Discharge in the Heavy Noble Gases Produced by a High-density Radiation Field. Alexander V. Sidorov, Sergey V. Razin, Alexey P. Veselov, Mikhail E. Viktorov, Alexander V. Vodopyanov, Mikhail V. Morozkin, Mikhail D. Proyavin, Mikhail Yu. Glyavin. 44th International Conference on Infrared, Millimeter, and Terahertz Waves (IRMMW-THz), 2019,

September 1-6, Paris, France, P. 8873700 DOI: 10.1109/IRMMW-THz.2019.8873700

15. FRONT BROADENING OF SELFIGNITED DISCHARGE AND HEATED BY POWERFUL THZ RADIATION. Veselov A.P., Sidorov A.V., Vodopyanov A.V., Victorov M.E., Razin S.V., Barmashova T.V., Glyavin M.Yu., Luchinin A.G. XLVII ZVENIGOROD INTERNATIONAL CONFERENCE ON PLASMA PHYSICS AND CONTROLLED FUSION, Zvenigorod, Russia, March, 2020. DOI: 10.34854/ICPAF.2020.47.1.104

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17. Dynamics of the gas discharge in noble gases sustained by the powerful radiation of 0.67 THz gyrotron. A. Sidorov, S. Razin, A. Veselov, M. Viktorov, A. Vodopyanov, A. Luchinin, and M. Glyavin Physics of Plasmas 27, 093509 (2020). DOI: 10.1063/5.0012583

18. Laser interferometry of terahertz discharge in N₂. T. Barmashova, A. Luchinin, A. Murzanev, A. Sidorov, A. Stepanov, A. Veselov, A. Vodopyanov. Fourth International Conference on Terahertz and Microwave Radiation: Generation, Detection, and Applications, edited by Oleg A. Romanovskii, Yurii V. Kistenev, Proc. of SPIE Vol. 11582, 115820N · © 2020 SPIE · CCC code: 0277-786X/20/\$21. DOI: 10.1117/12.2580141

19. Prospects of the gas-discharge EUV source based on the plasma creation by powerful pulsed terahertz gyrotrons. Kalynov, Yu., Razin, S., Sidorov, A., Vodopyanov, A., Veselov, A. Proc. SPIE 11582, Fourth International Conference on Terahertz and Microwave Radiation: Generation, Detection, and Applications, 115820P (17 November 2020); doi: 10.1117/12.2580161

20. Gas discharge sustained by the powerful radiation of 0.26 THz CW gyrotron. A. V. Sidorov, S. V. Razin, A. P. Veselov, A. V. Vodopyanov, A. A. Orlovskiy, M. Yu. Glyavin, "Gas discharge sustained by the powerful radiation of 0.26 THz CW gyrotron," Proc. SPIE 11582, Fourth International Conference on Terahertz and Microwave Radiation: Generation, Detection, and Applications, 115820Q (17 November 2020) doi: 10.1117/12.2580352

21. Continuous atmospheric pressure discharges in terahertz and sub-terahertz focused beams. Alexander V. Vodopyanov, Vitaly V. Kubarev, Alexander V. Sidorov, Oleg A. Shevchenko, Alexey P. Veselov, Yaroslav I. Gorbachev, Sergey V. Sintsov, Mikhail E. Viktorov, Mikhail V. Morozkin, and Mikhail Y. Glyavin, Proc. SPIE 11582, Fourth International Conference on Terahertz and Microwave Radiation: Generation, Detection, and Applications, 1158210 (17 November 2020); <https://doi.org/10.1117/12.2580544>

22. Prospects for creating an intense ultraviolet source based on the creation of a plasma discharge by a powerful terahertz radiation pulse. Bandurkin et al., 2020 7th All-Russian Microwave Conference

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| | (RMC), Moscow, Russia, 2020, pp. 61-65, doi: 10.1109/RMC50626.2020.9312351. 23. Экспериментальное изучение скорости распространения разряда в пучке эм. волн частотой 0.263 ТГц. Веселов Алексей Павлович, Сидоров Александр Васильевич, Бармашова Татьяна Владимировна, Разин Сергей Владимирович. 25 Сессия молодых учёных (технические, естественные, гуманитарные науки): материалы тезисов и докладов, стр. 228, УДК 533.95 | |
| Участие в конференциях | PIERS-2017, IRMMW-THz2018, EPS-2019, XLVII Звенигородская конференция, XXV Нижегородская сессия молодых ученых. | |
| Участие в грантах | РНФ «Разряд, поддерживаемый излучением ТГц диапазона в неоднородном потоке газа как точечный источник экстремального ультрафиолетового излучения» №14-12-00609; РФФИ: Микроволновое излучение, генерируемое при развитии кинетических неустойчивостей в плотной плазме в магнитной ловушке. №19-52-10007 РНФ «Экспериментальное исследование особенностей пробоя газа и динамики разряда, поддерживаемого мощным излучением терагерцового диапазона частот» №17-72-20173; РНФ «Генерация субпикосекундных электронных сгустков сильными терагерцовым полями для высокоградиентного ускорения электронов и сверхбыстрого дифракционного имиджинга» №19-42-04133 | |
| Педагогическая деятельность | | |
| Успеваемость | | |
| дисциплина | Дата экзамена | оценка |
| Специальность (физика плазмы) | | |
| Иностранный язык | 11.06.2020 | ОТЛИЧНО |
| История и философия науки | 18.06.2020 | ОТЛИЧНО |
| Личные достижения (дипломы, грамоты, сертификаты, именные стипендии) | | |
| Дополнительная информация | | |