

22 June, 2019

19:00 – 21:00 Registration.

Hotel "Agni" (90-92, Nevsky pr.)

23 June, 2019

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| 14 00 – 18 00 | Registration Beloselsky-Belozersky Palace (41, Nevsky pr.) |
| 15 00 – 15 50 | Opening ceremony (Mirror Hall) |
| | Plenary lectures (Mirror Hall) Chairpersons: Tatsuya Tomo, Maria Borisova-Mubarakshina |
| 15 50 – 16 00 | Jian-Ren Shen Introducing Kimiyuki Satoh |
| 16 00 – 16 30 | Kimiyuki Satoh Sixty years since the decease of Robert Emerson: History of uncovering the chemical entities laying the basis for his great findings |
| 16 30 – 17 10 | Guangye Han Photosynthesis Research in Tingyun Kuang's Laboratory |
| 17 10 – 17 50 | Cesare Marchetti Self sinking capsules, a final solution to radioactive disposal (Speaker Govindjee) |
| 17 50 – 18 00 | Julian Eaton-Rye Introducing Anthony Larkum |
| 18 00 – 18 30 | Anthony Larkum Stromatolites old and new |
| 18 30 – 18 45 | Meeting of participants in front of the Beloselsky-Belozersky palace to go to the "get together evening" in Komarov Botanical Institute of the Russian Academy of Sciences. The busses will be provided. |
| 19 30 – 22 00 | Get together evening and excursions to the Greenhouses of the Botanical Garden (tropical pathway and Victoria House) |

24 June, 2019

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| 9 10 – 18 00 | Registration Beloselsky-Belozersky Palace (41, Nevsky pr.) |
| | Plenary lectures (Mirror Hall) Chairpersons: Rajagopal Subramanyam, Anatoly Tsygankov |
| 9 10 – 9 50 | Jian-Ren Shen Structural biological studies on photosynthetic systems |
| 9 50 – 10 30 | Mahdi Najafpour Najafpour-Feizi reaction under water-oxidation conditions |
| 10 30 – 10 45 | coffee break |

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| 10 45 – 11 25 | Plenary lecture (Mirror Hall) | | |
| | Tatsuya Tomo Analysis of energy transfer pathway in cyanobacterium during the process of the chlorophyll f accumulation Chairperson: Suleyman Allakhverdiev | | |
| | Section 1.1 (Mirror Hall) Chairpersons: Marc Nowaczyk, Akimoto Seiji | Sections 2.1 – 2.9 (Oak Hall) Chairpersons: Taras Antal, Sumanta Kumar Padhi | |
| 11 30 – 11 55 | Chikahiro Miyake P700 oxidation suppresses the production of reactive oxygen species (ROS) in photosystem I and induces ferredoxin-independent cyclic electron flow within PS I (Speaker Ryo Nagao) | Shah Dhruv Future prospect and challenges in production of hydrogen | |
| 11 55 – 12 20 | Semenov Alexey Electron transfer in Photosystem I upon limited protein conformational mobility | Tejaswi Naman Prospects and challenges of mainstreaming hydrogen-fueled automobiles | |
| 12 20 – 12 45 | Kentaro Ifuku Thylakoid lumenal proteins supporting the assembly and function of photosynthetic supercomplexes | Zayadan Bolatkhan Perspectives of cyanobacterial strains for biodiesel and biohydrogen production | |
| 12 45 – 14 00 | Time for lunch | | |
| | Plenary lectures (Mirror Hall) Chairpersons: Olga Voitsekhovkaja, Julian Eaton-Rye | | |
| 14 00 – 14 40 | Andrey Rubin Biophysics of the primary processes of photosynthesis | | |
| 14 40 – 15 20 | Sumanta Kumar Padhi Electro-catalytic activity for H ₂ evolution by a polypyridyl copper complex | | |
| 15 20 – 15 35 | coffee break | | |
| | Talks of young scientists (Mirror Hall) Chairpersons: Tyutereva Elena, Jörg Pieper | Sections 2.1 – 2.9 (Oak Hall) Chairpersons: Mahdi Najafpour, Anatoly Tsygankov | |
| 15 35 – 15 50 | Zahra Abdi Water oxidation by Vitamin B12: Questions and challenges | 15 35 – 16 00 | Gadi Schuster Harnessing photosynthesis to produce electricity and hydrogen using spinach thylakoids and live cyanobacteria |
| 15 50 – 16 05 | Takagi Daisuke Phosphorus toxicity decreases both electron sink activity and anti-oxidative activity in rice leaves | 16 00 – 16 25 | Taras Antal Photosynthetic hydrogen production as acclimation mechanism in green algae |

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| 16 05 – 16 20 | Eugene Maksimov Temperature sensor derived from the photoactive Orange Carotenoid Protein | 16 25 – 16 50 | Szilvia Toth Keeping the Calvin-Benson cycle inactive is the key to sustained and photoautotrophic H ₂ production in green algae |
| 16 20 – 16 35 | Valerya Dmitrieva Photosynthesis controls plasmodesmata permeability in <i>Arabidopsis thaliana</i> | 16 50 – 17 15 | Sergey Kosourov Understanding the mechanism of H ₂ photoproduction in the pulse-illuminated green alga, <i>Chlamydomonas reinhardtii</i> |
| 16 35 – 16 50 | Aliniaefard Sasan γ -aminobutyric acid confers cadmium tolerance in maize plant by concerted regulation of polyamines metabolism and antioxidant defense system | 17 15 – 17 40 | Fang Huang Potential for sustained H ₂ photoproduction in the <i>Chlamydomonas</i> mutant hpm91 |
| 16 50 – 17 05 | Jack Forsman Hydrophobic interactions between the D1 and PsbT subunits of Photosystem II stabilize the iron-quinone acceptor complex | | |
| 17 05 – 17 20 | Kseniya Nikerova The increase in the activity of AOS enzymes is an indicator of abnormal growth of woody plants, which differ in the heartwood/sapwood ratio | | |
| 17 20 – 19 00 | <i>Poster viewing</i> | | |

25 June, 2019

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| 9 10 – 18 00 | Registration Beloselsky-Belozersky Palace (41, Nevsky pr.) |
| Plenary lectures (Mirror Hall) | |
| Chairpersons: Jian-Ren Shen, Suleyman Allakhverdiev | |
| 9 10 – 9 50 | William Cramer Structure-function of the cytochrome <i>b₆f</i> complex: (i) Lipid-protein interactions; (ii) Structure-based control of the electron transport rate; (iii) <i>Arabidopsis</i> |
| 9 50 – 10 30 | Matthias Rögner Remodeling of photosynthetic electron transport in <i>Synechocystis</i> sp. PCC 6803 for future hydrogen production from water |

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| 10 30 – 10 45 | <i>coffee break</i> | |
| | Sections 1.2 and 1.3 (Mirror Hall) Chairpersons: Tatsuya Tomo, Franz-Josef Schmitt | Section 1.9 (Oak Hall) Chairpersons: Natalia Rudenko, Gregory Pozhvanov |
| 10 45 – 11 10 | Jörg Pieper Vibrational dynamics and excitation energy transfer in LHC II | Natalia Belyaeva Evaluation of the thylakoid membrane processes in <i>Synechocystis</i> sp. PCC 6803 by modeling fluorescence induction on the time scale from microseconds to several minutes |
| 11 10 – 11 35 | Seiji Akimoto Modification of light-harvesting and energy-transfer processes in diatoms under different light conditions | Olga Voitsekhovkaja The good and the bad of lacking chlorophyll b: photosynthesis and growth in barley chlorina f23613 mutant |
| 11 35 – 12 00 | Marina Kozuleva The role of oxygen in evolution of photosystem I | Vasily Ptushenko Apparent lack of stomatal growth irradiance response in four <i>Tradescantia</i> species |
| 12 00 – 12 25 | Lyudmila Vasilieva Features of bacteriochlorophylls axial ligation in the photosynthetic reaction center of purple bacteria | Vladimir Chikov The communication of chloroplasts with the stomatal leaf apparatus in the regulation of photosynthesis |
| 12 25 – 13 40 | Time for lunch | |
| | Plenary lectures (Mirror Hall) Chairpersons: Giovanni Venturoli, Govindjee | |
| 13 40 – 14 20 | Julian Eaton-Rye Mutation of D1 and D2 residues associated with bicarbonate and bound waters on the acceptor side of PS II impair the quinone-Fe-acceptor complex | |
| 14 20 – 15 00 | Marc Nowaczyk Structural adaptations of photosynthetic complex I enable ferredoxin-dependent electron transfer | |
| 15 00 – 15 40 | Nathan Nelson Photosynthetic reaction centers – Robustness with increased complexity | |
| 15 40 – 15 55 | <i>coffee break</i> | |
| | Sections 1.4 – 1.6 (Mirror Hall) Chairpersons: Kimiyuki Satoh, William Cramer | Section 1.9 (Oak Hall) Chairpersons: Maria Borisova-Mubarakshina, Matthias Rögner |
| 15 55 – 16 20 | Yuki Kato FTIR study on the water oxidation reaction in photosystem II microcrystals | Rajagopal Subramanyam Expression of LHCSR3 induces change in supercomplexes of thylakoid membranes under PEG stress from <i>Chlamydomonas reinhardtii</i> |

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| 16 20 – 16 45 | Franz-Josef Schmitt How different wavelengths of light change energy transfer and trapping in far red light adapted cells of the Chl f containing cyanoobacterium <i>Halomicronema hongdechloris</i> | Natalia Rudenko Carbonic anhydrases in chloroplasts of C3 higher plants |
| 16 45 – 17 10 | Kevin Sheridan Characterisation of a phylogenetically distinct group of D1 proteins from cyanobacteria | Galina Smolikova Embryonic photochemical activity is crucial for the seed maturation |
| 17 10 – 17 35 | Roman Pishchalnikov Relationship between pigment-protein structure and dynamics of the energy transfer and trapping in cyanobacterial PS I | Liudmila Kabashnikova Effect of β -1,3-glucane on the structure and function of photosynthetic apparatus and oxidative status of tomato leaves under fusarium wilt |
| 17 35 – 19 00 | <i>Poster viewing</i> | |

26 June, 2019

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| 9 10 – 17 00 | Registration Beloselsky-Belozersky Palace (41, Nevsky pr.) | | |
| Plenary lectures (Mirror Hall) | | | |
| Chairpersons: Nathan Nelson, Giuseppe Spazzafumo | | | |
| 9 10 – 9 50 | Govindjee On finding ways to make plants, especially rice, more efficient: A perspective | | |
| 9 50 – 10 20 | Anatoly Tsygankov Hydrogen electrode with HydSL hydrogenase from <i>Thiocapsa roseopersicina</i> in fuel cell | | |
| 10 20 – 10 35 | coffee break | | |
| | Section 1.8 (Mirror Hall) | Section 1.9 (Oak Hall) | |
| | Chairpersons: Akimoto Seiji, Vasilieva Lyudmila | Chairpersons: Olga Voitsekhovkaja, Guangye Han | |
| 10 35 – 11 00 | Imre Vass Photosynthetic electron transport in silico | 10 35 – 11 00 | Tatyana Savchenko Comparative analysis of cortical photosynthesis in grapevine varieties contrasting in freeze tolerance |

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| 11 00 – 11 25 | Kostas Stamatakis A cyanobacterium cell factory for producing useful chemicals and fuels under abiotic stress conditions | 11 00 – 11 25 | Boris Ivanov Production of hydrogen peroxide within thylakoid membrane with involvement of the plastoquinone pool, and the role of this production for signalling (Speaker Maria Borisova-Mubarakshina) |
| 11 25 – 11 50 | Rachel Nechushtai Artificial photosynthesis with electron acceptor/photosensitizer-aptamer conjugates | 11 25 – 11 50 | Gregory Pozhvanov Microgravity modelling by 3D-clinorotation affects actin cytoskeleton, ROS production, photosynthesis and metabolome of Arabidopsis plants |
| 11 50 – 12 40 | Agrisera Workshop Tips and tricks of antibody production and western blot. How to obtain good results. | 11 50 – 12 15 | Hitoshi Nakamoto Novel molecular chaperones in cyanobacteria: groEL and clpB paralogs |
| 12 40 – 13 50 | Time for lunch | | |
| Plenary lectures (Mirror Hall) Chairpersons: Anthony Larkum, Anatoly Tsygankov | | | |
| 13 50 – 14 30 | Giovanni Venturoli Room temperature immobilization of photosynthetic reaction centers in amorphous matrices: testing the role of protein dynamics in electron transfer | | |
| 14 30 – 15 10 | Dmitry Dunikov Hydrogen energy technologies: recent developments and prospects in Russia | | |
| 15 10 – 15 50 | Mats Hansson Employing barley mutants to dissect a chlorophyll biosynthetic enzyme | | |
| 15 50 – 16 10 | coffee break | (Oak Hall) The meeting of the committee on the topic of selection of the best oral and poster presentations of young scientists. Committee members: Marian Brestic, Marc Nowaczyk, Seiji Akimoto, Anatoly Tsygankov, Rajagopal Subramanyam, Suleyman Allakhverdiev, Tatsuya Tomo, Julian Eaton-Rye, Mahdi Najafpour | |
| Plenary lectures (Mirror Hall) Chairpersons: Mats Hansson | | | |
| 16 10 – 16 50 | Giuseppe Spazzafumo Comparison of different system layouts to generate a substitute of natural gas from biomass and electrolytic hydrogen | | |
| 16 50 – 17 10 | Talk of the gold sponsor of the conference – Sergey Antsyrovich, LabInstruments Company | | |
| | Section 1.11 (Mirror Hall) Chairpersons: Imre Vass | | Section 1.9 (Oak Hall) Chairpersons: Tatyana Savchenko |

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| 17 15 – 17 40 | Natalya Kaznina Photosynthetic activity of barley plants under zinc deficient and excess stress conditions | Eugene Lysenko Specificity of Cd, Cu, and Fe action on cation contents in chloroplasts and activities of PS II and PS I |
| 17 40 – 18 05 | Elena Tyutereva Potassium and glucose as putative signals regulating processes in shoots and roots | Tatiana Pluysnina Model of microalgae <i>Chlamidomonas reinhardtii</i> adaptation to sulfur starvation |
| 18 05 – 18 45 | <i>Selected talks for best posters of young scientists and summing up the competition for best oral and posters presentations of young scientists. Awarding best talk/best poster prizes for early career researchers by the committee and by the AGRISERA company (Mirror Hall) Chairpersons: Anatoly Tsygankov, Suleyman Allakhverdiev</i> | |
| 18 45 – 19 00 | <i>Closing Ceremony (Mirror Hall) and Conference Photograph on the Stairs of the Beloselsky-Belozersky palace</i> | |
| 20 00 | Banquet Jazz restaurant White Night Music Joint. 40, Fontanka emb. | |

27 June, 2019

Excursion day (for the information visit <https://icprs.ru/#!/cultural>)

28 June, 2019

Departure