Список основных работ

Аллахвердиева Сулеймана Ифхан оглы

List of major publications

Suleyman I. Allakhverdiev

(1978-2024)

I. Статьи в реферируемых журналах (Articles in refereed journals (420)

1. Климов В.В., **Аллахвердиев С.И.,** Пащенко В.З. (1978) Измерение энергии активации и времени жизни флуоресценции хлорофилла фотосистеме 2. ***Докл. АН СССР***, 242: 1204-1205.

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3. Климов В.В., **Аллахвердиев С.И.,** Красновский А.А. (1979) Сигнал ЭПР при фотовосстановление феофитина в реакционных центрах фотосистемы 2 хлоропластов. -***Докл. АН СССР*** , 249: 485-488.

4. Климов В.В., **Аллахвердиев С.И.,** Шутилова Н.И., Красновский А.А. (1980) Исследование фотовосстановления феофитина и фотоокисления хлорофилла П680 на препаратах фотосистемы 2 из хлоропластов гороха и *Chlamydomonas reinhardii.* ***Физиология растений***, 27: 315-326.

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7. Куликов А.В., Богатыренко В.Р., Лихтенштейн Г.И., **Аллахвердиев С.И.**, Климов В.В., Шувалов В.А., Красновский А.А. (1983) Магнитное взаимодействие марганца с анион-радикалом феофитина и катион- радикалом хлорофилла в реакционных центрах фотосистемы 2. ***Биофизика,*** 28:357-363.

8. Klimov V.V., **Allakhverdiev S.I.,** Shafiev M.A., Demeter S. (1985) Effect of complete extraction and re-addition of manganese on thermoluminescence of pea photosystem II preparations. ***Biochim Biophys Acta,*** 809: 414-420.

9. **Аллахвердиев С.И.,** Шафиев М.А., Климов В.В. (1985) Влияние экстрагирования и последующего добавления ионов марганца на фотоокисление хлорофилла П680 в препаратах фотосистемы 2. ***Биофизика***, 31: 223-226.

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II. Книги-Books (13)

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V. Устные и/или приглашенные докладов с 1995г - Oral and / or invited lectures from 1995 (67)

1. **Satellite Meeting of International Congress on Photosynthesis: Visible and UV Light Stress, Paris, France, August, 1995,** "Evidence for the involvement of cyclic electron transport in the protection of photosystem II against photoinactivation: influence of a new phenolic compound".

2. ***European Research Conferences: "Biophysics of Photosynthesis"*** **Sitges, Spain, 5-10 October, 1996**, "Bicarbonate requirement for the donor side of photosystem II"

3. ***European Workshop: "Molecular recognition in photosynthesis"*** Jaca, Spain, 27-29 September, 1996, "Bicarbonate is an essential constituent of the water-oxidizing complex of photosystem II"

4. ***The 13th International symposium on Plant Lipids*****, Seville, Spain, July, 1998;** "Effect of unsaturation of fatty acids in membrane lipids on the tolerance to light and high-salt stress and temperature-dependent regulation of the expression of genes for fatty acid desaturases in *Synechocystis*"

5. ***Japan-Australia Binational Seminar "Molecular physiology of photosynthesis in Stress Environments"*** **Okazaki, Japan, March, 1998;** "Bicarbonate may be required for ligation of manganese in the oxygen-evolving complex of photosystem II"

6. ***Satellite Meeting of the 11th International congress on Photosynthesis: "International Workshop on Stress Synergisms in Plants: Abiotic and Biotic Stress in Photosynthesis"*** **Tata, Hungary, August, 1998;** "Genetic engineering of the unsaturation of fatty acids in membrane lipids alters the tolerance of *Synechocystis* to salt stress"

7. ***The 38th NIBB Conference: "Stress Responses, Sensing, Signal Transduction and Gene Expression"*** **Okazaki, Japan, March 29-31, 1998;** "Low-temperature perception system which regulates induction of fatty acid desaturases in the cyanobacterium synechocystis sp. PCC 6803"

8. **The MBIO Conference "Marino Biotechnology", Kamaishi, Japan August, 1999** "Structure and function of photosystem II"

9. ***The 14th International Workshop of Plant Lipids,*** **Okazaki, Japan, November-December, 2001;** "Unsaturated fatty acids in membrane lipids protect the photosynthetic machinery against salt-induced damage in cyanobacteria"

10. **"Light Stress and Photosynthesis", Satellite Meeting of 12th International Congress on Photosynthesis,Heron Island, Australia, August 2001;** "The repair of photosystem II is the site of regulation by environmental stresses"

11. ***The 12th International Congress on Photosynthesis,*** **Brisbane, Australia, August 2001;** "Light and salt stress act synergistically to impair photosystem II by inhibition of the transcription and translation of *psbA* genes"

12. ***The International Symposium on Photosystem II,*** **Pushchino, Russia, July 8-12, 2002** "Salt stress inhibits the repair of photodamaged photosystem II by suppressing the transcription and translation of *psbA* genes in *Synechocystis*"

13. ***The International Satellite Meeting*** "***Photosynthesis and Post-Genomic Era: From Biophysics to Molecular Biology a Path in the Research of Photosystem II***"**- in honour of Professor Norio Murata, August 25-28, 2004 Trois-Rivières, Québec, Canada, in Conjunction with the XIIIth International Congress on Photosynthesis, Montreal, Canada** "Environmental stress inhibits the synthesis *de novo* of proteins involved in the photodamage-repair cycle of photosystem II in *Synechocystis*"

14. ***The 18th Pushchino Conference on Photosynthesis,*** **Pushchino, Russia, June 19-23, 2005** "Cellular energization protects the photosynthetic machinery against salt-induced inactivation in *Synechococcus*"

15. ***NIBB Conference in 2006.*** "Temperature Regulation of Photodamage to Photosystem II in Synechocystis"

16. ***The International Meeting*** "***Photosynthesis and Post-Genomic Era: Structure and Function of Photosystems***"**-in honour of Prof. Jim Barber, August 20-26, 2006, Pushchino, Russia** "A new Paradigm for Photodamage and Repair in Photoinhibition of Photosystem II"

17. ***Kanasawa University, Kanasawa, Japan, February 14, 2007*** "Temperature regulation of photodamage to photosystem II in Synechocystis"

18. ***Institute for Molecular Science (IMS), National Institutes for Natural Science (NINS), Myodaiji, Okazaki, Japan, June 20, 2007,*** "Photosystem II: X-ray analysis and Temperature regulation of photodamage to photosystem II in Synechocystis"

19. ***The 14th International Congress on Photosynthesis,*** **Glasgow, July, 2007;** "Action of reactive oxygen species in the photoinhibition of photosystem II"- Y.Nishiyama,K.Kojima, H.Hayashi, **S I.Allakhverdiev,** N. Murata

20. ***International Conference "Photosynthesis in the Global Perspective" DAVV, Indore, India (27-29 November) 2008*** "Single-molecular quinine pools: an approach toward photosynthetic energy conversion from organic chemistry"- T. Nagata, Y. Kikuzawa, T. Nagasawa and **S.I.Allakhverdiev**

21. **RIKEN Plant Science Center, Yokohama, Japan. February 4, Monday, 2008 (at 14:30).** ***(Host researcher: Prof. K. Shinozaki. Director of RIKEN Plant Science Center)*** "Glycinebetaine alleviates the inhibitory effect of moderate heat stress on the repair of photosystem II during photoinhibition"

22. **Okayama University, Okayama, Japan, February 18, Monday, 2008 (at 15:00).** ***(Host researcher: Prof. J.-R. Shen. Department of Biology).***"From natural photosynthesis to artifical photosynthesis: Reconstitution of water-oxidizing complex in Mn-depleted photosystem II

preparations using synthetic binuclear Mn(II) and Mn(IV) complexes: production of hydrogen peroxide"

23. **Osaka Prefecture University, Osaka, Japan, February 20, Wednesday, 2008 (at 15:00).** ***(Host researcher: Prof. M. Sigiura. Department of Plant Biosciences),*** "Structure and Function of Photosystem II"

24. **The University of Tokyo, Tokyo, Japan. March 3, Monday, 2008 (at 16:00).** ***(Host researcher: Prof. H. Nishihara. Department of Chemistry),*** "Structure and Function of Photosystem II: Reconstitution of water-oxidizing complex in Mn-depleted photosystem II preparations using synthetic binuclear Mn complexes"

25. **Nagoya Institute of Technology, Nagoya, Japan. March 12, Monday, 2008 (at 15:40).** ***(Host researcher: Prof. Y. Funahashi. Department of Applied Chemistry)***"Structure and Function of Photosystem II: Reconstitution of water-oxidizing complex in Mn-depleted photosystem II preparations using synthetic binuclear Mn complexes" at Public Symposium "Carbon Cycle and Light Energy"

26. **Tokyo Institute of Technology, Chemical Resources Laboratory, Yokohama, Japan. January 28, Thursday, 2010, (at 16:00). (Host researcher: Prof. M. Fujii):** "Structure and Function of Photosystem II: Reconstitution of the Water-Oxidizing Complex in Mn-depleted Photosystem II Preparations using Synthetic Mn complexes"

27. **The Tokyo University of Sciences, Department of Applied Biological Science, Noda, Japan. January 29, Friday, 2010, (at 16:00). (Host researcher: Prof. Y. Inoue):** "Structure and Function of Photosystem II: Reconstitution of the Water-Oxidizing Complex in Mn-depleted Photosystem II Preparations using Synthetic Mn complexes".

28. **National Institute of Advanced Industrial Science and Technology (AIST) Tsukuba, Japan. February 4, Thursday, 2010, at 14:00), (Host researcher: Prof. T. Hiraga):** "Structure and Function of Photosystem II: Reconstitution of the Water-Oxidizing Complex in Mn-depleted Photosystem II Preparations using Synthetic Mn complexes".

29. **Institute for Molecular Science, Research Center for Molecular Scale Nanoscience, Okazaki, Japan. February 16, (Tuesday, 2010 (at 16:00), (Host researcher: Prof. T. Nagata):** "Structure and Function of Photosystem II: Reconstitution of the Water-Oxidizing Complex in Mn-depleted Photosystem II Preparations using Synthetic Mn complexes".

30. **Nagoya University, Department of Electrical Engineering, Electronics and Information Electronics, Nagoya, Japan. February 17, (Wednesday, 2010 (at 12:30). (Host researcher: Prof. K. Nakazato)**: "Structure and Function of Photosystem II: Reconstitution of the Water-Oxidizing Complex in Mn-depleted Photosystem II Preparations using Synthetic Mn complexes".

31. **The University of Tokyo, Department of Chemistry, Tokyo, Japan. March 1, Monday, 2010 (at 16:00). (Host researcher: Prof. H. Nishihara)**: "Structure and Function of Photosystem II: Reconstitution of the Water-Oxidizing Complex in Mn-depleted Photosystem II Preparations using Synthetic Mn complexes".

32. **International Conference "Photosynthesis Research for Sustainability", Baku, Azerbaijan, (July 24-30, 2011**)-"Opening ceremony" and lecture "From natural to artificial photosynthesis" July 24, at 15:30.

33. **Korean Society of Plant Biology (KSPB) and Global Plant Council (GPC) workshop,** Jeju island, South Korea**,** October 28, Saturday, (at 10 a.m.), 2012. **Title: "Initiative for Plant Research on Energy and Biomaterials: Solar Energy Conversion using photosynthetic Systems"**

34. Pusan National University, Department of Plant Molecular Biology, Pusan, South Korea, October 12, Friday (at 5 p.m.), 2012. (**Host researcher: Prof. Choon-Hwan Lee,** President of KSPB, Head of Department of Plant Molecular Biology). **Title: "Solar Energy Conversion using Photosynthetic Systems"**

35. **Daegu Gyrongbuk Institute of Science and Technology, Dalseong-Gun, Daegu, South Korea, September 20, Thursday (at 3 p.m.), 2012**. (**Host researcher: Prof. Hong Gil Nam**, Head, School of New Biology). **Title: "From Natural to Artificial Photosynthesis: Structure and Function of Photosystem II, Reconstitution of the Water-Oxidizing Complex in Mn-depleted Photosystem II Preparations using Synthetic Mn complexes".**

36. **International Conference "Photosynthesis Research for Sustainability: in honor of J.A. Aliyev", Baku, Azerbaijan, (June 5-9, 2013**)-"Proposed mechanism for water oxidation: From natural Mn-Ca cluster to nano-sized Mn oxides" July 24, at 17:50.

37. **Okayama University, Okayama , Japan.** "**Comparison of nano-sized Mn-Ca oxides with Mn-Ca cluster of photosystem II in water oxidation"**

38. **Photosynthesis Research Center, Okayama University, Japan:** "**Nano-Sized Manganese-Calcium Cluster in Photosystem II: From Natural to Artificial", September 6, 2014**

39. **International Conference "Photosynthesis Research for Sustainability in honor of Vladimir Shuvalov" June 1-8, 2014, Pushchino, Moscow Region, Russia**: **"Diversity of chlorophylls in photosynthesis", June 3th, Lecture (11:00-11:30)**

40. **Opening ceremony at International Conference "Photosynthesis Research for Sustainability in honor of Vladimir Shuvalov", June 1-8, 2014, Pushchino, Moscow Region, Russia**

41. **"Excitation energy transfer in thylakoid membranes from the chlorophyll f-containing cyanobacterium"** Meeting of the Japanese Society of Plant Physologists (16-18 March, 2015). Tokyo, Japan.

42. **"Nanostructured manganese oxide on silica aerogel toward water oxidation" International Conference Photosynthesis Research for Sustainability in honor of Dr. George C. Papageorgiou. (21-26 September 2015) Crete, Greece.**

43. "**Characterization of unique photosystem I complexes and its application" International Conference Photosynthesis Research for Sustainability in honor of Dr. George C. Papageorgiou. (21-26 September 2015) Crete, Greece.**

44. **"Physiological significance of photosystem I photoinhibition in wheat leaves"** International Conference Photosynthesis Research for Sustainability in honor of Dr. George C. Papageorgiou. (21-26 September 2015) Crete, Greece.

45. **"Which technique is better for studying photosynthetic apparatus? Modulated, prompt or delayed chlorophyll fluorescence?"** International Conference Photosynthesis Research for Sustainability in honor of Dr. George C. Papageorgiou. (21-26 September 2015) Crete, Greece.

46. **"Хлорофиллы d и f и их роль в первичных процессах фотосинтеза цианобактерий".** Симпозиальный доклад: (7 Октября, 16:20), V Съезде биохимиков России, 4–8 октября 2016, Сочи - Дагомыс, Россия.

47. **"A set-up for studying effects of environmental factors on a photocurrent generated by a solar cell based on titanium dioxide and plant photosensitizers".** Invited Lecture (November 1 at 10:00)

International Conference “Photosynthesis and Hydrogen Energy Research for Sustainability-2017” in honor of Agepati S. Raghavendra, William A. Cramer, and Govindjee” October 30 – November 4, 2017 Hyderabad, India

48. **“Альтернативная энергетика с точки зрения физиолога растений”-** 79-го Тимирязевского чтения (ИФР РАН, 5 Июня, 2018 г.).

49. I gave series of lectures on a new direction of research in the field of nanobiotechnology, in particular the system of artificial photosynthesis using protein structures to produce molecular hydrogen as an alternative source of energy and the use of photosynthetic crops for biofuel production at the Department of Biology and Biotechnology, Al-Farabi KazNU (from 16.11.2018 to 06.12.2018), Almaty, Kazakhstan (https://www.kaznu.kz/en/3/news/one/14713/)

50. **“Alternative energy based on photosynthesis**”. Invited lecture (23 November 2018), International scientific seminar "Bioenergetics on the basis of phototrophic microorganisms". At the faculty of biology and biotechnology, Al-Farabi Kazakh National University, Almaty, Kazakhstan (https://www.kaznu.kz/en/3/news/one/14982/)

51. **“Альтернативная энергетика на основе фотосинтеза**”. Приглашенный доклад на междисциплинарном мероприятии "Биофизика-Фотоника" из серии "Технологии нового хозяйственного уклада". Мероприятие состоялся в "Точке кипения" (форумная площадка Агентства стратегических инициатив), 14 декабря 2018 г. (15:00). Малый Конюшковский переулок, д.2 (возле "высотки" на Кудринской площади, м.Баррикадная, м.Краснопресненская). Отв: Шарипов О.В., советник администрации РФФИ (E-mail: sharipov@rfbr.ru)

52. **“Alternative energy based on photosynthesis**”. Invited lecture (4 March 2019), Azerbaijan Diplomatic Academy (ADA) University, Baku, Azerbaijan

53. **“Alternative energy based on photosynthesis**”. Invited lecture. “The Belt and Road” 1st Forum of Plant Membrane Biology (8-10 April, 2019). Foshan, Guangdong, China.

54. **“Искусственный фотосинтез как основа альтернативной энергетики”**-заседания Секции физико-химической биологии ОБН РАН (17 сентября 2019) ИБХ РАН, Москвю

55. **“Искусственный фотосинтез как основа альтернативной энергетики”** Приглашенный пленарный доклад, (19 сентября) **IX СЪЕЗД ОБЩЕСТВА ФИЗИОЛОГОВ РАСТЕНИЙ РОССИИ (18-24 сентября 2019), Казань.**

56. **“Искусственный фотосинтез как основа альтернативной энергетики”** Приглашенный доклад на семинаре "Курчатовский институт" 23.09.2019 (понедельник) в 15.00 в НИЦ "Курчатовский институт" (площадь Академика Курчатова, 1).

57. **“The four Basic types of Biofuels: Problems and future Prospects”** Invited Lecture. International Conference “Aspects and innovations of environmental biotechnology and bioenergy”, (February 12 - 13, 2021), Al-Farabi Kazakh National University, Almaty, Kazakhstan.

58. **“Структурный базис адаптации и функции хлорофилла f в фотосистеме 1”. Устный доклад** (28 сентября, 10:00). Всероссийская научная конференция с международным участием и школа для молодых ученых «Экспериментальная биология растений и биотехнология: история и взгляд в будущее», посвященная 130-летию Институту физиологии растений им. К. А. Тимирязева РАН (27 сентября-1 октября 2021г. Москва

59. **“Альтернативная энергетика на основе искусственного фотосинтеза”** Приглашенный доклад на “Всероссийский Фестиваль науки NAUKA 0+”, (9 октября в 13:00-14:00, 2021) по адресу Шуваловский корпус МГУ, Москва.

60. “**The role of chlorophyll f in photosystem I for adaptation to far-red light conditions”** Invited Lecture. International Conference “**The 2nd Belt and Road initiative Forum on Plant MembraneTransport Biology (2021 Foshan), Foshan, China (at13:30-14:00 (8:30-9:00 Mos) Dec 6, 2021)).**

61. **Устный доклад на заседании секции физико-химической биологии Отделения биологических наук РАН (ОБН РАН),** 6 апреля 2022, ИБХ РАН (Москва, Российская Федерация)

62. **«Альтернативная энергетика на основе искусственного фотосинтеза»** приглашенный доклад, XXII Пущинские чтения по фотосинтезу (19 июня 2022 г) Институт фундаментальный проблем биологии РАН, Пущино, Российская Федерация.

63. **«Альтернативная энергетика: достижения, проблемы и перспективы»** лидерская лекция 02 ноября 2022 г, Казахский национальный университет имени Аль-Фараби, факультет биологии и биотехнологии (Казахстан, Астана).

64. **«Solar energy: achievements and prospects»** Invited Lecture, 14.12.2022, Foshan University, China.

65. Пленарный доклад «Искусственный фотосинтез – перспективное решение энергетики», 21.04.2023, VII СЪЕЗД БИОФИЗИКОВ РОССИИ, ФГБОУ ВО «КубГТУ», Краснодар.

66. **«Artificial Photosynthesis, an Energy Technology of the Future»** лекция, XI Conference on «Photosynthesis and Hydrogen Energy Research for Sustainability – 2023» (05.07.2023), Istanbul, Turkey.

67. **«Artificial Photosynthesis – a promising energy solution»,** Invited Lecture, 09.11.2023, Environmental Membrane Biology (EBM) Forum, Foshan University, China.

68. “**Green Hydrogen Production**”, Invited Lecture, 24 April, **2024** (12:20-12:50 PM). International Conference on Hydrogen Energy and Advanced Materials (ICHEAM-2024) , (22-24 April, 2024), India

VI. Авторское свидетельство- Patents (7)

1. Шутилова Н.И., Климов В.В., **Аллахвердиев С.И.** (1987) Способ получения кислородвыделяющих субхлоропластных фрагментов фотосистемы 2 растений. ***Авторское свидетельство*** № 1330769, от 1987 г.

2. Климов В.В., **Аллахвердиев С.И.,** Жармухамедов С.К., Шувалов В.А., (1989) Способ определения количества реакционных центров фотосистемы 2 растений. ***Авторское свидетельство*** № 1494880, от 1989 г.

3. Баскаков Ю.А., Колобанова Л.П., Константинова Н.В., Аллахвердиев **С.И.,** Жармухамедов С.К., Ананьев Г.М., Климов В.В. (1990) 4-(2□-оксиперфторизопропил)-2,6-динитроанилина в качестве ингибиторов реакционного центра фотосистемы 2 растений. ***Авторское свидетельство*** № 1573798, от 1990.г.

4. **Аллахвердиев С.И.,** Жармухамедов С.К., Климов В.В., Колобанова Л.П., Константинова Н.В., Баскаков Ю.А. (1990) Производные гидроксиперфторизопропилдинитро-фенилгидразина, ингибирующие реакционные центры фотосистемы 2 растений. ***Авторское свидетельство*** № 1617892, от 1990 г.

5. **Аллахвердиев С.И.** (1991) Способ определения количества реакционных центров фотосистемы 2 растений. ***Авторское свидетельство*** № 1664176, от 1991 г.

6. Христин М.С., Жармухамедов С.К., **Аллахвердиев С.И.**, Климов В.В. (1991) Способ выделения реакционных центров фотосистемы 2 растений. ***Авторское свидетельство*** № 1718754, от 1991 г.

7. Ефимова М.В., Данилова Е.Д., Коломейчук Л.В., Ковтун И.С., Мурган О.К., Хрипач В.А., Литвиновская Р.П., Шмарёв А.Н., Мухаматдинова Е.А., Кабил Ф., Креславский В.Д., Кузнецов В.В., **Аллахвердиев С.И.** (2020) Способ повышения продуктивности растений картофеля в оптимальных и стрессовых условиях выращивании. ***Авторское свидетельство*** № RU 2711577 C1, от 2020г.

Автор/author **Аллахвердиев С.И. /Allakhverdiev S.I.**

**** Список составлен по категориям публикаций, тезисы докладов не включены.***
The list of publications is categorised by significance/importanc, and abstracts are not included

May, 2024