



IFSOE 2023

9th INTERNATIONAL FALL SCHOOL
ON ORGANIC ELECTRONICS

School program

October 15-19, 2023
Moscow, Russia
www.ifsoe.ru



9th INTERNATIONAL FALL SCHOOL ON ORGANIC ELECTRONICS – 2023 (IFSOE-2023)

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**SUNDAY,
15 October 2023**

11:00-13:00	REGISTRATION
13:00-14:00	BUS TRANSFER FROM ENIKOLOPOV INSTITUTE OF SYNTHETIC POLYMERIC MATERIALS OF RAS TO EXCURSION
14:40-15:25	EXCURSION TO DIAMOND FUND (RUS)
15:00-15:45	EXCURSION TO DIAMOND FUND (ENG)

**MONDAY,
16 October 2023**

9:30-10:00	CONFERENCE OPENING Sergey Ponomarenko, Dmitry Parashchuk	12:30-15:00	SESSION 2
10:00-12:00	SESSION 1	12:30-13:15	TUTORIAL Abderrahim Yassar
10:00-10:45	TUTORIAL Yulia Gorbunova	13:15-13:45	INVITED Maxim Kazantsev
10:45-11:15	INVITED Egor Verbitskiy	13:45-14:00	Maxim Skorotetskiy
11:15-11:45	INVITED Oleg Borshchev	14:00-14:15	Anton Yakimanskiy
11:45-12:00	Timofey Moseev	14:15-14:30	Tatiana Rudneva
12:00-12:30	COFFEE BREAK	14:30-14:45	Pavel Abramov
		14:45-15:00	Artur Mannanov
		15:00-16:30	WELCOME PARTY

**TUESDAY,
17 October 2023**

10:00-12:00	SESSION 1
10:00-10:45	TUTORIAL Pavel Troshin
10:45-11:15	INVITED Carlos Frederico de Oliveira Graeff
11:15-11:45	INVITED Qifan Xue
11:45-12:00	Georgy Pakhomov
12:00-12:30	COFFEE BREAK
12:30-15:00	SESSION 2
12:30-13:00	INVITED Danila Saranin
13:00-13:15	Alexander Steparuk
13:15-13:30	Valentina Utochnikova
13:30-13:45	Anna Saunina
13:45-14:00	Nikolay Shubin
14:00-15:00	LUNCH
15:00-17:00	SESSION 3
15:00-17:00	POSTER SESSION-1
17:00-17:45	EVENING LECTURE Alexander Litvinov

**WEDNESDAY,
18 October 2023**

10:00-12:00	SESSION 1
10:00-10:45	TUTORIAL Sahika Inal
10:45-11:15	INVITED Elena Agina
11:15-11:30	Danfis Karamov
11:30-11:45	Askold Trul
11:45-12:00	Evgeniya Buryanskaya
12:00-12:30	COFFEE BREAK
12:30-14:00	SESSION 2
12:30-13:15	TUTORIAL Luisa Torsi
13:15-13:45	INVITED Dmitry Godovsky
13:45-14:00	Elena Poimanova
14:00-15:00	LUNCH
15:00-17:00	SESSION 3
15:00-17:00	POSTER SESSION-2
17:00-17:45	EVENING LECTURE Gagik Ghazaryan

**THURSDAY,
19 October 2023**

10:00-12:00	SESSION 1
10:00-10:45	TUTORIAL Sergey Novikov
10:45-11:15	INVITED Vladimir Nikitenko
11:15-11:45	INVITED Andrey Sosorev
11:45-12:00	Darya Tarakanovskaya
12:00-12:30	COFFEE BREAK
12:30-14:45	SESSION 2
12:30-13:15	TUTORIAL Artem Bakulin
13:15-13:45	INVITED Evgeny Mostovich
13:45-14:00	Nikita Dubinets
14:00-14:15	Alexander Smolyga
14:15-14:30	Azat Galiev
14:30-16:00	CONFERENCE CLOSING REMARKS & FAREWELL PARTY

SUNDAY, 15 October 2023

11:00-13:00	REGISTRATION
13:00-14:00	BUS TRANSFER FROM ENIKOLOPOV INSTITUTE OF SYNTHETIC POLYMERIC MATERIALS OF RAS RAS TO EXCURSION
14:40-15:25	EXCURSION TO DIAMOND FUND (RUS)
15:00-15:45	EXCURSION TO DIAMOND FUND (ENG)

MONDAY, 16 October 2023

9:30-10:00	CONFERENCE OPENING Welcome and opening remarks from the conference co-chairs, Sergey Ponomarenko, Dmitry Parashchuk
10:00-10:45	TUTORIAL Porphirins and their derivatives in modern organic electronics, <u>Yulia Gorbunova</u> , Moscow State University, Russia
10:45-11:15	INVITED Design of azaheterocyclic pushpull systems as sensors for nitroaromatic compounds and other applied materials, <u>Egor Verbitskiy</u> , Postovsky Institute of Organic Synthesis of Ural Branch of RAS
11:15-11:45	INVITED Unusual properties of organic luminophores based on 2,1,3- benzothiadiazole, <u>Oleg Borshchev</u> , Enikolopov Institute of Synthetic Polymeric Materials of RAS, Russia
11:45-12:00	Nucleophilic C-H functionalization in the synthesis of luminophores, ligands, and chemosensors, <u>Timofey Moseev</u> , Ural Federal University, Russia
12:00-12:30	COFFEE BREAK

12:30-13:15	TUTORIAL Synthetic approaches to pconjugated diradicaloid materials for transistors, <u>Abderrahim Yassar</u> , Ecole Polytechnique, Institut Polytechnique de Paris, France
13:15-13:45	INVITED Additive-assisted crystallization of conjugated organic compounds, <u>Maxim Kazantsev</u> , IOC SB RAS, Russia
13:45-14:00	Novel Asymmetric Tetrathienoacene Derivatives for Organic Electronics, <u>Maxim Skorotetskiy</u> , KAUST, Saudi Arabia
14:00-14:15	Photo- and electroluminescent properties of novel polyfluorene copolymers containing dicyanostilbene and 9,10- dicyanophenathrene in the main chain, <u>Anton Yakimanskiy</u> , Institute of Macromolecular Compounds RAS, Russia
14:15-14:30	Polymeric phthalocyanines synthesized in high boiling solvent, <u>Tatiana Rudneva</u> , Institute of Microelectronics Technology and High Purity Materials RAS, Russia
14:30-14:45	The Influence of Copper Ions on the Transport and Relaxation Properties of Hydrated Eumelanin, <u>Pavel Abramov</u> , MIPT, Russia
14:45-15:00	Organic solar cells based on star-shaped and linear donoracceptor conjugated molecules, <u>Artur Mannanov</u> , Enikolopov Institute of Synthetic Polymeric Materials of RAS, Russia
15:00-16:30	WELCOME PARTY

TUESDAY, 17 October 2023

10:00-10:45	<p>TUTORIAL</p> <p>Exploring potential of organic and perovskite solar cells for space applications, <u>Pavel Troshin</u>, FRC PCP MC RAS, Chernogolovka, Russia</p>
10:45-11:15	<p>INVITED</p> <p>Recent advances in perovskite solar cells and supercapacitors, <u>Carlos Frederico de Oliveira Graeff</u>, Sao Paulo State University, Brazil</p>
11:15-11:45	<p>INVITED</p> <p>Material Innovation and Optical Engineering towards Highly Efficient Perovskite/ Organic Tandem Solar Cell's, <u>Qifan Xue</u>, South China University of Technology, Guangzhou, China</p>
11:45-12:00	<p>VO-EtioP-III as donor layer in organic photovoltaic cells, <u>Georgy Pakhomov</u>, RAS Institute for Physics of Microstructures, Nizhniy Novgorod, Russia</p>
12:00-12:30	<p>COFFEE BREAK</p>
12:30-13:00	<p>INVITED</p> <p>Advanced interface engineering for up-scaling of perovskite solar modules, <u>Danila Saranin</u>, MISIS, Russia</p>
13:00-13:15	<p>New D-π-A compounds based on thieno[3,2-b]indole as electron transport materials for perovskite solar cells, <u>Alexander Steparuk</u>, Postovsky Insititute of Organic Synthesis of the Ural Branch of RAS</p>
13:15-13:30	<p>Towards efficient lanthanidebased OLEDs, <u>Valentina Utochnikova</u>, Lomonosov Moscow State University</p>
13:30-13:45	<p>Analytic modelling of temperature dependence of exciton diffusion coefficient in disordered organics, <u>Anna Saunina</u>, MEPhI, Russia</p>

13:45-14:00	<p>Quantum interference in single molecule conductors for novel electronic applications,</p> <p><u>Nikolay Shubin</u>, Lebedev Physical Institute of RAS, Russia</p>
14:00-15:00	LUNCH
15:00-17:00	POSTER SESSION-1
17:00-17:45	<p>EVENING LECTURE</p> <p>Printmaking techniques in art and traditional Japanese woodblock printing (mokuhanga),</p> <p><u>Alexander Litvinov</u>, Enikolopov Institute of Synthetic Polymeric Materials of RAS, Russia</p>

WEDNESDAY, 18 October 2023

10:00-10:45	TUTORIAL Organic bioelectronics: materials and applications, <u>Sahika Inal</u> , KAUST, Saudi Arabia
10:45-11:15	INVITED Differential diagnosis of various diseases by the exhaled air composition using an «electronic nose», <u>Elena Agina</u> , Enikolopov Institute of Synthetic Polymeric Materials of RAS, Russia
11:15-11:30	Interfaces between submicron polydiphenylenephthalide films – new possibilities for sensor applications, <u>Danfis Karamov</u> , IMSP, Ufa, Russia
11:30-11:45	Electronic nose based on OFETs from BTBT-based siloxane dimers with different terminal alkyl substituents chain length, <u>Askold Trul</u> , Enikolopov Institute of Synthetic Polymeric Materials of RAS, Russia
11:45-12:00	Ferroelectric polymers based on vinylidene fluoride for bioelectronics applications, <u>Evgeniya Buryanskaya</u> , MISIS University
12:30-13:15	TUTORIAL Single molecule reliable detection in point-of-care testing technologies, <u>Luisa Torsi</u> , University of Bary, Italy
13:15-13:45	INVITED Red-ox processes in Polyaniline as a basis for rate-based and spiking neural networks, <u>Dmitry Godovsky</u> , INEOS RAS, Russia
13:45-14:00	Quantitative determination of Influenza A Virus by a portable device based on EGOFETaptasensors, <u>Elena Poimanova</u> , Enikolopov Institute of Synthetic Polymeric Materials of RAS, Russia
14:00-15:00	LUNCH
15:00-17:00	POSTER SESSION-2
17:00-17:45	EVENING LECTURE Giving a scientific talk: Hints & Tips, <u>Gagik Ghazaryan</u> , Enikolopov Institute of Synthetic Polymeric Materials of RAS, Russia

THURSDAY, 19 October 2023

10:00-10:45	<p>TUTORIAL</p> <p>Charge carriers in amorphous organic semiconductors: transport, injection and recombination in the correlated energy landscape,</p> <p><u>Sergey Novikov</u>, Frumkin Institute of Electrochemistry, Russia</p>
10:45 11:15	<p>INVITED</p> <p>Analytical modeling of charge carrier transport in disordered organic materials,</p> <p><u>Vladimir Nikitenko</u>, MePhI, Russia</p>
11:15 11:45	<p>INVITED</p> <p>Probing of dynamic disorder in organic semiconductors and compaction of biomolecules using low-frequency Raman spectroscopy,</p> <p><u>Andrey Sosorev</u>, Enikolopov Institute of Synthetic Polymeric Materials of RAS, Russia</p>
11:45 12:00	<p>Quantum-chemical simulation of multi-resonance thermally activated delayed fluorescence materials based on B,Nheteroarenes using graph neural networks,</p> <p><u>Darya Tarakanovskaya</u>, Novosibirsk State University, Russia</p>
12:00 12:30	COFFEE BREAK
12:30 13:15	<p>TUTORIAL</p> <p>Time-resolved spectroscopy of electron-phonon coupling in soft optoelectronic materials,</p> <p><u>Artem Bakulin</u>, Imperial College London, UK</p>
13:15-13:45	<p>INVITED</p> <p>Rational Design of TADFemitters: from classical to multiple resonance,</p> <p><u>Evgeny Mostovich</u>, OREL ResearchLab, Novosibirsk State University, Russia</p>
13:45-14:00	<p>Multiscale Simulation of the Structure and Spectroscopic Properties of B3PYMPM/CBP Exciplexes at an B3PYMPM/CBP Interface in OLEDs,</p> <p><u>Nikita Dubinets</u>, Enikolopov Institute of Synthetic Polymeric Materials of RAS, Russia</p>

14:00-14:15	<p>A simple method of calibration of the BHHLYP exchange correlation functional for precise calculations of fluorescence wavelengths of charge-transfer exciplexes based on calculations of DBMBF2 exciplexes with benzene, alkylbenzenes and pyridine, <u>Alexander Smolyga</u>, MIPT, Russia</p>
14:15-14:30	<p>Dependence of the potential barrier at the metal/polymer interface on the metal strain, <u>Azat Galiev</u>, Akmullah Bashkir State Pedagogical University, Russia</p>
14:30-16:00	CONFERENCE CLOSING REMARKS & FAREWELL PARTY

Poster Session-1, Tuesday, 17th October 2023

P-1-1	Abramov Anton	Portable electronic nose based on OFET and MOS sensors array with differential gas chamber for exhaled air analysis
P-1-2	Balakirev Dmitry	Novel push-pull triphenylamine-based unsymmetrical luminophores: synthesis and properties study
P-1-3	Bezsudnov Igor	Formation of foamed silicone composites used in thermomechanical muscles
P-1-4	Bizyaeva Anastasia	Novel perylenediimide-based polymers as low-cost electron-transport materials for p-i-n perovskite solar cells
P-1-5	Bobrova Elizaveta	CONJUGATED ORGANIC MATERIALS WITH SILAZANE ANCHORING GROUPS FOR THIN-FILM FIELD-EFFECT TRANSISTORS
P-1-6	Chuyko Irina	Synthesis and properties of triphenylamine-based polymers with side electron-withdrawing groups
P-1-7	Demyanenko Alena	Effect of the composition of ionic liquids in biocompatible gel electrolytes on the electronic characteristics of electrolyte-gated organic field-effect transistors
P-1-8	Dyadishchev Ivan	Synthesis and properties of liquid π -conjugated luminescent oligomers with trihexylsilyl terminal substituents
P-1-9	Polyakov Roman	New nanostructured luminophores with carbon branching center: the synthesis and optical properties study
P-1-10	Kretova Elena	Biorecognition layer creation by click-chemistry for biosensors based on electrolyte-gated field-effect transistors
P-1-11	Gaidarzhi Viktoria	Step by step guide for functional layers creation of organic electronics devices
P-1-12	Gaikov Dmitry	Development of organosilicon luminescent, photo-curable material for microelectronics
P-1-13	Gladkikh Arseny	Improvement of electroluminescent properties of OLEDs based on europium complexes using gold nanorods

P-1-14	Gradova Anna	Linear push-pull benzodiindole-based small molecules as novel photoactive materials
P-1-15	Isaeva Yulia	Red- and infra-red light absorbing semiconducting nanoparticles based on push-pull triphenylamine-containing dyes
P-1-16	Ivanov Konstantin	TADF and Energy Transfer in Asymmetrical Spirobi[indene]-1,1'(3H,3'H)-dione Derivatives with Extended Conjugation
P-1-17	Karaman Polina	Antibody-based electrolyte gated field-effect transistors for polysaccharide detection
P-1-18	Kazantsev Maxim	Physico-chemical properties of diazafluorenylidenes
P-1-19	Cheshkina Darya	Synthesis of diazafluorenylidene derivatives
P-1-20	Koskin Igor	Computational study of small molecules with terminal diazafluorenylidene groups as perspective organic optoelectronic materials
P-1-21	Khasanov Albert	Photophysical properties of T-shaped and Y-shaped dibenzo[a,c]phenazine derivatives
P-1-22	Khmelnitskaia Alina	Functional siloxane matrices for dielectric elastomer actuators
P-1-23	Khokhlova Tatiana	New possibilities for controlling the processes of relaxation of mechanical stresses of inconformity in GexSi1-x/Si(001) heterosystems
P-1-24	Kleymyuk Elena	Synthesis of new graft copolymers based on polyvinylidene fluoride (PVDF) by photoinduced reversible deactivation radical polymerization (RDRP), the influence of the content of grafted chains on their properties.
P-1-25	Komissarova Ekaterina	Novel polymeric hole-transport materials for dopant-free perovskite solar cells

Poster Session-2, Wednesday, 18th October 2023

P-2-1	Fedorenko Roman	Thiophene-phenylene co-oligomers for 2D organic light-emitting transistors
P-2-2	Krasnikov Danila	Detection of Low NO ₂ Concentrations Using Organic Field-Effect Transistors Based on Benzothienobenzothiophene with Various Interface Dielectrics
P-2-3	Kuimov Anatolii	The Impact of solution processing on the optoelectronic properties of TADF emitters
P-2-4	Kuklin Konstantin	Identification of impurities by optical methods and assessment of their impact on the semiconductor properties of 2D organic single crystals
P-2-5	Kuleshov Bogdan	Crown-ether based electrolyte-gated organic field effect sensor
P-2-6	Kuznetsov Petr	Light-induced degradation of diketopyrrolopyrrole-based conjugated polymers
P-2-7	Dyadishchev Ivan	Synthesis and properties of novel fused non-fullerene acceptors based on thienopyrroloindoles for organic solar cells
P-2-8	Mikhailov Maxim	New methods for the synthesis of compounds with high-efficiency blue electroluminescence
P-2-9	Nikitenko Sergei	Design of wireless IoT sensors powered by perovskite PV modules
P-2-10	Papkovskaya Elizaveta	Synthesis and properties of new non-fullerene acceptors for organic photovoltaics
P-2-11	Poletavkina Liya	Novel push-pull fused oligomers: synthesis and investigation of structure-property relationships
P-2-12	Levkov Lev	Photo- and radioluminescent polystyrene-based blends doped with branched derivative of 2,1,3-benzothiadiazole
P-2-13	Popova Vlada	Study of influence of terminal groups in 2,1,3-benzothiadiazole-based thiophene derivatives

P-2-14	Rychikhina Ekaterina	Thin-film photovoltaic cells with planar heterojunction «etioporphyrin/triphenylamine-based dye»
P-2-15	Rykhta Yaroslav	Synthesis and optoelectronic properties of thieno[3,4-b]pyrazine-based conjugated co-polymers absorbing in near-infrared for organic optoelectronics
P-2-16	Shaposhnik Polina	Siloxane dimer BTBT as a material for EGOFETs with prolonged shelf-life stability
P-2-17	Sorokina Ekaterina	Synthesis of novel BTBT derivatives for Biosensing by Electrolyte-Gated Organic Field-Effect Transistors
P-2-18	Sukhorukova Polina	Donor-acceptor benzoindole-based small molecules as donor materials for organic solar cells
P-2-19	Titova Yaroslava	Organic electrochemical transistors based on PEDOT:PSS by doctor blade technique
P-2-20	Trofimova Kristina	Comparative study of optical and electrical properties of a series of benzo[b]thieno[2,3-d]thiophenes with phenyl functional group
P-2-21	Trukhanov Vasiliy	Influence of field-dependent photogeneration on the spatially localized photoelectric effect and response times in organic field-effect phototransistors
P-2-22	Ustinova Marina	Partial Substitution of Pb^{2+} in $CsPbI_3$ as an Efficient Strategy to Design Fairly Stable All-Inorganic Perovskite Formulations
P-2-23	Yurasik Georgiy	Growth and electrical properties of linear thiophene-benzothiadiazole oligomers crystals
P-2-24	Zaborin Evgeniy	New polysiloxane brushes modified with dialkyl derivatives of BTBT fragments
P-2-25	Zargarova Leila	Fluorinated bis(benzofuro)benzenes for organic optoelectronics



Лабконцепт

Продуманные решения для аналитической лаборатории



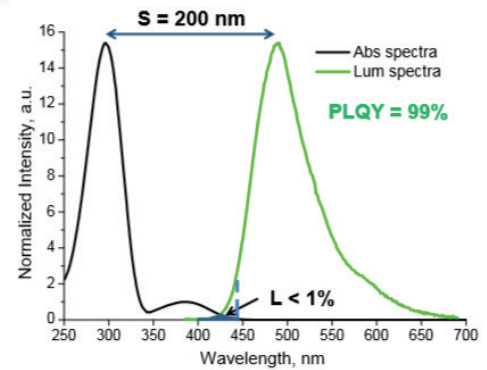
Компания Лабконцепт – официальный дистрибьютор мировых и российских производителей аналитического, общелабораторного оборудования, мебели и расходных материалов, а также производитель собственной линейки высокоэффективных жидкостных хроматографов.

- Оснащение лабораторий оборудованием и мебелью:** комплексные решения в разных ценовых сегментах (премиум, среднеценовой, бюджетный).
- Наличие товара на складе** в Санкт-Петербурге / быстрые сроки поставки.
- Аналитическая лаборатория,** оснащенная современным оборудованием, позволяющая проводить полное тестирование приборов, оперативно работать с собственными и клиентскими методиками, а также организовывать практическое обучение наших заказчиков.
- Пусконаладка, сервис и ремонт оборудования** разных производителей. Большой штат собственных сервис-инженеров, обученных и сертифицированных производителями оборудования.
- Собственное сборочное производство** хроматографического оборудования.
- Возможности по доработке и адаптации приборов,** в том числе сторонних производителей под специализированные задачи заказчиков.
- Обучение персонала лабораторий заказчиков:** начальное, углубленное, по индивидуальным программам, теоретическое и практическое.

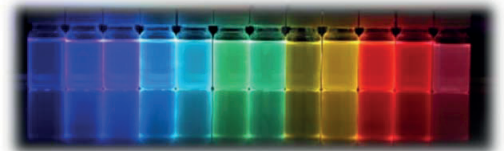
The main goal of LumInnoTech is research, development and commercialization of Nanostructured Organosilicon Luminophores (NOLs) with unique optical properties combining those of organic luminophores and inorganic quantum dots.

Key advantages of NOLs:

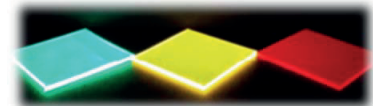
- High luminescence quantum yield: up to 99%
- High molar extinction coefficient: up to 300 000
- Large pseudo Stokes shift: up to 250 – 300 nm
- The possibility of controlling a wavelength of the light emission in a wide range
- Good solution processability
- High stability



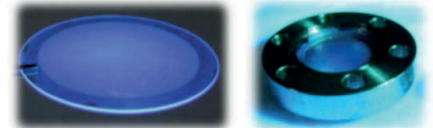
- **A library of NOLs, emitting at the desired wavelengths in the range from 390 to 650 nm.**



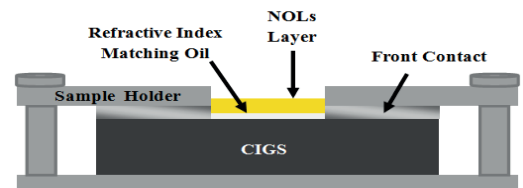
- **Wavelength shifting plates for pure CsI crystals**



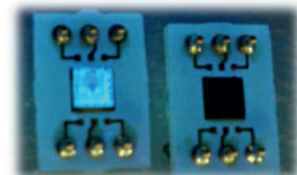
- **VUV wavelength shifters for improving photon detection efficiency of noble gas detectors**



- **Luminescent Down Shifting Materials for CIGS Photovoltaics**



- **Effective Spectral Shifters for Silicon Photomultipliers**



- **New generation of highly efficient and fast plastic and organosilicon scintillators**



- **Various NOLs are available from 100 mg to 100 g quantity**

"Luminescent Innovative Technologies" Limited Liability Company

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