



# Terenin Memorial Symposium

**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  
Yu.V. Kapitonov, A.O. Murzin, B.V. Stroganov, A.V. Shurukhina, N.I. Selivanov, A.V. Emeline
- 14:10 – 14:30 Exciton-polaritons in total internal reflection AlGaAs/GaAs waveguide with a quantum well  
V.N. Mitryakhin, P.Yu. Shapochkin, Yu.P. Efimov, S.A. Eliseev, V.A. Lovcjus, Yu.V. Kapitonov
- 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<sub>3</sub> 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<sub>2</sub>/MFI for photocatalytic degradation of methylene blue dye in aqueous solution  
A.U. Ruiz de Esparza, R.I. Yocupicio-Gaxiola, H. Borbon, S. Fuentes Moyado, U. Caudillo, J. Antúnez-García, F.N. Murrieta-Rico, J.C. González, V. Petranovskii
- 10:20 – 10:40 Synthesis and spectroscopic characterization of GdMoO<sub>4</sub>:Er<sub>3+</sub>@SiO<sub>2</sub> 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 metallocenes  
G.V. Loukova, Alexey A. Milov
- 15:30 – 15:50 Phenyloxazole 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**