5th International Symposium on Molecular Photonics
dedicated to the memory of Academician A.N. Terenin (1896–1967)
May 6–7, 2021, Peterhof, St. Petersburg, Russia

PROGRAM

06.05, Thursday

9:00 – 11:20 Opening ceremony

9:00 – 9:15 Opening of the Symposium. Chairman A.A. Tsyganenko

9:15 – 9:30 Introductory words: Development of the ideas of A.N. Terenin at Tomsk University
G.V. Mayer, National Research Tomsk State University, president

9:30 – 11:20 Key lectures

9:30 – 10:00 A new universal law of photoluminescence
V.F. Razumov, Institute of Problems of Chemical Physics of RAS, Russia

10:00 – 10:30 Ranking the Brønsted acid strength of protonic zeolites with VTIR spectroscopy – an overview of current research
C. Otero Arean, M. Rodriguez Delgado, University of the Balearic Islands, Spain

10:30 – 10:50 Superfluid helium droplets
A.F. Vilesov, University of Southern California, USA

10:50 – 11:20 Development of IR studies of surfaces in St. Petersburg University. From A.N. Terenin up to nowadays
A.A. Tsyganenko, Saint Petersburg State University, Russia

11:20 – 13:00 Lecture session

11:20 – 11:40 ATR-FTIR studies of catalytic solid–liquid interfaces. The example of glycerol oligomerization
G. Telbiz, N. Vlasenko

11:40 – 12:00 Theoretical nonlinear vibrational spectroscopy of silica/water interfaces
K.S. Smirnov

12:00 – 12:20 FTIR and quantum chemical study of adsorbed ozone
T.R. Aminev

12:20 – 12:40 FTIR study of CO on Ni zeolites: effects of lattice and compensating cations
D.A. Baranov, R.A. Belykh, A.A. Tsyganenko

12:40 – 13:00 Photonics of heterogeneous systems: research methods and some results from Terenin to the present days
A.A. Lisachenko
13:00 – 13:30  Dinner

13:30 – 15:30  Lecture session

13:30 – 13:50  Synthesis and study of the optical properties of carbon quantum dots
N.Kh. Ibrayev, R.Kh. Dzhanabekova, G. Amanzholova

13:50 – 14:10  Lasing and its origin in halide perovskite single crystals

14:10 – 14:30  Exciton-polaritons in total internal reflection AlGaAs/GaAs waveguide with a quantum well

14:30 – 14:50  Photon echo from GaAs / AlGaAs quantum well
R.S. Nazarov*, I.A. Solovev, Yu.P. Efimov, S.A. Eliseev, V.A. Lovcjus, Yu.V. Kapitonov

14:50 – 15:10  Crystal, optical and electronic properties of halide post-perovskite 3-cyanopyridinium lead tribromide
A.Yu. Samsonova, Yu.V. Kapitonov, N.I. Selivanov, A.V. Emeline

15:10 – 15:30  Mapping of phase transitions of MAPbI$_3$ halide perovskites single crystal
A.O. Murzin, N.I. Selivanov, Yu.V. Kapitonov

15:30 – 18:30  Poster session

07.05, Friday

9:00 – 10:00  Key lectures

9:00 – 9:30  Use of selected organic molecules to explore the photocatalytic active species, mechanisms and pathways in water
P. Pichat, "Photocatalyse et Environnement", CNRS/Ecole Centrale de Lyon (STMS), France

9:30 – 10:00  Comparison of the absorption spectra of molecular oxygen in Earth’s atmosphere, aerated solvents and compressed state (a review)
A.A. Krasnovsky, Federal Research Center of Biotechnology RAS, Russia

10:00 – 13:00  Lecture session

10:00 – 10:20  Synthesis and characterization of lamellar mesoporous TiO$_2$/MFI for photocatalytic degradation of methylene blue dye in aqueous solution

10:20 – 10:40  Synthesis and spectroscopic characterization of GdMoO$_4$:Er$_3$+@SiO$_2$ phosphor
V.R.B.S. Babu Mukkamala

10:40 – 11:00  Features of the formation of radiation spectra of two-particle nanosystems in a magnetic field
M.G. Kucherenko, V.M. Nalbandyan

11:00 – 10:20  A simple method for calculating the homogeneous and inhomogeneous broadenings of the optical absorption and emission spectra of colloidal quantum dots from their excitation-emission matrix
S.A. Tovstun, A.V. Gadomska, M.G. Spirin, V.F. Razumov

11:20 – 11:40  Sensitization of S1-S4 transition in the Rhodamine 6G molecule by the Ag nanoparticles
N.Kh. Ibrayev, E.V. Seliverstova
11:40 – 12:00 Features of the Stern-Volmer and FRET formalisms as applied to hybrid nanosystems consisting of colloidal semiconductor quantum dots and bound photochromic organic ligands

M.F. Budyka

12:00 – 12:20 Photoluminescent features of oxygenated polyphenylene vinylene (MEH-PPV) films

M.G. Kucherenko, S.A. Penkov

12:20 – 12:40 Correlations between efficiency of singlet oxygen generation and luminescence parameters of photosensitizers

A. Starukhin, A. Romamenka, V. Plavskii

12:40 – 13:00 Molecular doping of 2D organic semiconductor films for light-emitting transistors

A.V. Kuevda, V.A. Trukhanov, O.V. Borshchev, D.Yu. Paraschuk

13:00 – 13:30 Dinner

13:30 – 15:50 Lecture session

13:30 – 13:50 Recent advances in organic photochromics

V.A. Barachevsky

13:50 – 14:10 Optical spectra of bisphenol A after exposure to UV and electron beam radiation

E.N. Bocharnikova, O.N. Tchaikovskaya, N.P. Bezlepkina, V.I. Solomonov, A.S. Makarova, V.V. Osipov

14:10 – 14:30 Optical spectra and the nature of electronic excited states of sulgin

V.S. Chaydonova, O.N. Tchaikovskaya, E.N. Bocharnikova, O.K. Bazyl, G.V. Mayer, M.V. Ashmarina

14:30 – 14:50 Photonics and application of dipyrromethene coordination complexes

Iu.V. Aksenova, R.T. Kuznetsova, E.V. Antina, M.B. Berezin

14:50 – 15:10 Dipole moments and solvatochromism of metal complexes

G.V. Loukova, Alexey A. Milov

15:10 – 15:30 LMCT states based on structurally complex group 4 bent metalallocenes

G.V. Loukova, Alexey A. Milov

15:30 – 15:50 Phenylloxazole based luminophores with intramolecular energy transfer

M.S. Skorotetcky, N.M. Surin, O.B. Borshchev, S.A. Ponomarenko

15:50 – 17:00 Poster session

17:00 – 20:00 Round table