СПИСОК НАУЧНЫХ ПУБЛИКАЦИЙ, В КОТОРЫХ ИЗЛОЖЕНЫ ОСНОВНЫЕ РЕЗУЛЬТАТЫ ДИССЕРТАЦИИ
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1. Список научных статей за последние 10 лет (2016-2024 гг.), в которых изложены основные результаты диссертации

1. **V. Sukhov**. Electrical signals as mechanism of photosynthesis regulation in plants // Photosynthesis Research. – 2016. – V. 130. – № 1-3. – P. 373-387. doi:10.1007/s11120-016-0270-x (**WoS, Scopus, IF= 2.9, Q1 (SJR)**)
https://doi.org/10.1007/s11120-016-0270-x

2. L. Surova, O. Sherstneva, V. Vodeneev, L. Katicheva, M. Semina, **V. Sukhov**. Variation potential-induced photosynthetic and respiratory changes increase ATP content in pea leaves // Journal of Plant Physiology. – 2016. – V. 202. – P. 57-64. doi: 10.1016/j.jplph.2016.05.024 (**WoS, Scopus, IF= 4.0, Q1 (SJR)**)
https://doi.org/10.1016/j.jplph.2016.05.024

3. **V. Sukhov**, L. Surova, E. Morozova, O. Sherstneva, V. Vodeneev. Changes in H^+-ATP synthase activity, proton electrochemical gradient, and pH in pea chloroplast can be connected with variation potential // Frontiers in Plant Science. – 2016. – V. 7. – P. 1092. doi: 10.3389/fpls.2016.01092 (**WoS, Scopus, IF= 4.1, Q1 (SJR)**)
https://doi.org/10.3389/fpls.2016.01092

4. L. Surova, O. Sherstneva, V. Vodeneev, **V. Sukhov**. Variation potential propagation decreases heat-related damage of pea photosystem I by two different pathways // Plant Signaling and Behavior. – 2016. – V. 11. – P. E1145334. doi: 10.1080/15592324.2016.1145334 (**WoS, Scopus, IF= 2.8, Q2 (SJR)**)
https://doi.org/10.1080/15592324.2016.1145334

5. В.А. Воденеев, О.Н. Шерстнева, Л.М. Сурова, М.М. Семина, Л.А. Катичева, **В.С. Сухов**. Изменение параметров индуцированных электрическими сигналами ответов фотосинтеза при увеличении возраста проростков пшеницы // Физиология растений. – 2016. – Т. 63. – № 6. – С. 873-880. doi:10.7868/S001533031605016X (**WoS, Scopus, IF=1.1**)
https://doi.org/10.7868/S001533031605016X

6. О.Н. Шерстнева, В.А. Воденеев, Л.М. Сурова, Е.М. Новикова, **В.С. Сухов**. Использование математической модели вариабельного потенциала для анализа его влияния на фотосинтез высших растений // Биологические мембраны. – 2016. – Т. 33. – № 4. – С. 293-302. doi: 10.7868/S0233475516030087 (**WoS, Scopus, RSCI**)
https://doi.org/10.7868/S0233475516030087

7. В.А. Воденеев, Л.А. Катичева, **В.С. Сухов**. Электрические сигналы у высших растений: механизмы генерации и распространения // Биофизика. – 2016. – Т. 61. – № 3. – С. 598-606. doi: 10.1134/S0006350916030209 (**Scopus, RSCI**)
https://doi.org/10.1134/S0006350916030209

8. **V. Sukhov**, V. Gaspirovich, S. Mysyagin, V. Vodeneev. High-temperature tolerance of photosynthesis can be linked to local electrical responses in leaves of pea // Frontiers in Physiology. – 2017. – V. 8. – P. 763. doi: 10.3389/fphys.2017.00763 (**WoS, Scopus, IF=3.2, Q2 (SJR)**)
https://doi.org/10.3389/fphys.2017.00763

9. E. Sukhova, E. Akinchits, **V. Sukhov**. Mathematical models of electrical activity in plants // Journal of Membrane Biology. – 2017. – V. 250. – № 5. – P. 407-423. doi: 10.1007/s00232-017-9969-7 (**WoS, Scopus, IF= 2.3**)
https://doi.org/10.1007/s00232-017-9969-7

10. Е.М. Новикова, В.А. Воденеев, **В.С. Сухов.** Разработка математической модели потенциала действия высших растений, учитывающей роль вакуоли в генерации электрического сигнала // Биологические мембраны. – 2017. – Т. 34. – № 2. – С. 109-125. doi: 10.7868/S0233475517010066 (**WoS, Scopus, RSCI**)

https://doi.org/10.7868/S0233475517010066

11. E. Sukhova, M. Mudrilov, V. Vodeneev, **V. Sukhov**. Influence of the variation potential on photosynthetic flows of light energy and electrons in pea // Photosynthesis Research. – 2018. – V. 136. – № 2. – P. 215-228. doi: 10.1007/s11120-017-0460-1 (**WoS, Scopus, IF= 2.9, Q1 (SJR)**)

https://doi.org/10.1007/s11120-017-0460-1

12. V. Vodeneev, M. Mudrilov, E. Akinchits, I. Balalaeva, **V. Sukhov**. Parameters of electrical signals and photosynthetic responses induced by them in pea seedlings depend on the nature of stimulus // Functional Plant Biology. – 2018. – V. 45. – № 2. – P. 160-170. doi: 10.1071/FP16342 (**WoS, Scopus, IF= 2.6, Q1 (SJR)**)

https://doi.org/10.1071/FP16342

13. E. Sukhova, **V. Sukhov**. Connection of the photochemical reflectance index (PRI) with the photosystem II quantum yield and the nonphotochemical quenching can be dependent on variation of photosynthetic parameters among investigated plants: A meta-analysis // Remote Sensing. – 2018. – V. 10. – № 5. – P. 771. doi:10.3390/rs10050771 (**WoS, Scopus, IF=4.2, Q1 (SJR)**)

https://doi.org/10.3390/rs10050771

14. Е.М. Сухова, **В.С. Сухов**. Зависимость поступления CO_2 в растительную клетку от активности H^+-АТР-азы плазматической мембраны. Теоретический анализ // Биологические мембраны. – 2018. – Т. 35. – № 1. – С. 52-65. doi: 10.7868/S0233475518010061 (**WoS, Scopus, RSCI**)

https://doi.org/10.7868/S0233475518010061

15. **V. Sukhov**, E. Sukhova, V. Vodeneev. Long-distance electrical signals as a link between the local action of stressors and the systemic physiological responses in higher plants // Progress in Biophysics and Molecular Biology. – 2019. – V. 146. – P. 63-84. doi: 10.1016/j.pbiomolbio.2018.11.009 (**WoS, Scopus, IF= 3.2, Q1 (SJR)**)

https://doi.org/10.1016/j.pbiomolbio.2018.11.009

16. **V. Sukhov**, E. Sukhova, E. Gromova, L. Surova, V. Nerush, V. Vodeneev. The electrical signals-induced systemic photosynthetic response is accompanied with changes in photochemical reflectance index in pea // Functional Plant Biology. – 2019. – V. 46. – № 4. – P. 328-338. doi:10.1071/FP18224 (**WoS, Scopus, IF= 2.6, Q1 (SJR)**)

https://doi.org/10.1071/FP18224

17. E. Sukhova, **V. Sukhov**. Analysis of light-induced changes in the photochemical reflectance index (PRI) in leaves of pea, wheat, and pumpkin using pulses of green-yellow measuring light // Remote Sensing. – 2019. – V. 11. – № 7. – P. 810. doi:10.3390/rs11070810 (**WoS, Scopus, IF= 4.2, Q1 (SJR)**)

https://doi.org/10.3390/rs11070810

18. E. Sukhova, L. Yudina, E. Akinchits, V. Vodeneev, **V. Sukhov**. Influence of electrical signals on pea leaf reflectance in the 400 - 800 nm range // Plant Signaling and Behavior. – 2019. – V. 14. – № 7. – P. E1610301. doi:10.1080/15592324.2019.1610301 (**WoS, Scopus, IF= 2.8, Q2 (SJR)**)

https://doi.org/10.1080/15592324.2019.1610301

19. Л.М. Сурова, О.Н. Шерстнева, С.А. Мысягин, В.А. Воденеев, **В.С. Сухов.** Влияние локального повреждения на транспирацию листьев гороха при различной влажности воздуха // Физиология растений. – 2019. – Т. 66. – № 1. – С. 58-65. doi:10.1134/S0015330319010160 (**WoS, Scopus, IF=1.1**)

https://doi.org/10.1134/S0015330319010160

20. L. Yudina, O. Sherstneva, E. Sukhova, M. Grinberg, S. Mysyagin, V. Vodeneev, **V. Sukhov**. Inactivation of H^+-ATPase participates in the influence of variation potential on photosynthesis and respiration in peas // Plants. – 2020. – V. 11. – № 9. – P. 1585. doi:10.3390/plants9111585 (**WoS, Scopus, IF= 4.0, Q1 (SJR)**)

https://doi.org/10.3390/plants9111585

21. M. Ladeinova, M. Mudrilov, E. Berezina, D. Kior, M. Grinberg, A. Brilkina, **V. Sukhov**, V. Vodeneev. Spatial and temporal dynamics of electrical and photosynthetic activity and the content of phytohormones induced by local stimulation of pea plants // Plants. – 2020. – V. 9. – № 10. – P. 1364. doi:10.3390/plants9101364 (**WoS, Scopus, IF= 4.0, Q1 (SJR)**)

https://doi.org/10.3390/plants9101364

22. L. Yudina, E. Sukhova, O. Sherstneva, M. Grinberg, M. Ladeinova, V. Vodeneev, **V. Sukhov**. Exogenous abscisic acid can influence photosynthetic processes in peas through a decrease in activity of H^+-ATP-ase in the plasma membrane // Biology. – 2020. – V. 9. – № 10. – P. 324. doi:10.3390/biology9100324 (**WoS, Scopus, IF= 3.6, Q1 (SJR)**)

https://doi.org/10.3390/biology9100324

23. L. Yudina, E. Sukhova, E. Gromova, V. Nerush, V. Vodeneev, **V. Sukhov**. A light-induced decrease in the photochemical reflectance index (PRI) can be used to estimate the energy-dependent component of non-photochemical quenching under heat stress and soil drought in pea, wheat, and pumpkin. // Photosynthesis Research. – 2020. – V. 146. – № 1-3. – P. 175-187. doi:10.1007/s11120-020-00718-x (**WoS, Scopus, IF= 2.9, Q1 (SJR)**)

https://doi.org/10.1007/s11120-020-00718-x

24. E. Sukhova, **V. Sukhov**. Relation of photochemical reflectance indices based on different wavelengths to the parameters of light reactions in photosystems I and II in pea plants // Remote Sensing. – 2020. – V. 12. – № 8. – P. 1312. doi:10.3390/rs12081312 (**WoS, Scopus, IF= 4.2, Q1 (SJR)**)

https://doi.org/10.3390/rs12081312

25. E. Sukhova, L. Yudina, E. Gromova, V. Nerush, V. Vodeneev, **V. Sukhov**. Burning-induced electrical signals influence broadband reflectance indices and water index in pea leaves // Plant Signaling and Behavior. – 2020. – V. 15. – № 4. – P. 1737786. doi: 10.1080/15592324.2020.1737786 (**WoS, Scopus, IF= 2.8, Q2 (SJR)**)

https://doi.org/10.1080/15592324.2020.1737786

26. M. Mudrilov, L. Katicheva, M. Ladeynova, I. Balalaeva, **V. Sukhov**, V. Vodeneev. Automatic determination of the parameters of electrical signals and functional responses of plants using the wavelet transformation method // Agriculture. – 2020. – V. 10. – № 1. – P. 7. doi:10.3390/agriculture10010007 (**WoS, Scopus, IF= 3.3, Q2 (SJR)**)

https://doi.org/10.3390/agriculture10010007

27. **В.С. Сухов**, Е.М. Сухова, Д.А. Ратницына, М.А. Гринберг, Л.М. Юдина, В.А. Воденеев. Теоретический анализ влияния флуктуаций активности H^+-АТР-азы плазматической мембраны на холодоиндуцированные электрические реакции растительной клетки // Биологические мембраны. – 2020. – Т. 37. – № 4. – С. 299-312. doi:10.31857/S0233475520040076 (**WoS, Scopus, RSCI**)

https://doi.org/10.31857/S0233475520040076

28. E. Sukhova, **V. Sukhov**. Electrical signals, plant tolerance to actions of stressors, and programmed cell death: Is interaction possible? // Plants. – 2021. – V. 10. – № 8. – P. 1704. doi:10.3390/plants10081704 (**WoS, Scopus, IF= 4.0, Q1 (SJR)**)

https://doi.org/10.3390/plants10081704

29. E. Sukhova, E. Akinchits, S.V. Gudkov, R.Y. Pishchalnikov, V. Vodeneev, **V. Sukhov.** A theoretical analysis of relations between pressure changes along xylem vessels and propagation of variation potential in higher plants // Plants. – 2021. – V. 10. – № 2. – P. 372. doi:10.3390/plants10020372 (**WoS, Scopus, IF= 4.0, Q1 (SJR)**)

https://doi.org/10.3390/plants10020372

30. M.A. Grinberg, S.V. Gudkov, I.V. Balalaeva, E. Gromova, Yu. Sinitsyna, **V. Sukhov**, V. Vodeneev. Effect of chronic β-radiation on long-distance electrical signals in wheat and their role in adaptation to heat stress // Environmental and Experimental Botany. – 2021. – V. 184. – P. 104378. doi:10.1016/j.envexpbot.2021.104378 (**WoS, Scopus, IF= 4.5, Q1 (SJR)**)

https://doi.org/10.1016/j.envexpbot.2021.104378

31. M. Mudrilov, M. Ladeinova, E. Berezina, M. Grinberg, A. Brilkina, **V. Sukhov,** V. Vodeneev. Mechanisms of specific systemic response in wheat plants under different locally acting heat stimuli // Journal of Plant Physiology. – 2021. – V. 258–259. – P. 153377. doi: 10.1016/j.jplph.2021.153377 (**WoS, Scopus, IF= 4.0, Q1 (SJR)**)
https://doi.org/10.1016/j.jplph.2021.153377
32. E. Sukhova, D. Ratnitsyna, **V. Sukhov**. Stochastic spatial heterogeneity in activities of H^+-ATP-ases in electrically connected plant cells decreases threshold for cooling-induced electrical responses // International Journal of Molecular Sciences. – 2021. – V. 22. – № 15. – P. 8254. doi:10.3390/ijms22158254 (**WoS, Scopus, IF= 4.9, Q1 (SJR)**)
https://doi.org/10.3390/ijms22158254
33. E. Sukhova, L. Yudina, E. Gromova, A. Ryabkova, V. Vodeneev, **V. Sukhov** Influence of local burning on difference reflectance indices based on 400–700 nm wavelengths in leaves of pea seedlings // Plants. – 2021. V. 10. – № 5. — P. 876. doi: 10.3390/plants10050878 (**WoS, Scopus, IF= 4.0, Q1 (SJR)**)
https://doi.org/10.3390/plants10050878
34. E. Sukhova, L. Yudina, E. Gromova, A. Ryabkova, D. Kior, **V. Sukhov**. Complex analysis of the efficiency of difference reflectance indices on the basis of 400–700 nm wavelengths for revealing the influences of water shortage and heating on plant seedlings // Remote Sensing. – 2021. – V. 13. – № 5.– P. 962. doi:10.3390/rs13050962 **(WoS, Scopus, IF= 4.2, Q1 (SJR))**
https://doi.org/10.3390/rs13050962
35. **V. Sukhov**, E. Sukhova, A. Khlopkov, L. Yudina, A. Ryabkova, A. Telnykh, E. Sergeeva, V. Vodeneev, I. Turchin. Proximal imaging of changes in photochemical reflectance index in leaves based on using pulses of green-yellow light // Remote Sensing. – 2021. V. 13. – № 9. — P. 1762. doi:10.3390/rs13091762 (**WoS, Scopus, IF= 4.2, Q1 (SJR)**)
https://doi.org/10.3390/rs13091762
36. L. Yudina, E. Gromova, M. Grinberg, A. Popova, E. Sukhova, **V. Sukhov**. Influence of burning-induced electrical signals on photosynthesis in pea can be modified by soil water shortage // Plants. – 2022. – V. 11. – № 4. – P. 534. doi:10.3390/plants11040534 (**WoS, Scopus, IF= 4.0, Q1 (SJR)**)
https://doi.org/10.3390/plants11040534
37. E. Sukhova, D. Ratnitsyna, E. Gromova, **V. Sukhov**. Development of two-dimensional model of photosynthesis in plant leaves and analysis of induction of spatial heterogeneity of CO_2 assimilation rate under action of excess light and drought // Plants. – 2022. – V. 11. – № 23. – P. 3285. doi:10.3390/plants11233285 (**WoS, Scopus, IF= 4.0, Q1 (SJR)**)
https://doi.org/10.3390/plants11233285
38. E. Sukhova, D. Ratnitsyna, **V. Sukhov**. Simulated analysis of influence of changes in H^+-ATPase activity and membrane CO_2 conductance on parameters of photosynthetic assimilation in leaves // Plants. – 2022. – V. 11. – № 24. – P. 3435. doi:10.3390/plants11243435 (**WoS, Scopus, IF= 4.0, Q1 (SJR)**)
https://doi.org/10.3390/plants11243435
39. E. Sukhova, **V. Sukhov**. Electrical signals in systemic adaptive response of higher plants: Integration through separation // Bioelectricity. – 2023. – V. 5. – № 2. – P. 126-131. doi: 10.1089/bioe.2022.0042 (**WoS, Scopus, IF= 1.7, Q2 (SJR)**)
https://doi.org/10.1089/bioe.2022.0042
40. Е.М. Сухова, Л.М. Юдина, **В.С. Сухов**. Изменения активности H^+-АТРазы плазматической мембраны как связующее звено между формированием электрических сигналов и развитием фотосинтетических ответов у высших растений // Биохимия. – 2023. – Т. 88. – № 10. – С. 1800–1817. doi:10.31857/S0320972523100068 (**WoS, Scopus, IF= 2.3, Q2 (SJR), RSCI**)
https://doi.org/10.31857/S0320972523100068

41. E. Sukhova, L. Yudina, E. Kozlova, **V. Sukhov**. Preliminary treatment by exogenous 24-epibrassinolide influences burning-induced electrical signals and following photosynthetic responses in pea (*Pisum sativum L.*) // Plants. – 2024. – V. 13. – № 23. – P. 3292. doi:10.3390/plants13233292 (**WoS, Scopus, IF= 4.0, Q1 (SJR)**)

https://doi.org/10.3390/plants13233292

42. **V. Sukhov**. Increasing stomatal CO_2 conductance as a potential mechanism of photosynthetic activation by electrical signals in terrestrial plants // Frontiers in Plant Science. – 2024. – V. 15. – P. 1476175. doi:10.3389/fpls.2024.1476175 (**WoS, Scopus, IF= 4.1, Q1 (SJR)**)

https://doi.org/10.3389/fpls.2024.1476175

2. Список патентов за последние 10 лет (2016-2024 гг.), связанных с диссертацией

43. **В.С. Сухов**, Е.М. Сухова, В.А. Воденеев, Л.М. Юдина, И.В. Турчин, А.А. Тельных, Е.А. Сергеева, В.А. Воробьев Система для измерения фотохимического индекса отражения PRI у растений (Патент на изобретение 2746690, государственная регистрация 19 апреля 2021 г.).

3. Список научных статей, опубликованных до 2016 г., в которых изложены основные результаты диссертации

44. **V. Sukhov**, O. Orlova, S. Mysyagin, J. Sinitsyna, V. Vodeneev Analysis of the photosynthetic response induced by variation potential in geranium // Planta. – 2012. – V. 235. – № 4. – P. 703-712. doi:10.1007/s00425-011-1529-2 (**WoS, Scopus, IF= 3.6, Q1 (SJR)**)

https://doi.org/10.1007/s00425-011-1529-2

45. **В.С. Сухов**, О.Н. Шерстнева, Л.М. Сурова, Е.А. Румянцев, В.А. Воденеев. Влияние вариабельного потенциала на фотосинтез проростков тыквы (*Cucurbita pepo L.*) // Биофизика. – 2013. – Т. 58. – № 3. – С. 468-473. doi:10.1134/S0006350913030184 **(Scopus, RSCI)**

https://doi.org/10.1134/S0006350913030184

46. **V. Sukhov**, O. Sherstneva, L. Surova, L. Katicheva, V. Vodeneev. Proton cellular influx as a probable mechanism of variation potential influence on photosynthesis in pea // Plant, Cell and Environment. – 2014. – V. 37. – № 11. – P. 2532-2541. doi:10.1111/pce.12321 (**WoS, Scopus, IF= 6.1, Q1 (SJR)**)

https://doi.org/10.1111/pce.12321

47. **V. Sukhov**, L. Surova, O. Sherstneva, V. Vodeneev. Influence of variation potential on resistance of the photosynthetic machinery to heating in pea // Physiologia Plantarum. – 2014. – V. 152. – № 4. – P. 773-783. doi:10.1111/ppl.12208 (**WoS, Scopus, IF= 5.4, Q1 (SJR)**)

https://doi.org/10.1111/ppl.12208

48. **V. Sukhov**, L. Surova, O. Sherstneva, L. Katicheva, V. Vodeneev. Variation potential influence on photosynthetic cyclic electron flow in pea // Frontiers in Plant Science. –2015. – V. 5. – P. 766. doi: 10.3389/fpls.2014.00766 (**WoS, Scopus, IF= 4.1, Q1 (SJR)**)

https://doi.org/10.3389/fpls.2014.00766

49. **V. Sukhov**, L. Surova, O. Sherstneva, A. Bushueva, V. Vodeneev. Variation potential induces decreased PSI damage and increased PSII damage under high external temperature in pea // Functional Plant Biology. – 2015. – V. 42. – № 8. – P. 727-736. doi:10.1071/FP15052 (**WoS, Scopus, IF= 2.6, Q1 (SJR)**)

https://doi.org/10.1071/FP15052

50. V. Vodeneev, E. Akinchits, **V. Sukhov**. Variation potential in higher plants: mechanisms of generation and propagation // Plant Signaling and Behavior. – 2015. – V. 10. – P. E1057365. doi:10.1080/15592324.2015.1057365 (**WoS, Scopus, IF= 2.8, Q2 (SJR)**)

https://doi.org/10.1080/15592324.2015.1057365

51. О.Н. Шерстнева, В.А. Воденеев, Л.А. Катичева, Л.М. Сурова, **В.С. Сухов.** Участие изменений внутри и внеклеточного pH в развитии вызванного вариабельным

потенциалом фотосинтетического ответа у проростков тыквы // Биохимия. – 2015. – Т. 80. – № 6. – С. 920-930. doi:10.1134/S0006297915060139 (**WoS, Scopus, IF=2.3, Q2 (SJR), RSCI**)

https://doi.org/10.1134/S0006297915060139

52. О.Н. Шерстнева, Л.М. Сурова, В.А. Воденеев, Ю.И. Плотникова, А.В. Бушуева, **В.С. Сухов**. Изменения внутри- и внеклеточного pH участвуют в формировании разных компонент фотосинтетического ответа, вызванного вариабельным потенциалом у проростков гороха // Биологические мембраны. – 2015. – Т. 32. – № 5-6. – С. 446-454. doi:10.1134/S1990747815050116 (**WoS, Scopus, RSCI**)

https://doi.org/10.1134/S1990747815050116