





11th International Fall School on Organic Electronics

School Program









September 21-25, 2025 Moscow region, Russia Hotel Sofrino Park http://www.ifsoe.ru

11th INTERNATIONAL FALL SCHOOL ON ORGANIC ELECTRONICS – 2025 (IFSOE-2025)

Organizers

Division of Chemistry and Material Science of Russian Academy of Sciences

The Ministry of Science and Education of Russia

Enikolopov Institute of Synthetic Polymeric Materials of Russian Academy of Sciences (ISPM RAS)

Lomonosov Moscow State University (MSU)

MESOL LLC

Scientific program

- 1) *Fundamentals of organic electronics:* charge transport, modeling, photophysics, etc.
- 2) **Design and synthesis of materials for organic electronics:** organic conductors and semiconductors, dielectrics, substrates, etc.
- 3) **Organic field-effect transistors:** single crystal, polymer and monolayer OFETs, integrated circuits and related devices.
- 4) *Organic light-emitting devices:* OLEDs and OLETs, white light-emitting devices, TADF devices, organic lasers.
- 5) *Organic and hybrid solar cells:* small molecules and polymer photovoltaics, tandem cells, perovskites-based photovoltaics, etc.
- 6) *Organic sensors:* physical (pressure, temperature, photo, etc.) sensors, chemo- and biosensors.
- 7) **Characterization techniques:** various spectroscopy, microscopy, and x-ray scattering techniques, charge mobility measurements, thermal and surface analysis, HOMO and LUMO evaluation, biomedical applications, etc.
- 8) **Technologies of organic electronics:** printing of organic materials and devices, roll-to-roll techniques, ink formulations, encapsulation, etc.

School-conference Chairs

Prof. Sergey Ponomarenko (Enikolopov Institute of Synthetic Polymeric Materials of RAS, Russia)

Prof. Dmitry Paraschuk (Lomonosov Moscow State University, Russia)

International Advisory Board

Prof. Mikhail Alfimov (Photochemistry Center of RAS, Russia)

Prof. Paul Berger (Ohio State University, USA)

Prof. Sergei Chvalun (National Research Center "Kurchatov Institute", Russia)

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Prof. Han Yan (Xi'an Jiaotong University, China)

Dr. Abderrahim Yassar (Ecole Polytechnique, France)

Local Organizing Committee

Alina Khmelnitskaia – workshop secretary

Dr. Elena Kleimyuk

Dr. Gagik Ghazaryan

Ekaterina Sorokina

Elizaveta Bobrova

Evgeniy Zaborin

Yaroslava Titova

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School program

The 11th International Fall School on Organic Electronics – 2025 Time Schedule

Moscow, Russia (GMT+3)

Time	Sunday September, 21	Monday September, 22	Tuesday September, 23	Wednesday September, 24	Thursday September, 25
8:00			Breal	kfast	·
9:00	13:00	Sergey Ponomarenko	Dmitry Paraschuk	Maria Rosa Antognazza	Kostas Daoulas
	Registration at ISPM RAS	Grigory Zyryanov	Valentina Utochnikova	Raul David Rodriguez	Souren Grigorian
10:00	15:00 Departure to	Ratheesh Vijayaraghavan	Alexander Romanov	Oral talks 5	Alessandro Troisi
11:00	Conference site		Coffee-break		Saha al Clasina
11:00		Pavel Troshin	Anna Koehler	Oral talks 6	School Closing
12:00	17:00 Hotel arrival	Maxim Kazantzev	Johannes Gierschner	Sport activi	activities
12.00	Registration	Oral talks 1	Oral talks 3	Sport activities	
13:00			Lur	nch	
14:00	19:30	Shinto Varghese	Artem Bakulin		
	School opening	Oral talks 2	Oleg Kharlanov		
15:00			Oral talks 4		
16:00	19:45 Vitaly Podzorov	Coffee-break +	Coffee-break +	Excursion/Sport activities	14:00 Departure to Moscow
17:00		Poster session 1	Poster session 2		
18:00	20:30	Dinn	er		
19:00	Welcome party	Sport act	Sport activities		

Sunday, September 21st

13:00 – 15:00	Registration at ISPM RAS. Departure to conference site
17:00 – 18:30	Hotel arrival. Registration
18:30 – 19:30	Dinner
19:30 – 19:45	School opennig
19:45 – 20:30	<u>T-1</u> . Vitaly Podzorov. Elucidating Intrinsic Electronic and Ionic Mobilities in Soft- Lattice Materials (Organic Semiconductors and Metal-Halide Perovskites)
20:30 – 23:00	Welcome-party

Monday, September 22nd

8:00 – 9:00	Breakfast
	Chair: Pavel Troshin
9:00 – 9:45	<u>T-2</u> . Sergey Ponomarenko. High Mobility Organic Semiconductors for Field-Effect Transistors
9:45 – 10:15	<u>I-1</u> . <i>Grigory Zyryanov</i> . Functional Polymers: (Mechano)Synthesis and Study of Photophysical and Applied Properties
10:15 – 10:45	<u>I-2</u> . Ratheesh Vijayaraghavan. Solid-State Aggregates of Ndis for Efficient n-Channel OFETs: Molecular Structure, Assembly and Function
10:45 – 11:00	Coffee-break
	Chair: Grigory Zyryanov
11:00 – 11:45	<u>T-3</u> . Pavel Troshin. Organic Batteries: Current Promises and Challenges
11:45 – 12:15	<u>I-3</u> . Maxim Kazantsev. Aryl-Containing Diazafluoren(On)Es for Organic Optoelectronics and Sensorics
	Oral talks 1.
12:15 – 12:30	<u>O-1</u> . Daria Cheshkina. Condensations of 4,5- and 1,8-Diazafluorenes
12:30 – 12:45	<u>O-2</u> . <i>Polina Shaposhnik</i> . New Siloxane Polymers with Grafted BTBT Groups as Materials for Organic Field-Effect Transistors
12:45 – 13:00	<u>O-3</u> . Askold Trul. Sensing Mechanism of Sensor Devices Based on Organic Field- Effect Transistors
13:00 – 14:00	Lunch
	Chair: Maxim Kazantsev

14:00 – 14:30	<u>I-4</u> . Shinto Varghese. Mechanical Conformity in π -Conjugated Molecular Crystals
	Oral talks 2.
14:30 – 14:45	<u>O-4</u> . Valeriy Postnikov. Polymorphism of Crystals Based on Linear Conjugated Molecules with a Central 2,1,3-Benzothiadiazole Fragment
14:45 – 15:00	<u>O-5</u> . <i>Irina Gudkova</i> . Synthesis and Phase Behavior Study of a New Organosilicon Tetramer with Octylhexyl-Substituted [1]Benzothieno[3,2-B][1]Benzothiophene Moieties
15:00 – 15:15	<u>O-6</u> . Lev Levkov. Conjugated Polymers Based on Alkylthiophene-Substituted Derivatives of Benzothieno[3,2-B][1]Benzothiophene
15:15 – 15:30	<u>O-7</u> . Akim Shmalko. Synthesis of C- and B-Anthracenyl-Ortho-Carboranes with Various Substituents in The Carborane Core
15:30 – 15:45	<u>O-8</u> . Aleksander Mitroshin. In Situ Synthesis of Solution-Processable TADF Polycarbazoles via Suzuki Polycondensation
15:45 – 17:15	Coffee-break + Poster session 1 (P-1 – P-17)
18:00 – 19:00	Dinner
19:00 – 21:00	Sport activities

Tuesday, September 23rd

8:00 – 9:00	Breakfast
	Chair: Ratheesh Vijayaraghavan
9:00 – 9:45	<u>T-4</u> . Dmitry Paraschuk. Multiresonant Luminophores for Light-Emitting Devices
9:45 – 10:15	<u>I-5</u> . Valentina Utochnikova. Lanthanide Based OLEDs
10:15 – 10:45	<u>I-6</u> . Alexander Romanov. Organometallic Complexes for Energy Efficient and Stable OLEDs
10:45 – 11:00	Coffee-break
	Chair: Valentina Utochnikova
11:00 – 11:45	<u>T-5</u> . Anna Köhler. Disorder, Aggregates and Vibrations in Spectroscopy
11:45 – 12:30	<u>T-6</u> . <i>Johannes Gierschner.</i> Bright or Dark - Regulation of Radiative vs. Nonradiative Processes in Novel Organic Materials
	Oral talks 3.
12:30 – 12:45	<u>O-9</u> . Amira Nada Mechekkeme. Weak Acceptor Approach Towards Blue TADF OLED-emitters Based on Carbazole Substituted Quinolines

12:45 – 13:00	O-10. Olga Egorova. Application of Matrix-Assisted Laser Desorption/Ionization Time-of-Flight Mass-Spectroscopy in Research and Development of Organic Light Emitting Diodes
13:00 – 14:00	Lunch
	Chair: Alexander Romanov
14:00 – 14:45	<u>T-7</u> . Artem Bakulin. Monitoring Electronic Defects and Their Impact on the Device Performance of Processable Electronic Materials
14:45 – 15:15	<u>I-7</u> . Oleg Kharlanov. Electron-Phonon Interaction and Charge Transport in Organic Semiconductors
	Oral talks 4.
15:15 – 15:30	<u>O-11</u> . Andrey Sosorev. Novel Multi-Resonance Diindolophenazine Derivatives for Efficient Blue OLEDS
15:30 – 15:45	<u>O-12</u> . <i>Nikita Dubinets</i> . Multiscale Quantum Chemical Calculations of TADF- Luminophores in OLED
15:45 – 16:00	O-13. Artem Toropin. Comparative Analysis of The Applicability of Analytical Models of Charge Carrier Mobility in Disordered Organic Semiconductors
16:00 – 16:15	<u>O-14</u> . Anna Saunina. Effect of Exciton Transport and Dissociation Characteristics on The Performance of Photovoltaic Cell with Quantum Dot-Based Active Layer
16:15 – 16:30	O-15. Yuriy Zhabanov. Application of Theoretical and Experimental Structural Methods to Study Macrocycles for Organic Electronics
16:30 – 18:00	Coffee-break + Poster session 1 (P-18 – P-34)
18:00 – 19:00	Dinner
19:00 – 21:00	Sport activities
Wednesda	y, September 24 th
8:00 – 9:00	Breakfast
	Chair: Sergey Ponomarenko
9:00 – 9:30	<u>I-8</u> . <i>Maria Rosa Antognazza</i> . Bio-Hybrid Photoactive Interfaces for Optoelectronic Modulation of Living Cell Fate
9:30 – 10:00	<u>I-9</u> . Raul David Rodriguez. Engineering 2D Material/Bio-Interfaces by Laser Forging
	Oral talks 5.
10:00 – 10:15	O-16. Elena Poimanova. Influence of Semiconductor Layer Thickness on The Operational Properties of Electrolyte-Gated Field-Effect Transistor
10:15 – 10:30	<u>O-17</u> . <i>Dmitry Godovsky</i> . Novel Non-Condensed Acceptors Based on 4H-Dithieno[3,2-B:2',3'-D]Pyrrole and 4H-Cyclopenta[1,2-B:5,4-B']Dithiophenen,S-Heterocycles with an Ethynylene Linker for Ternary Polymer Solar Cells with an Efficiency more than 15%

10:30 – 10:45	<u>O-18</u> . Mukhamed Keshtov. New 5,6-Bis(6-Fluoro-9H-Carbazol-3-Yl)Naphtho[2,1-B:3,4-B']Dithiophene Containing Π-Conjugated Wide Bandgap Donor Polymer Synthesized via Direct Arylation Polycondensation for Ternary Non-Fullerene Organic Solar Cells
10:45 – 11:00	Coffee-break
	Chair: Dmitry Godovsky
	Oral talks 6.
11:00 – 11:15	O-19. Mikhail Uvarov. Stable Radicals as Admixtures in The Active Layers of Organic Photovoltaic Cells
11:15 – 11:30	<u>O-20</u> . Georgy Pakhomov. Photoconductivity in thin films of oil porphyrins
11:30 - 11:45	<u>O-21</u> . <i>Polina Sukhorukova</i> . Design of Triphenylamine-Based Molecules with Anchor Group for Interfacial Layers of Perovskite Solar Cells
11:45 – 12:00	<u>O-22</u> . <i>Maria Sandzhieva</i> . Novel Organic and Hybrid Organic-Perovskite Composite Materials for Light Emitting Application
12:00 – 13:00	Sport activities
13:00 – 14:00	Lunch
14:00 – 18:30	Trip to Abramtsevo Museum (optional) / Sport activities
19:00 – 23:00	Conference Dinner

Thursday, September 25th

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8:00 – 9:00	Breakfast
	Chair: Dmitry Paraschuk
9:00 – 9:45	<u>T-8</u> . Kostas Daoulas. Choosing The Right Formulation of Polymer-Based Inks for Printed Electronics: Opportunities and Challenges for Molecular Simulations
9:45 – 10:30	<u>T-9</u> . Souren Grigorian. Probing Thin Film and Nanostructure Morphologies with Surface-Sensitive X-ray Techniques
10:30 – 11:00	<u>I-10</u> . Alessandro Troisi. Modelling Charge Transport in Conjugated Polymers: The Challenges of High-Throughput Simulation and Mixed Ionic-Electronic Transport
11:00 – 12:00	School closing
12:00 – 13:00	Sport activities
13:00 – 14:00	Lunch / Hotel check out
14:00 – 14:15	Departure to Moscow

Poster session 1

Monday, September 22nd, 15:45

Deep Neural Networks Dominskiy, Dmitry I. P5 High-Vacuum Sublimation of Organic Semiconductor Materials for OLEDs Filipenkov, Dmitry A. P6 Impact of Organic Light Emitting Diodes Structure on The Charg Carrier Recombination Profile Gaikov, Dmitry K. P7 Creation And Research of Luminescent Compositions with Improved Characteristics for Light-Conversion Photoresists			Moriday, September 22 , 13.13
Bobrova, Elizaveta A. P3 New Triazine -Based Molecules for Organic Electronic Devices Demianenko, Alena I. P4 Anion Effect on Modulation of Synaptic Properties of Organic Biocompatible-lonogel Electrolyte Neuromorphic Transistors for Deep Neural Networks Dominskiy, Dmitry I. P5 High-Vacuum Sublimation of Organic Semiconductor Materials for OLEDs Filipenkov, Dmitry A. P6 Impact of Organic Light Emitting Diodes Structure on The Charg Carrier Recombination Profile Gaikov, Dmitry K. P7 Creation And Research of Luminescent Compositions with Improved Characteristics for Light-Conversion Photoresists Ghazaryan, Gagik S. P8 Modeling The Behavior of Circular Dielectric Elastomer Actuators Khitrov, Michael D. P9 Theoretical Development of Diboraanthracene TADF Luminophores for Green OLEDs Khmelnitskaia, Alina G. P10 Development of Modified PDMS/MQ Composite as Dielectric Elastomers Actuators Kleymyuk, Elena A. P11 Synthesis and Study of The Properties of Host-Materials for the Emitting Layer of OLED Koshelev, Daniil S. P12 NIR OLED Based on Ytterbium Complexes with Schiff Bases	Aladeva, Aleksandra V.	P1	Benzothiadiazole and Its Derivatives with Terminal Alkyl
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Koshelev, Daniil S. P12 NIR OLED Based on Ytterbium Complexes with Schiff Bases	Khmelnitskaia, Alina G.	P10	· ·
	Kleymyuk, Elena A.	P11	
Krasnikov, Danila A. P13 Baseline Drift Correction for OFET-Based Gas Sensors	Koshelev, Daniil S.	P12	NIR OLED Based on Ytterbium Complexes with Schiff Bases
	Krasnikov, Danila A.	P13	Baseline Drift Correction for OFET-Based Gas Sensors
Kuzmin, Ilya A. P14 Influence of Intermolecular Interactions on The Electronic Absorption Spectra of SiF2-Etioporphyrin	Kuzmin, Ilya A.	P14	
Lavrinchenko, Igor A. P15 Azolyl-Containing Luminescent Materials Based on Ortho-Carborane	Lavrinchenko, Igor A.	P15	
Levitskaya, Alina I. P16 Molecular Design of Polymer Materials Composed of Polyimide Matrix and Azochromophores Guests for Electrooptical Applications	Levitskaya, Alina I.	P16	Matrix and Azochromophores Guests for Electrooptical
	Litvinenko, Daniil N.	P17	Geminate Pair Separation Probability in Organic Semiconductors: The Effect of Disorder and Energy Nonequilibrium (A Monte Carlo Study)

Poster session 2

Tuesday, September 23rd, 16:45

Mikhailov, Maxim S.	P18	New Diindolophenazine-Based Fluorophores with Highly Efficient Blue Electroluminescence
Nikerov, Dmitry V.	P19	New Method of Determining Charge Carrier Mobility in Thin Layers of Organic Crystals Using Time-of-Flight Technique
Poletavkina, Liya A.	P20	Synthesis, Study of Structure-Property Relationships and Comparative Analysis of New Annelated Push- Pull Semiconductors Based on Indolo[3,2-B]Indole and Benzothieno[3,2-B]Benzothiophene
Polyakov, Roman A.	P21	Optical Study of Non-Conjugated Polymers with Different Main Chain Nature for OLED Applications
Ponomareva, Anastasia V.	P22	Polymer Materials for Use in Light-Emitting Diodes
Popova, Vlada V.	P23	Terminal Groups Impact on The Properties of 2,1,3 Benzothiadiazole-Based Phenylene Derivatives
Potapov, Danil A	P24	Synthesis and Physicochemical Properties of Thiophene- Containing Derivatives of 4,5-Diazafluorene
Samburskiy, Denis E.	P25	Centrosymmetric Donor-Acceptor TADF-Emitters for Single-Layer OLED Exhibiting Aggregation-Induced Emission
Sorokina, Ekaterina A.	P26	Synthesis of Copolymers with Grafted Biotin-Containing BTBT Segments Based on Polysiloxane and Polystyrene
Stakanova, Daria E.	P27	Functional and Non-Functional Oligomers Based on 4,4'-Bis(2,1,3-Benzothiadiazole)
Starikova, Natalya D.	P28	Novel Chromophores, Incorporating 2,3-Diphenylthiophene Moieties
Tarakanovskaya, Daria D.	P39	Optoelectronic Property Prediction and Generation of Multi- Resonance Thermally Activated Delayed Fluorescence Molecules Using Graph and Multimodal Neural Networks
Titova, Yaroslava O.	P30	Semiconductor Properties of Novel [1]Benzothieno[3,2-b][1] Benzothiophene Derivatives in OFETs Prepared by Solution Processing
Trukhanov, Vasiliy A.	P31	Organic Light-Emitting Diodes Based on Thienyl-Containing Derivative of Tris(2,4,6-Trichlorophenyl)Methyl Radical
Zaborin, Evgeniy A.	P32	Grafted Polymers with Benzothieno[3,2-B]Benzothiophene (BTBT) Moieties as Side Groups: Prospects for High-Performance Organic Semiconductors
Dyadishchev, Ivan V.	P33	Synthesis and Properties of Π-Conjugated Molecular Liquids with Trihexylsilyl Terminal Substituents
Kuleshov, Bogdan S.	P34	Electrolyte-Gated Organic Field-Effect Transistor as a Perspective Platform for Detecting Metals in Aqueous Solutions

СКОРОХОЛ — УНИВЕРСЯЛЬНЯЯ ПЛЯТФОРМЯ ДЛЯ УНИКАЛЬНЫХ РЕШЕНИЙ

ФОТОМЕТРИЧЕСКИЕ ДЕТЕКТОРЫ (СФД И ДМД) С ДВОЙНЫМ ТЕМПЕРАТУРНЫМ КОНТРОЛЕМ. ДРЕЙФ: 3х10 4 Е.О.П./Ч

АВТОДОЗАТОР ПРЯМОГО ДОЗИРОВАНИЯ ПРОБЫ ИЗ ИГЛЫ «SPLIT-LOOP" (ЕДИНСТВЕННЫЙ В РФ)

НАСОСЫ КОРОТКОХОЛОВЫЕ БЕЗПУЛЬСАЦИОННЫЕ



ПРОИЗВОДИМ. Я НЕ СОБИРЯЕМ



ЛУЧШЕЕ ДЛЯ СВОИХ

SKOROHOD

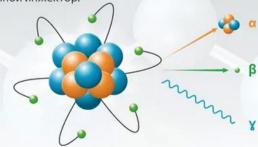
СТОЙКОСТЬ КО ВСЕМ ОРГАНИ-ЧЕСКИМ РАСТВОРИТЕЛЯМ. PH = 1 - 14

КОМПАКТНОСТЬ (НА 35-50% МЕНЬШЕ МОНОБЛОКОВ ЗАПАДНОГО ПРОИЗВОДСТВА) COOTBETCTBUE TO 21 CFR PART 11. ПРЯМОЕ УПРАВЛЕНИЕ ВСЕМИ МОДУЛЯМИ ЭКОСИСТЕМЫ «СКОРОХОД»

Уникальное отечественное решение для ВЗЖХ радиофармпрепаратов: хроматограф "Скороход" с *у*-радиометрическим детектором



- Регистрация в реальном времени у-спектра радионуколида с возможностью построения 3D-хроматограммы.
- Настраиваемая геометрия детектора для работы в аналитическом и препаративном режимах.
- Быстрая смена детекторов γ- и β-излучения. Детектор для а-излучающих радионкулидов.
- Автодозатор прямого дозирования (split-loop) для ввода самых малых объемов без перерасхода пробы или полуавтоматический ручной инжектор.

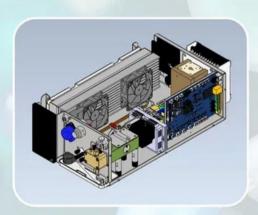


Модуль постколоночной дериватизации из серии ВЗЖХ "Скороход". Готовые решения, проверенные временем

Внализ аминокислот

- Оригинальная разработка на основе отечественной компонентной базы.
- 🕟 Единственный модуль постколоночной дериватизации в РФ: более 10 лет успешной работы с хроматографами разных марок.
- О Инертное исполнение ВЭЖХ-системы.
- Поток для бутылей с системой подачи инертного газа.
- Катионообменные колонки собственного производства.
- Набор реагентов для определения аминокислот в комплекте.
- Демонстрация методики на вашей площадке.





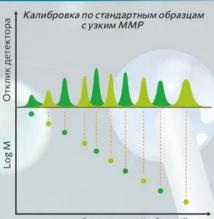
Альтернативные применения постколоночной дериватизации

- Биогенные амины.
- Монезин, наразин и салиномицин.
- Мадурамицин аммония, семдурамицин натрия, гидрат гадодиамида.
- Редуцирующие и фосфорилированные редуцирующие сахара.
- Анионы переходных и тяжелых металлов.
- Водорастворимые витамины В1, В2, В6 (ГОСТ 32903-2014).
- 🚺 Афлатоксин В1 (ГОСТ 32251-2013, EH-12955) и сумма афлатоксинов В1, В2, G1 и G2 (EH-12955).



ХРОМЯТОГРЯФ «СКОРОХОД» ДЛЯ АНАЛИЗА ПОЛИМЕРОВ МЕТОДОМ ГПХ

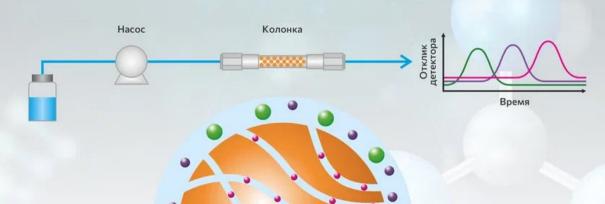




Элюирующий объем/Время

- Единое ПО Мультихром для управления прибором и обсчета данных ГПХ.
- Непревзойденные повторяемость (0,06% ОСКО) и точность (±0,15%) потока подвижной фазы, а также стабильность поддержания температуры (± 0,1°C) гарантируют отсутствие ошибок при определении ММ полимеров.
- Стойкость к ТГФ, ДМФА, ДМСО, ДМАА, ГФИП, хлорированным растворителям.
- Вместительный термостат для работы с каскадами колонок.
- Широкий температурный диапазон (до 99°C).
- Плавное увеличение скорости потока подвижной фазы во избежание повреждения частиц полимерного геля.
- Разнообразие концентрационных детекторов (РФД, СФД, ДМД, СРД).
- Инертное исполнение для работы с биомолекулами.





Частица полимерного геля (поперечное сечение)





ЧЧЕБНЫЕ XPOMRMOГРАФЫ «СКОРОХОД»



ПРЕПЯРАМИВНЫЕ И ПОЛУПРЕПЯРАМИВНЫЕ ХРОМЯМОГРЯФЫ «СКОРОХОД»



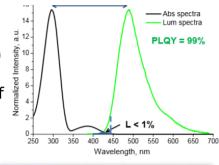
- Насосы производительностью 150 мл/мин, 40 мл/мин и 10 мл/мин.
- Автоматический коллектор фракций, гибко конфигурируемый под любые приемные сосуды, или автоматические краны для сбора фракций.
- Держатели аналитических, препаративных и полупрепаративных колонок.
- Любые детекторы: СФД, ДМД, РФД, ФЛД, СРД с ячейками, соответствующими масштабу разделения.
- Автоматический сбор фракций по программируемым сигналам детектора при помощи ПО Мультихром.
- Инертное исполнение для работы с биомолекулами.
- расчет и масштабирование системы из аналитической.

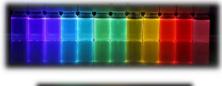


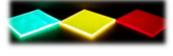
The main goal of LumInnoTech is research, development and commercialization of Nanostructured Organosilicon Luminophores (NOLs) with unique optical properties combining those of organic luminophores and inorganic quantum dots.

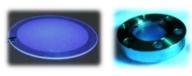
Key advantages of NOLs:

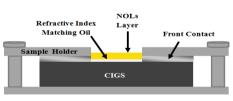
- High luminescence quantum yield: up to 99%
- High molar extinction coefficient: up to 300 000
- Large pseudo Stokes shift: up to 250 300 nm
- The possibility of controlling a wavelength of the light emission in a wide range
- Good solution processability
- High stability
 - A library of NOLs, emitting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

















