3rd INTERNATIONAL FALL SCHOOL ON ORGANIC ELECTRONICS – 2016 (IFSOE-2016)

Organizers

Division of Chemistry and Material Science of Russian Academy of Sciences

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

Lomonosov Moscow State University (MSU)

Printed Electronics Technologies Limited Liability Company (PrintElTech LLC)

Russian Science Foundation (RSF)

Russian Foundation for Basic Research (RFBR)

Federal Agency of Scientific Organizations

Scientific program

1) ***Fundamentals of organic electronics:*** charge transport, modeling, photophysics, etc.

2) ***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 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. Vladimir Agranovich (Institute for Spectroscopy RAS, Russia)
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Local Organizing Committee

Alexey Sizov – *workshop secretary*
Dr. Elena Agina
Askold Trul
Marina Polinskaya

The 3rd International Fall School on Organic Electronics – 2016 Time Schedule

	Sunday *September 18th*	**Monday** *September 19th*	**Tuesday** *September 20th*	**Wednesday** *September 21st*	**Thursday** *September 22nd*	**Friday** *September 23rd*	
	Conference	***School***				***Conference***	
9:00		Valentine Ananikov	Dongge Ma	Maxim Pschenichnikov	Mario Caironi	Transfer to Innovative Nanotechnology Center "Technospark"	9:00
10:00		Joji Ohshita	Dan Credgington	Henning Sirringhaus	Fabio Biscarini		10:00
11:00	Visit to Kolomenskoe Museum (optional)	**Coffee-break**				Denis Kovalevich	11:00
		Mikhail Bochkarev	Andriy Zhugayevych	Koen Vandewal	Souren Grigorian	Chuck Milligan	
12:00		Andrei Shevelkov	Mikhail Nechaev	Alexei Komolov	Stephan Kirchmeyer	Viktor Zadkov	12:00
13:00	Lunch	Artem Bakulin	David Vanden Bout	Peter Thiesen		**Coffee-break**	
		Lunch				Alexander Mityashin	13:00
14:00	Registration at ISPM RAS 16:00 departure to Conference site					Boris Galkin	
						Oral talks 5	14:00
		Conference				Lunch	
15:00		Oral talks 1	Oral talks 2	Oral talks 4	Trip to Zvenigorod (optional)	Excursion to Innovative Nanotechnology Center "Technospark"	15:00
16:00		**Coffee-break**				**Closing ceremony**	16:00
17:00	**Hotel arrival. Registration**	Poster session 1	Individual discussions	Poster session 2	Sport activities (horse riding)	**Departure to Moscow**	17:00
18:00							18:00
19:00	**Dinner**				**Conference dinner**		19:00
	School	Evening lecture	Moscow sightseeing tour	Evening lecture			
20:00	**School opening. Keith Stevenson**	Sport activities (swimming pool, wellness, spa)		Sport activities (swimming pool, wellness, spa)			20:00
21:00	Welcome-party						21:00
22:00-22:30							22:00-22:30

Sunday, September 18th

11:00 – 16:00	**Visit to Kolomenskoe Museum (optional)** **Registration at ISPM RAS. Departure to conference site**
19:00 – 20:00	**Dinner**
20:00 – 20:15	**School opening**
20:15 – 21:15	**T-1.** *Keith Stevenson.* Spatially-resolved measurements of organic semiconductor interfaces
21:15 – 22:30	**Welcome-party**

Monday, September 19th

8:00 – 9:00	**Breakfast**
9:00 – 10:00	**T-2.** *Valentine Ananikov.* Catalytic reactions for preparation of complex organic molecules with atomic precision
10:00 – 11:00	**T-3.** *Joji Ohshita.* Group 14 element chemistry for organic optoelectronic materials
11:00 – 11:30	**Coffee-break**
11:30 – 12:30	**T-4.** *Mikhail Bochkarev.* Features of luminescence of organic compounds of rare earth metals
12:30 – 13:00	**I-1.** *Andrei Shevelkov.* Chemistry of Perovskite Solar Cells
13:00 – 13:30	**I-2.** *Artem Bakulin.* Structural and electronic dynamics in hybrid perovskite materials for photovoltaic and light-emitting devices
13:30 – 15:00	**Lunch**
15:00 – 15:15	**O-1.** *Alexander Dudnik.* Direct C-H arylation polymerization toward sustainable synthesis of conjugated polymers for high performance organic electronics
15:15 – 15:30	**O-2.** *Evgeny Mostovich.* 9H-Fluorene-9-ylidene-caped small molecules: toward rational design of conformational dependent optical properties for organic optoelectronics
15:30 – 15:45	**O-3.** *Yuriy Luponosov.* Design of donor-acceptor oligomers for solution-processed organic solar cells
15:45 – 16:00	**O-4.** *Alexey Tereshchenko.* Nanostructured organosilicon luminophores – large scale synthesis and application in organic photonic and optoelectronic devices
16:00 – 16:15	**O-5.** *Maria Kotova.* Resistive switches in composite structures based on organic dyes and colloidal nano plates CdSe

16:15 – 16:30	**O-6.** *Alexander Shokurov.* Selective mercury sensor model based on crown-substituted hemicyanine dye monolayer at air/water interface
16:30 – 17:00	**Coffee-break**
17:00 – 18:30	**Poster session 1 (*P-1 – P-27*)**
19:00 – 20:00	**Dinner**
20:00 – 21:00	**Evening lecture.** *Maxim Pschenichnikov.* How to write a scientific paper
20:00 – 22:30	**Sport activities**

Tuesday, September 20th

8:00 – 9:00	**Breakfast**
9:00 – 10:00	**T-5.** *Dongge Ma.* Organic semiconductor heterojunctions and their application in OLEDs
10:00 – 11:00	**T-6.** *Dan Credgington.* Recombination and spin in printable OLEDs
11:00 – 11:30	**Coffee-break**
11:30 – 12:30	**T-7.** *Andriy Zhugayevych.* First-principle modeling of energy and charge transport in organic semiconductors
12:30 – 13:00	**I-3.** *Mikhail Nechaev.* QM modeling of materials for organic electronics
13:00 – 13:30	**I-4.** *David Vanden Bout.* Spectroscopy of single conjugated polymers and aggregates
13:30 – 15:00	**Lunch**
15:00 – 15:15	**O-7.** *Alexandra Freidzon.* Multireference quantum chemistry in organic electronics
15:15 – 15:30	**O-8.** *Yulia Krupskaya.* Band-like transport and magnetic ions at organic charge transfer interfaces
15:30 – 15:45	**O-9.** *Maxim Kazantsev.* Highly-emissive solution-grown furan/phenylene co-oligomer single crystals
15:45 – 16:00	**O-10.** *Olga Parashchuk.* Dopant-enhanced photoluminescence in solution processed semiconducting single crystals
16:00 – 16:15	**O-11.** *Vladimir Bruevich.* Thiophene-phenylene co-oligomer single crystals unintentionally doped by longer co-oligomers: optical and electrical properties
16:15 – 16:30	**O-12.** *Igor Fedorov.* Mono- and tri-methine carbocyanine dye J-aggregates: Influence of aggregation promoters on optical and stability properties

16:30 – 17:00	**Coffee-break**
17:00 – 18:00	**Individual discussions**
18:15 – 19:00	**Dinner**
19:00 – 23:00	**Moscow Sightseeing tour**

Wednesday, September 21st

8:00 – 9:00	**Breakfast**
9:00 – 10:00	**T-8.** *Maxim Pschenichnikov.* Excitons in organic semiconductors
10:00 – 11:00	**T-9.** *Henning Sirringhaus.* Device physics of organic transistors
11:00 – 11:30	**Coffee-break**
11:30 – 12:30	**T-10.** *Koen Vandewal.* Charge-transfer states for organic solar cells, OLEDs and NIR photo-detectors
12:30 – 13:00	**I-5.** *Alexei Komolov.* Electron spectroscopy studies of organic electronics materials
13:00 – 13:30	**O-13.** *Peter Thiesen.* Current trends in spectroscopic imaging ellipsometry and brewster angle microscopy
13:30 – 15:00	**Lunch**
15:00 – 15:15	**O-14.** *Oleg Kozlov.* Enhanced exciton harvesting in rubrene:C60 heterojunctions
15:15 – 15:30	**O-15.** *Fallon Colberts.* Water-based processing of electro-active layers in organic solar cells
15:30 – 15:45	**O-16.** *Gaël Heintges.* The effect of branching in a semiconducting polymer on the efficiency of organic photovoltaic cells
15:45 – 16:00	**O-17.** *Qiang Wang.* Structure-property relationships for bis-diketopyrrolopyrrole molecules in organic photovoltaics
16:00 – 16:15	**O-18.** *Andrey Sosorev.* Stepwise change of conjugated polymer:acceptor blend properties with acceptor electron affinity
16:15 – 16:30	**O-19.** *Artem Bakirov.* Structure of star-shaped D–π–A oligothiophenes in solid state and in thin films
16:30 – 17:00	**Coffee-break**
17:00 – 18:30	**Poster session 2 (*P-28 – P-63*)**
19:00 – 20:00	**Dinner**

20:00 – 21:00	**Evening lecture.** *Dmitry Paraschuk.* Basic concepts in organic electronics
20:00 – 22:30	**Sport activities**

Thursday, September 22nd

8:00 – 9:00	**Breakfast**
9:00 – 10:00	**T-11.** *Mario Caironi.* Printed polymer and hybrid transistors: from fundamentals to high frequency devices
10:00 – 11:00	**T-12.** *Fabio Biscarini.* Electrolyte-gated organic field effect transistors: fundamentals and applications to biosensing
11:00 – 11:30	**Coffee-break**
11:30 – 12:30	**T-13.** *Souren Grigorian.* Real time X-ray studies of organic thin films
12:30 – 13:30	**T-14.** *Stephan Kirchmeyer.* Organic and printed electronics: materials, technologies, opportunities and challenges
13:30 – 15:00	**Lunch**
15:00 – 19:00	**Trip to Zvenigorod (optional)** **Sport activities**
19:00 – 22:30	**Conference dinner**

Friday, September 23rd

8:00 – 9:00	**Breakfast**
9:00 – 11:00	**Transfer to Innovative Nanotechnology Center "Technospark"**
11:00 – 11:30	**I-6.** *Denis Kovalevich.* Russia's position in the emerging global industry of flexible electronics
11:30 – 12:00	**I-7.** *Chuck Milligan.* Organic thin film transistors industrialisation and applications
12:00 – 12:30	**I-8.** *Victor Zadkov.* Harnessing plasmonic nanoparticles for solar cells
12:30 – 13:00	**Coffee-break**
13:00 – 13:30	**I-9.** *Alexander Mityashin.* Towards high performance organic semiconductor films on arbitrary substrates
13:30 – 14:00	**I-10.** *Boris Galkin.* Russian flexible electronics centre – a platform for prototyping and small scale manufacturing
14:00 – 14:15	**O-20.** *Dmitry Yakovlev.* Towards high performance organic – inorganic perovskite photovoltaics with CNT based top electrode

14:15 – 14:30	**O-21.** *Vicktoria Zheltova.* Drivers of the development of organic electronics as a framework for the applied laboratory
14:30 – 16:30	**Lunch** **Excursion to Innovative Nanotechnology Center "Technospark"**
16:30 – 17:00	**Closing ceremony**
17:00 – 17:15	**Departure to Moscow**

Poster session 1

Monday, September 19th, 17:00

Anisimov, Daniil S.	P1	Ambipolar transport in single crystal field-effect transistors based on thiophene-phenylene co-oligomers
Bakiev, Artur N.	P2	New chromophores based on combination of thiophene, ethylenedioxythiophene and carbazole fragments: synthesis and optoelectronic properties
Begantsova, Yulia E.	P3	Electroluminescent polynorbonenes with pendant ionic iridium(III) complexes as perspective emitters for OLEDs
Bhattacharyya, Sohini	P4	A Single crystalline organic semiconductor with mechanochromic and solvatochrmic properties and facile metal coordination
Borshchev, Oleg V.	P5	Nanostructured organosilicon luminophores for organic optoelectronics
Brackmann, Stefan	P6	In pursuit of high efficiency hybrid devices: Functionalization of Gallium nitride surfaces
Dominskiy, Dmitry I.	P7	Thiophene-phenylene co-oligomer single crystals: effect of end groups
Emelianov, Aleksei V.	P8	TCTA based single-molecular organic field effect transistors with single-walled carbon nanotubes contacts
Feldman, Elizaveta V.	P9	Correlating the low-and high-frequency vibrations of thiophene-phenelyene co-oliogemer single crystal with its lattice parameters
Frantseva, Ekaterina S.	P10	Synthesis and physico-chemical properties of 1,4-bis(5-arylfuran-2-yl)benzenes
Glushkova, Anastasia V.	P11	Large-area ultrathin single crystal films as an active layer for organic FETs
Grodd, Linda Sabrina	P12	In situ grazing incidence X-ray diffraction of polymer-fullerene thin films under thermal treatment
Guseynov, Abdul-Akim D.	P13	Analysis of $ASnI_3$ (A=CH_3NH_3+ or Cs+) and doped Cs_2SnI_6 perovskite-like structures

Gushchin, Maxim G.	P14	Deposition of electroactive molecules in micro and nano gaps
Heuvel, Ruurd	P15	Energy level tuning of PPDTBT polymers: towards high V_{oc}, low energy loss solar cells
Hietzschold, Sebastian	P16	Solution cast nickel oxide thin films as efficient hole extraction layers in organic electronics
Ilichev, Vasiliy A.	P17	Low LMCT state lanthanide complexes as luminophores in phosphorescent and NIR-emitting OLEDs
Ilicheva, Alena I.	P18	Novel binuclear copper(I) complexes as perspective emitters for OLEDs
Kleymyuk, Elena A.	P19	Synthesis and properties of dendritic organosilicon luminophores with various central acceptor groups
Kolesnikov, Efim A.	P20	Obtaining of the thin layers of $CH_3NH_3PbI_3$ and ZnO for application in solar power engineering
Komissarova, Ekaterina A.	P21	Synthesis of novel pyrimidine derivatives of D-[π]-D type containing heterocycles and TTF moieties
Konstantinov, Vladislav G.	P22	Solid photoluminescence standard based on an organosilicon luminophore
Koskin, Igor P.	P23	Theoretical study of annulation effect in O- and S-containing five-ring heterocyclic rod-like molecules on their optical and electronic properties
Krivtsova, Evgenia D.	P24	Novel conjugated organosilicon oligomers based on 2,1,3-benzothiadiazole
Kunz, Alexander	P25	Reduced charge carrier trapping by controlled polymer blend phase dynamics
Malakhova, Yulia N.	P26	Polyaniline/polyethylene oxide memristors with planar thin-film or 3D fibrous architecture
Mannanov, Artur A.	P27	Photoluminescence anisotropy in organic semiconducting single crystals

Poster session 2

Wednesday, September 21st, 17:00

Mannanov, Artur L.	P28	Highly soluble and thermally stable star-shaped oligomer for organic solar cells
Maslennikov, Dmitry R.	P29	Surface-enhanced Raman spectroscopy of semiconducting monolayers
Müller, Lars	P30	Charge-transfer – solvent interaction predefines doping efficiency in p-doped P3HT-films
Naumov, Artem I.	P31	Efficient modeling of conjugated polymers for electronics and energy storage
Platonova, Elena O.	P32	Red light-emitting polynorbornenes with cyclometaled iridium(III) complexes in side chains

Poimanova, Olena Yu.	P33	Solution-grown large-area ultrathin films of α,α'-dihexylquinquethiophene for organic field-effect transistors
Polinskaya, Marina S.	P34	Synthesis and properties of novel organosilicon derivative of [1]benzothieno[3,2-b][1]-benzothiophene
Pushkarev, Anatoly P.	P35	Sensitization of NIR emission of Nd^{3+} by Zn-containing Schiff base complex
Romashkin, Alexey V.	P36	Development of nanoscale contacts for organization and study low-molecular channel OFET
Rörich, Irina	P37	Role of energetic disorder and traps on exciton lifetime in conjugated polymers
Saunina, Anna Yu.	P38	Effect of microscopic Coulomb interactions on the mobility of charge carriers in disordered organics
Schneeweis, Arno Paul Wilhelm	P39	Di(benzothieno)thiazines – New Electron Rich Organic Molecules
Schönbein, Ann-Kathrin	P40	Kinetic Modeling of PPV Polymerization via Gilch
Selivanova, Daria G.	P41	New π-conjugated systems, containing prop-2-en-1-one, 2-aminopyrimidine and 2-(1H-pyrrol-1-yl)pyrimidine moieties
Sizov, Alexey S.	P42	Electrical characterization of self-assembled monolayer field-effect transistors based on Langmuir films of organosilicon conjugated oligomers
Skorotetcky, Maxim S.	P43	New nanostructured organosilicon luminophores for organic photonics
Solodukhin, Aleksandr N.	P44	Novel donor-acceptor oligomers of different architecture based on triphenylamine and carbazole for organic photovoltaics
Temiz, Cansel	P45	Relation between supramolecular structure and the charge and excited state dynamics in organic materials
Toropynina, Viktoriya Yu.	P46	Unsymmetrical push-pull oligomers based on triphenylamine: synthesis and properties
Trukhanov, Vasiliy A.	P47	Modeling of the photocurrent in organic field-effect transistors
Trul, Askold A.	P48	Highly stable ultrathin OFETs from siloxane dimers of BTBT
Willems, Robin Egidius Marinus	P49	Singlet fission in pentacene solar cells
Zhukov, Yurii M.	P50	Oxygen contents and the surface workfunction of the liquid phase deposited graphene oxide films studied by photoelectron spectroscopy
Baramygin, Aleksandr V.	P51	Conduction band electronic structure of the ultrathin films of substituted perylene and fullerene on germanium oxide surface

Panina, Yulia A.	P52	Energy level alignment in the ultra-thin layers of polar substituted phthalocyanine and phenylene-vinylene oligomer on solid substrate
Zashikhin, Georgy D.	P53	Density of the unoccupied electronic states of the films of dioctyl-substituted and of diphenyl-substituted perylenedicarboximide
Bensalem, Rechid	P54	Structure and magnetic properties of nanocrystalline mechanically alloyed Fe-10%Zn and Fe-30%Zn
Borzdun, Natalia I.	P55	Molecular dynamics simulation of P3HT helical structure in vacuo and in amorphous polymer surrounding
Dominguez, Sergio Ulises Espinosa	P56	Computational rational design of cationic polyelectrolytes with enhanced hydrogen bonding ability for electrode buffer layers
Godovsky, Dmitri Yu.	P57	New D1-A-D2-A-D1-type small molecules based on fluorobenzotriazole acceptor and dithienosilole core donor for solution processed organic solar cells
Kuklin, Sergei A.	P58	Design and synthesis of new ultra-low bandgap thiadiazoloquinoxaline based polymers for near infrared organic photovoltaic application
Labidi, Malika	P59	First-principles study of the electronic energy bands and state density of Rock-salt $Zn_{1-x}Sr_xO$ ternary alloys
Labidi, Salima	P60	Theoretical investigations of structural, electronic and thermal properties of CdO and ZnO
Rehamnia, Rabah	P61	Zn-Ni alloys electrodeposited from alkaline medium bath containing complexing agents
Postnikov, Valeriy A.	P62	Liquid–air interface solution growth and structure of large single crystals films of p-quaterphenyl and his novel terminal substituted derivatives
Lyasnikova, Maria S.	P63	The solution processed thin crystal layers formation of organic semiconducting co-oligomers on substrate

RUSSIAN FLEXIBLE ELECTRONICS CENTRE (RFEC)

TECHNOSPARK NANOTECH CENTER (TROITSK, MOSCOW) STARTS CONSTRUCTION OF A PROTOTYPING AND SMALL SCALE MANUFACTURING FACILITY FOR THIN-FILM ELECTRONICS AIMED FOR SEEDING NEW MARKETS WITH CUTTING EDGE COMPONENTS TO ENABLE NEW APPLICATIONS AND PRODUCTS

LOOKING FOR

Highly motivated, result-oriented, skilled engineers passionate about thin-film electronics interested in professional growth in various technology areas like:

- *Industrial process flow for IGZO and oTFT*
- *Thin-film transistor design and architecture*
- *Developing of new materials*
- *R&D for microelectronics*
- *Analytics and measurements*

To work on disruptive projects such as smart skin, flexible X-ray detector, health sensors, lab on chip, smart package, wearable electronics, IoT and so on.
RFEC partner with leading European R&D companies such imec (Belgium), Holst Centre, set up by imec and TNO (The Netherlands), and FlexEnable (Great Britain), RFEC will develop a range of advanced thin-film transistor technologies based on metal-oxide and organic materials for different application.
As a part of our fast growing team you will have opportunity to create completely new devices. You will have access to high-tech equipment for prototyping and manufacturing of flexible electronics and industrial process flow know-how from the leading European R&D centers.
We offer internships for graduates and post-graduates, as well as part-time and full-time positions for engineers and R&D professionals in thin-film electronics with more than 3 year working experience.

INTERESTED? CONTACT US:

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