

The 1st STEPS Symposium on Photon Science

March 21 - 22, 2015

Auditorium, Chemistry Main Bldg. 5th Floor

Hongo Campus, The University of Tokyo

Organized by: School of Science, The University of Tokyo *and*
Department of Civil Engineering, School of Engineering,
The University of Tokyo



Biphoton and three-photon states, entanglement and Schmidt decompositions

14:10 - 14:30

Coffee break

Session IV: Imaging

14:30 - 14:50

Takeaki Ozawa (The University of Tokyo)

Luminescent sensors for single cell analysis

14:50 - 15:10

Sergey Tunik (St. Petersburg State University)

Photophysical properties of triplet emitters based on transition metal complexes, prospective of application in sensing, bioimaging and OLEDs

15:10 - 15:30

Keisuke Goda (The University of Tokyo)

Extreme imaging and beyond

15:30-15:50

Coffee break

Session V: Molecules and clusters in intense laser fields

15:50-16:10

Erik Lötstedt (The University of Tokyo)

Classical trajectory methods for laser-molecule and laser-atom interaction

16:10-16:30

Alexander Pastor (St. Petersburg State University)

Study of relaxation of multi-photon excited neutral rare gas molecules and clusters in a supersonic jet

16:30-16:50

Alexander Shkurinov (Moscow State University)

Broadband electromagnetic wave emission from atomic cluster plasma produced by femtosecond laser pulses: from x-ray to terahertz wavelengths

Free time

18:00 - 20:00

Banquet

March 22 (Sun.)

Session VI: New methods in spectroscopy

9:00 - 9:20

Sergey Pulkhin (St. Petersburg University)

High-resolution femtosecond comb-spectroscopy

9:20 - 9:40

Andrey Stolyarov (Moscow State University)

Laser synthesis of ultracold molecules: from design to production

9:40 - 10:00

Shin Inouye (The University of Tokyo)

Ultracold molecules: production and application

10:00 - 10:20

Maria G. Khrenova (Moscow State University)

Spectroscopy of the flavin-containing proteins: theoretical insights

10:20 - 10:50

Coffee break

Session VII: Photochemistry of novel materials

10:50 - 11:10

Alexey Povolotskiy (St. Petersburg State University)

Photo-excited state chemistry of 4-diazo-2,2-dimethyl-5,5-diphenyldihydrofuran-3-one

11:00 - 11:20

Alexander Konev (St. Petersburg State University)

Novel porphyrin-fullerene covalent dyads capable of forming charge-separated states on a microsecond lifetime scale

11:20 - 11:40

Tatsuya Tsukuda (The University of Tokyo)

Optical properties of ultrasmall gold nanostructures

13:00 - 13:30

Lunch

Session VIII: Light propagation and its applications

13:30 - 13:50

Svyatoslav Shlenov (Moscow State University)

Femtosecond filaments and their plasma channels in focused laser beam in air

13:50 - 14:10

Nikolay Timofeev (St. Petersburg State University)

Strong coupling between the electromagnetic field and substance development of polariton lasers and new aspects of interference and diffraction of ultra-short pulses of optical radiation

14:10 - 14:30

Junji Yumoto (The University of Tokyo)

Coherent photon technology -Science to innovation-

14:30 - 14:50

Coffee break

Session IX: Material synthesis

14:50 - 15:10

Alina Manshina (St. Petersburg State University)

Laser-inspired chemical transformations

15:10 - 15:30

Yury Tver'yanovich (St. Petersburg State University)

Super-ionic nano-composite solid electrolyte prepared by laser ablation

15:30 - 15:50

Shinichi Ohkoshi (The University of Tokyo)

Magneto-optical functionalities in cyano-bridged bimetal assemblies and metal oxide nanomaterials

15:50 - 16:10

Oleg Vyvenko (St. Petersburg State University)

Helium ion microscope as a tool for gentle material modification on nanoscale

16:10 - 16:30

Coffee break

16:30 - 17:30 Round Table Discussion

17:30 - 17:40 Closing Remarks

19:00 - 21:00 Dinner

List of Invited Speakers

[Moscow State University]

Mikhail Fedorov (Moscow State University and A.M. Prokhorov General Physics Institute, Russian Academy of Sciences)

Maria Khrenova (Chair of Physical Chemistry, Chemistry Faculty)

Olga Kosareva (Chair of General Physics and Wave Processes, Faculty of Physics)

Konstantin Kouzakov (Institute of Nuclear Physics)

Vladimir Makarov (Head of Chair of General Physics and Wave Processes, Physics Faculty and Director, International Laser Center)

Andrey Savelyev-Trofimov (Chair of General Physics and Wave Processes, Faculty of Physics)

Alexander Shkurinov (Department of Physics and International Laser Center)

Svyatoslav Shlenov (Chair of General Physics and Wave Processes, Faculty of Physics and Vice-director, International Laser Center)

Andrey Stolyarov (Head of Laser Chemistry Department, Faculty of Chemistry)

[St. Petersburg State University]

Alexander Andreev (St. Petersburg State University, MBI Berlin, and ELI-ALPS)

Alexander Konev (Institute of Chemistry, Department of Organic Chemistry)

Alina Manshina (Chair of Laser Chemistry and Laser Materials Science, Institute of Chemistry)

Alexander Pastor (Optics Department, Physical Faculty)

Alexey Povolotskiy (Chair of Laser Chemistry and Laser Materials Science, Institute of Chemistry)

Sergey Pulkin (Department of General Physics1, Physical Faculty)

Nikolay Timofeev (Head of Optics Department, Physical Faculty)

Sergey Tunik (Vice-rector for Research, Saint Petersburg State University, and Institute of Chemistry, SPSU)

Yury Tver'yanovich (Chair of Laser Chemistry and Laser Materials Science, Institute of Chemistry)

Oleg Vyvenko (V.A. Fok Institute of Physics and Interdisciplinary Resource Center)

[The University of Tokyo]

Keisuke Goda (Department of Chemistry, School of Science)

Masahiro Hoshino (Department of Earth and Planetary Science, School of Science)

Shin Inouye (Department of Applied Physics, School of Engineering and Photon Science Center)

Reika Kanya (Department of Chemistry, School of Science)

Erik Lötstedt (Department of Chemistry, School of Science)

Shinichi Ohkoshi (Department of Chemistry, School of Science)

Takeaki Ozawa (Department of Chemistry, School of Science)

Tatsuya Tsukuda (Department of Chemistry, School of Science)

Junji Yumoto (Department of Physics, School of Science and Institute for Photon Science and Technology)
