



**15th INTERNATIONAL WORKSHOP
ON INORGANIC AND ORGANIC
ELECTROLUMINESCENCE
&
2010 INTERNATIONAL CONFERENCE
ON THE SCIENCE AND TECHNOLOGY
OF EMISSIVE DISPLAYS AND LIGHTING
&
XVIII ADVANCED DISPLAY TECHNOLOGIES
INTERNATIONAL SYMPOSIUM**



**St-Petersburg State Institute of Technology (Technical University)
St.Petersburg, Russia**

September 27 – October 1, 2010



EVENT

EL 2010 follows a historical series of International Workshops which started in 1980 on Inorganic Electroluminescence, and expanded in 1988 to include Organic Electroluminescence. In 1995 the Conference on Display Phosphors was initiated. The two events merged in 2002, and since then they have been held biannually. In 2010, just for one time the conference program will be merged with the Advanced Display Technologies series of conferences which are held every year in Russia, Byelorussia and Ukraine. The meeting covers all aspects of science and technology of inorganic and organic electroluminescence, phosphors and display devices and will include invited talks, contributed presentations and posters.

VENUE

St. Petersburg, is the second largest city in Russia, having a population of ~ 5 mln. and located near the border with other European countries. It was founded in 1703 by Russian Czar Peter I as a new capital of his empire. At present it has many scientific institutes and universities, where many scientists are related to display technologies.

<http://www.visit-petersburg.com/>

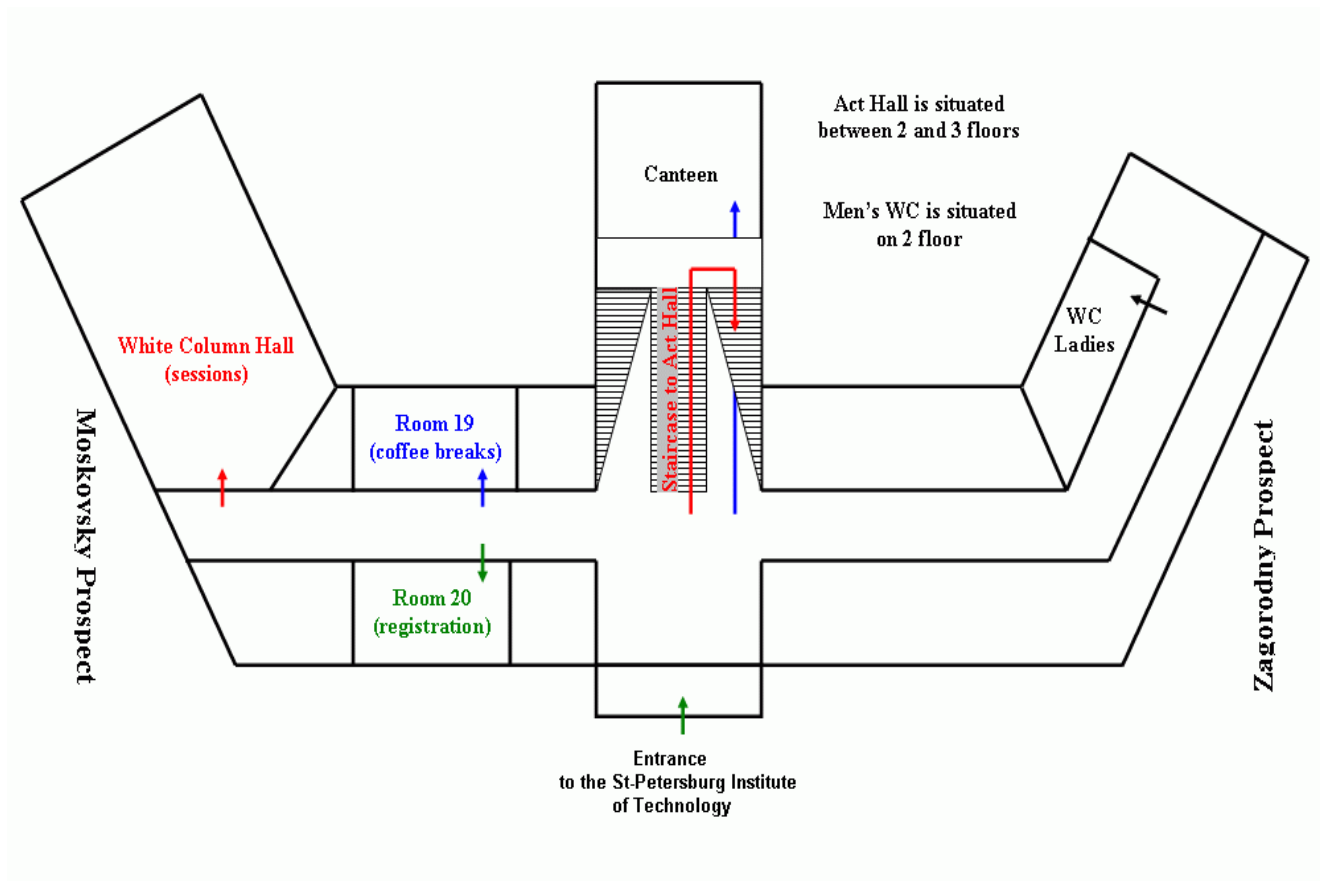
St. Petersburg Institute of Technology (Technical University) is situated in the city center, nearby the subway station and not far from its main attractions. Famous individuals who contributed to the history of institute include D. Mendeleev who became Professor at the age of 30; founder of Physical Technical Institute A.F. Ioffe and inventors of first Russian and USA CRTs for TV sets B.L. Rozing and V.K. Zvorykin.

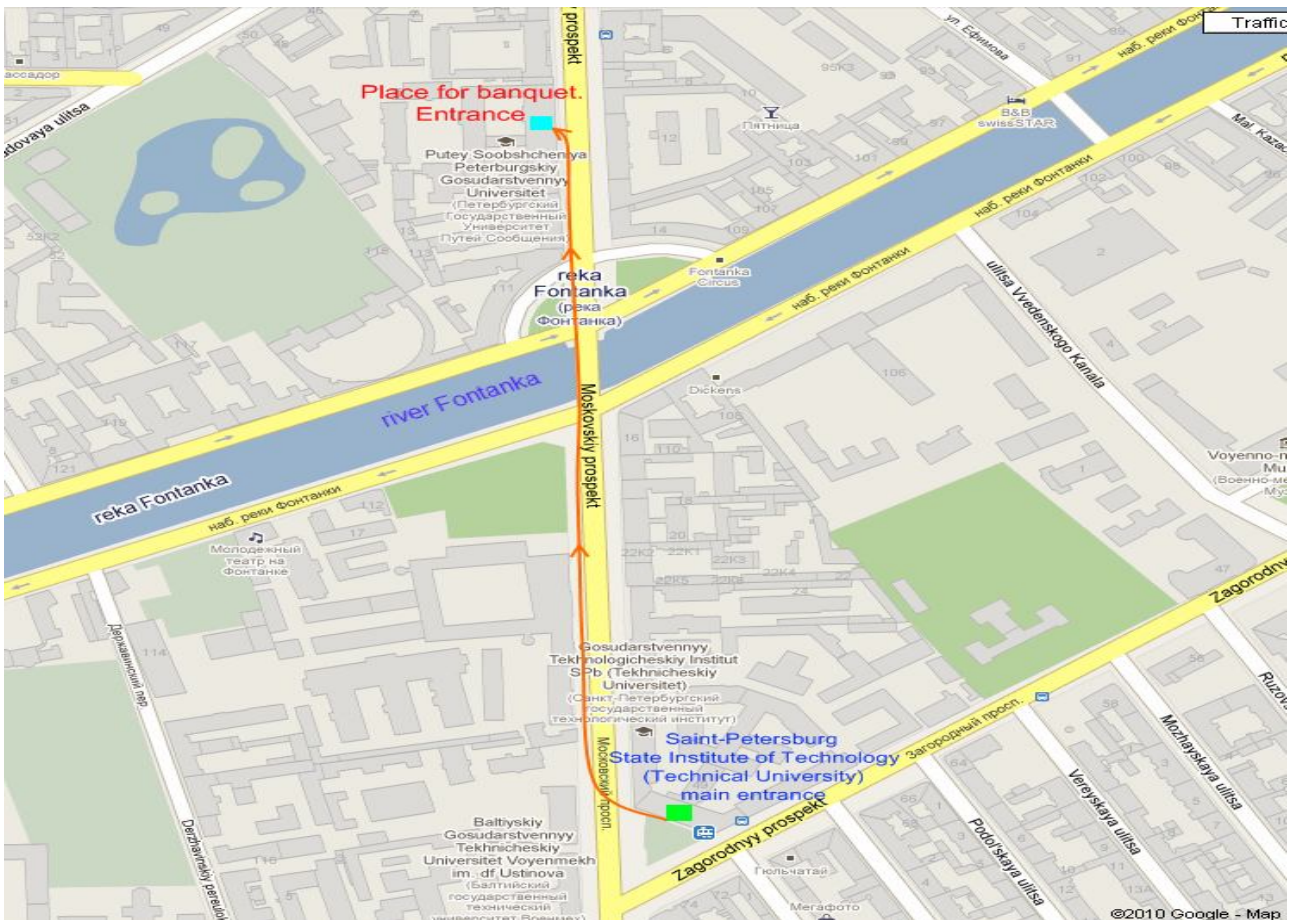
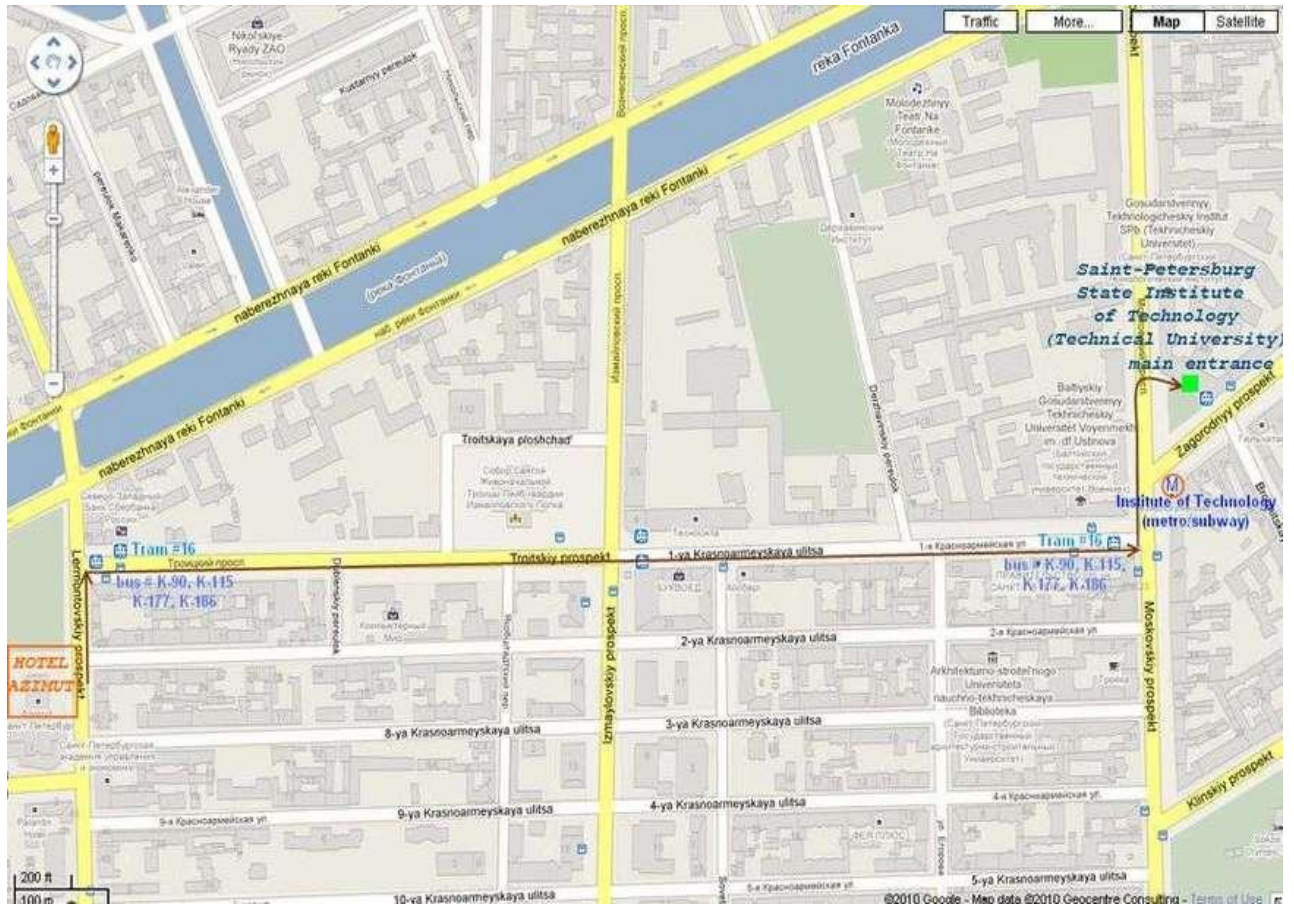
www.lti-gti.ru

TRANSPORTATION

Bus transportation will be arranged from Azimut hotel to the conference site on mornings of Tuesday, Wednesday, Thursday and Friday. Due to many participants the bus will make 2 charter trips at approximately 8:15 and 8:40. After get together on Monday, sessions on Tuesday and Friday, excursion on Wednesday and banquet on Thursday bus will bring participants back to hotel.

Floor plan





ORGANIZED AND SUPPORTED BY:

Society for Information Display, Russian Chapter of the Society for Information Display
St. Petersburg Institute of Technology (Technical University), Russia
SAES Getters S.p.A., Italy
Research Institute of Electronics, Shizuoka University, Japan
Moscow Region State University, Russia
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D. H. Shin		Dongguk Univ., EL-Korea Co, Korea
M. Tonelli		Univ. Pisa, Italy
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W. Riess		IBM Research Zurich, CH
J. Salbeck		Univ. Kassel, Germany
Y. Shirota		Fukui Univ., Japan
M. E. Thompson		Univ. Southern Calif., USA
C. Adachi		Univ. Kyushu, Japan
R. J. Visser		Applied Materials, USA
S. W. Wen		e-Ray Optoelectronics, Taiwan
K. T. Wong		National Univ.. Taiwan
X. Zheng		Jiaotong Univ., China
M. Cremona		Laboratório de Optoeletrônica Molecular Dep. de Física, Brazil

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TRAVEL:

For visa, transportation, accommodation
please Contact Travel agency "Status RTA"
Phone: +7-812-9598860
Fax: +7-812-7407386
symposium15@gmail.com
Ms. Varya Shironosova (please mention Advanced
Display Technologies symposium for discounts)
To come to Russia foreign citizens need visa!!!

CONTACTS:

St. Petersburg Institute of Technology
(Technical University)
26, Moskovsky prospect
St. Petersburg 190013, Russia

Dr. Maxim Sychov

Phone: (+7 921) 321 7100
E-mail: mpsychov@yahoo.com

Dr. Sergey Mjakin

Phone: (+7 911) 746 2510
E-mail: sergey_mjakin@mail.ru

Website: <http://EL-10.narod.ru/>

Presentations

The official language of the Conference is English. Each invited presentation will take 30 minutes including questions and answers, oral presentations will take 20 minutes including questions and answers. Authors will be provided with notebook and projector for presentations. Please make sure to contact your session chair and technical assistant before the session start.

For poster presentations maximum poster size width should be 1.2 meters, height is not limited

PRIZES AND AWARDS

At the Conference the following awards will be presented for the most prominent and impressive achievements and contributions in electroluminescence, phosphor and display sciences:

1. Rozing Prize for the life achievement in display technology field will be given to **Prof. Vladimir P. Kuklev** from the Semenikhin Institute of Automatic Equipment (Russia). Prof. Kuklev is an outstanding scientist and research leader supervising advanced R&D activities in the field of electronics, particularly in the development of electron beam devices for information imaging. He made great input into organization of research and industrial centers for electronics devices and displays production and establishment of a scientific school in this highly important area of the electronics. He was the first director of R&D Institute Platan, Fryazino, Moscow region. Vladimir Kuklev is a veteran of World War II. On July 28, 2010 Prof. Kuklev celebrated his 90th jubilee and currently continues scientific activities.

2. Life achievement in outstanding research and advancement of science of luminescent materials award. This award was initiated during EL 2008 conference in Rome when it was given to Prof. Aron Vecht from ARON VECHT & ASSOCIATES and Prof. Hiroshi Kobayashi from Tottori University Japan. This time award will be presented to the following distinguished scientists:

Prof. Paul H. Holloway, Distinguished Professor and the Ellis Verink Jr. Professor in Materials Science and Engineering at the University of Florida (USA), outstanding scientist in the field of electroluminescence (EL) from both alternating current thin film electroluminescent (ACTFEL) high electric field devices, as well as low field direct current inorganic, organic and hybrid light emitting devices. Among the achievements of the research group led by Prof. Holloway are the demonstration of the role of a thin interfacial layer for enhanced charge injection and increased of EL brightness, detailed microstructural characterization of ZnS based thin film phosphors, development of near infrared emitting ACTFEL devices, study of novel hybrid light emitting devices with the active emitting layer consisting of a mixture of a conjugated polymer and quantum dot nanoparticles to increase both the efficiency and lifetime of the hybrid LED. In addition to the fundamental materials work, his group has been active in applications of EL devices, covering areas from visible to infrared displays, to medical applications. His group has also made major contributions to the more conventional EL field, particularly in the development of methods for making ohmic contacts to wide band gap compound semiconductor devices, including GaN LEDs.

Prof. Anatoliy N. Georgobiani, Professor of the Moscow Physico-Technical Institute, Head Researcher at the Lebedev Institute of Physics of the Russian Academy of Sciences, member of the Russian Academy of Natural Sciences. Prof. Georgobiani specializes in semiconductor optoelectronics, solid state optics, physics of wide bandgap semiconductors and particularly physics of electroluminescence and electroluminescent devices. Prof. Anatoliy N. Georgobiani co-authored of more than 300 research articles and 6 monographs, including classical "A.N.Georgobiani, M.B.Kotlyarevsky. Physics of A^{II}B^{VI} compounds, Nauka Publishers, Moscow, 1986".

Prof. Georgobiani made input into development of modulation spectroscopy methods which allowed to increase sensitivity and precision of spectral measurements.

3. Diplomas will be awarded to distinguish outstanding oral and poster presentations made by young scientists.

Timetable (see also floor plan)

Monday September 27	Tuesday September 28	Wednesday September 29		Thursday September 30		Friday October 1	
14:00 – 18:00 Registration <i>Room 20</i>	9:00 – 15:00 Registration <i>Room 20</i>	9:00 – 14:00 Registration <i>Room 20</i>		9:00 – 13:00 Registration <i>Room 20</i>		9:00 – 10:20 LCDs	9:00 – 11:00 Emissive Devices
	9:00 – 9:45 Opening Ceremony <i>White Column Hall</i>	9:00 – 12:30 OLEDs <i>White Column Hall</i>	9:00 – 10:40 Display Metrology <i>Act Hall</i>	9:00 – 10:20 OLEDs <i>White Column Hall</i>	9:00 – 12:30 LCDs <i>Act Hall</i>	<i>Act Hall</i>	<i>White Column Hall</i>
		10:40 – 11.00 Coffee Break	10:40 – 11.00 Coffee Break	10:20 – 10.40 Coffee Break	10:40 – 11.00 Coffee Break	10:20 – 10.40 Coffee Break	11:00 – 11.20 Coffee Break
	9:45 – 12:30 Phosphors for Displays, Backlight and Lightings <i>White Column Hall</i>		11:20 - 12:30 3D Displays <i>Act Hall</i>	10:40 – 12:30 EL <i>White Column Hall</i>		10:40 – 12:30 Display Materials <i>Act Hall</i>	11:20 – 12:30 LEDs <i>White Column Hall</i>
	10:45 – 11.00 Coffee Break						
	12:30 – 13:30 Lunch <i>Institute Canteen</i>	12:30 – 13:30 Lunch <i>Institute Canteen</i>		12:30 – 13:30 Lunch <i>Institute Canteen</i>		12:30 – 13:30 Lunch <i>Institute Canteen</i>	
	13:30 – 17:10 Phosphors for Displays, Backlight and Lightings <i>White Column Hall</i>	14:00 – 19:00 Bus excursion		13:30 – 14:50 EL <i>White Column Hall</i>	13:30 - 15:10 LCDs <i>Act Hall</i>	13:30 – 14:30 Display Materials <i>Act Hall</i>	13:30 – 14:50 LEDs <i>White Column Hall</i>
14:50 – 15:10 Coffee Break			14:50 – 15.10 Coffee Break	15:10 – 15.30 Coffee Break	14:50 – 15:10 Coffee Break	14:50 – 15.10 Coffee Break	
	17:30 – 19:00 Meeting of organizing and program committees of EL conference <i>Institute Canteen</i>			15:30 – 17:30 Poster session <i>Rooms 19, 20</i>	15:10 – 15:30 Closing Session, Prizes and Awards <i>White Column Hall</i>		
18:00 – 19:30 Welcome Party <i>Institute Canteen</i>				18:00 – 21:00 Conference banquet with Russian folklore performance <i>(see map)</i>			

PROGRAM

Monday, September 27

14:00 – 18:00 Registration
18:00 – 19:30 Get together

Tuesday, September 28

9:00 – 15:00 Registration, *room 20*

9:00 – 9:45 **Opening Ceremony – *White Column Hall***

Welcome speech, Prof. Nikolay Lisitsyn, Rector of St. Petersburg State Institute of Technology

Opening remarks, Dr. Maxim Sychov, St. Petersburg State Institute of Technology

Electronics and Display Research in St.Petersburg Institute of Technology

Olga Scherbinina, Sergey Mjakin

St.Petersburg State Institute of Technology

9:45 – 12:30 Phosphors for Displays, Backlight and Lightings

White Column Hall, Session Chair – Prof. Y. Nakanishi

9:45 – 10:15 Invited

New classes of phosphors for emerging lighting applications

D. Poelman, A. Parmentier, K. Korthout, K. Van den Eeckhout, N. Avci, I. Cimieri,
J. Botterman, P.F. Smet.

Lumilab, Dept. Solid State Sciences, Ghent University, Gent, Belgium

10:15 – 10:45 Invited

Luminescent Mechanisms in Thiogallate and Thioaluminate Phosphors.

Shinji Okamoto, Katu Tanaka

Display & Functional Devices Division Science and Technology Research Laboratories, Japan
Broadcasting Corporation, Tokyo, Japan

10:45 – 11:00 Coffee break

11:00 – 11:30 Invited

Cathodoluminescence properties of ZnO based materials for UV and blue emissions

Hiroko Kominami, Yoichiro Nakanishi, Kazuhiko Hara

Research Institute of Electronics, Shizuoka University, Hamamatsu, Japan

11:30 – 11:50

Optical properties of UV down-converting $\text{ZnAl}_2\text{O}_4:\text{Ce}^{3+},\text{Tb}^{3+}$ phosphor

K.G. Tshabalala¹, S. Cho², J.K. Park², S Pitale¹, I.M. Nagpure¹, R.E. Kroon¹, H.C. Swart¹, O.M. Ntwaeaborwa¹

¹Department of Physics, University of the Free State, Bloemfontein, South Africa

²Nano-Materials Center, Korea Institute of Science and Technology, Cheongryang, Seoul, South Korea

11:50 – 12:10

Emission Property Prediction of Eu²⁺-doped Phosphors based on Crystal structure: A Computational Chemistry Study

Hiroaki Onuma¹, Itaru Yamashita², Ryo Nagumo³, Ryuji Miura², Ai Suzuki³, Hideyuki Tsubo¹, Nozomu Hatakeyama¹, Akira Endou¹, Hiromitsu Takaba³, Momoji Kubo⁴, Akira Miyamoto^{3,1,2},

¹ Department of Applied Chemistry, Graduate School of Engineering, Tohoku University, Japan

² Department of Chemical Engineering, Graduate School of Engineering, Tohoku University, Japan

³ New Industry Creation Hatchery Center, Tohoku University, Japan

⁴ Fracture and Reliability Research Institute, Graduate School of Engineering, Tohoku University, Japan

12:10– 12:30

Rare earth doped core/shell particles for lighting applications

K. Korthout, P.F. Smet, D. Poelman

Lumilab, Dept. Solid State Sciences, Ghent University, Gent, Belgium

12:30 – 13:30

Lunch

13:30 – 17:30 Phosphors for Displays, Backlight and Lightings

White Column Hall, Session Chair – Prof. D. Poelman

13:30 – 13:50

Chemical preparation and photoluminescence of partially Al-substituted MgO-ZnO (s.s.) powders

Koji Inoue, Toru Sago

Mie Industrial Research Institute, Tsu, Japan

13:50 – 14:10

The effect of Gd³⁺ and B³⁺ doping on photoluminescence property of CaYAlO₄:Eu³⁺ phosphors

Marilena Bartic, Hiroko Kominami, Yoichiro Nakanishi, Kazuhiko Hara

Active Display Laboratories, Research Institute of Electronic, Shizuoka University, Japan

14:10 – 14:30

Energy transfer in Phosphors SrTiO₃:Pr³⁺,Al

Vorobyov V. A.², Sinelnikov B.M.¹, Manashirov O. Ja.¹

¹ NCSTU, Stavropol, Russia

² SSC RAS, Stavropol, Russia

14:30 – 14:50

Local Structure and Luminescent Characteristics of Mn²⁺ Centers in Si-Codoped CuAlS₂:Mn Red Phosphor

Yoshinobu Miyamoto^{1,2}, Koutoku Ohmi², Tetsuo Honma³

¹ Tottori Univ. Electronic Display Research Center, Tottori, Japan

² Graduate School of Engineering, Tottori Univ. Tottori, Japan

14:50 – 15:10 Coffee break

15:10 – 15:30

Low thermal quenching of inorganic phosphor

X. Wang¹, Y. B. Chen^{1,2}, J. Antonio Zapien³, M. L. Gong², K. W. Cheah¹

¹ Department of Physics and Centre for Advanced Luminescence Materials, Hong Kong Baptist University, Hong Kong SAR, China

² School of Chemistry and Chemical Engineering, Sun Yat-sen University, China

³ Department of Physics and Material Science, City University of Hong Kong, China

15:30 – 15:50

Utilization of Explosion Energy in Synthesis of Phosphors

M.M.Sychov

St.Petersburg State Institute of Technology (Technical University), St.-Petersburg, Russia

15:50 – 16:10

Luminescence of CaMoO₄-CaWO₄ solid solutions doped with Eu³⁺

E.S. Zolotova, M.I. Rahmanova, V.V. Bakovets

Nikolaev Institute of Inorganic Chemistry, Novosibirsk, Russia

16:10 – 16:30

Luminescent CdTe/CdSe and CdTe/CdS quantum dots with tetrapod-shaped architecture

D. Dirin, M. Sokolikova, R. Vasiliev

Department of Materials Science, M.V. Lomonosov Moscow State University, Russia

16:30 – 16:50

Increase of low voltage displays brightness by using nanocrystalline electroconductive additives

A.O.Dmitrienko, V.P.Dmitrienko, E.S.Speranskaya

Saratov State University, Saratov, Russia

16:50 – 17:10

Activated nanosized glass ceramics

E.V.Kolobkova

St.Petersburg State Institute of Technology (Technical University), St.-Petersburg, Russia

17:30 – 19:00 Meeting of members of conference organizing and program committees, canteen of Institute of Technology

Wednesday, September 29

9:00 – 14:00 Registration, room 20

9:00 – 12:30 OLEDs

White Column Hall, Session Chair – Prof. K.W.Cheah

9:00 – 9:30 (Invited)

Interference and decay time change for the emission from a thin film

Kristiaan Neyts¹, Saso Mladenovski¹, Lieven Penninck¹, Sebastian Reineke²

¹Ghent University, Dept. of Electronics and Information Systems, Ghent, Belgium

² Institut für Angewandte Photophysik, Technische Universität Dresden, Germany

9:30 – 10:00 (Invited)

Gradient refractive index anode for high contrast OLEDs

Zhu Furong

Department of Physics and Centre for Advanced Luminescence Materials, Hong Kong Baptist University, Hong Kong

10:00 – 10:20

Optical modelling of an Alq₃-based organic light-emitting diode

E. Nichelatti^a, F. Bonfigli^b, M.A. Vincenti^b, R.M. Montoreali^b

^a ENEA, UTTMAT-OTT Laboratory, Rome, Italy

^b ENEA, UTAPRAD-MNF Laboratory, Rome, Italy

10.20 – 10.40

Highly Efficient White Electroluminescent Devices From Cross-linked Network Film Prepared by Electrochemical Polymerization

Xiaodong Liu, Yuguang Ma

State Key Lab for Supramolecular Structure and Materials, Jilin University, Changchun, China

10:40 – 11:00 Coffee break

OLEDs (continued), *White Column Hall, Session Chair – Prof. K. Neyts*

11.00 – 11.30 (Invited)

Towards solution-processed electroluminescent integrated systems

Tilman Beierlein

CSEM (Centre Suisse d'Electronique et de Microtechnique) Polymer Optoelectronics Division, Basel, Switzerland

11:30 – 11.50

Concentration quenching of luminescence in doped organic thin films

Y. Li¹, J. Fan¹, Y. K. Cheng², K. W. Cheah¹

Centre for Advanced Luminescence Materials

¹Department of Physics,

²Department of Chemistry

Hong Kong Baptist University, Kowloon Tong, Hong Kong SAR, China

11:50 – 12.10

Main Tendencies of Formation of High-Efficiency White OLED Structures

G.A.Aleksandrova, O.A.Grachev, A.V.Dmitriev, N.N.Usov

SC CRI Cyclone, Moscow, Russia

12:10 – 12.30

Electroluminescence of polyaniline layers in the presence of molecular nanocrystals

E.I. Mal'tsev, D.A. Lypenko, O.M. Pereyagina, A.V. Vannikov

A.N. Frumkin Institute of Physical Chemistry and Electrochemistry of the Russian Academy of Sciences, Moscow, Russia

12:30 – 13.30 Lunch

Parallel Sessions

9:00 - 10:40 Display Metrology

Act Hall, Session Chair – Prof. V.S.Kalinov

9:00 – 9:20

Spectrocolorimeter for measuring color characteristics of the sources of optical radiation

Tomsky K.A., Kuzmin V.N., Nikolaev S.E., Antonov V.V., Kruglov O.V.

«TKA Scientific Instruments», Saint-Petersburg, Russia

9:20 – 9:40

Photometry of light-emitting diodes and light devices based on these diodes

Andriychuk V.A., Osadtsa Y.M.

Ternopil Ivan Pul'uj National Technical University, Ternopil, Ukraine

9:40 – 10:00

The metrological guarantee and traceability by the manufacture, operation and testing of displays

Zagaryants G.S., Mikhailov O.M.

ANO NTC CE «ISEP» Saint-Petersburg, Russia

10:00 – 10:20

The comparative results measurement of special characteristics of non-homogeneous displays.

Zagaryants G.S., Mikhailov O.M.

ANO NTC CE «ISEP» Saint-Petersburg, Russia

10:20 – 10:40

Luminescence intensities accounting for reabsorption in a multicomponent medium with overlapping absorption bands

A.P. Voitovich, V.S. Kalinov*, A.P. Stupak B.I. Stepanov Institute of Physics, National Academy of Sciences of Belarus, Minsk, Belarus

10:40 – 11:00 Coffee break

11:00 – 12:20 3D Displays

Act Hall, Session Chair – Prof. I.N.Kompanets

11:00 – 11:30 (Invited)

3D display design

Andrew Putilin

Lebedev Physical Institute, Moscow, Russia

11:30 – 12:00 (Invited)

Prospects of creating 3D volumetric display with FLC based video-projector and shutters

A.L. Andreev, I.N. Kompanets, A.G. Sobolev

P.N. Lebedev Physical Institute of RAS, Moscow, Russia

12:00 – 12:20

Elimination of Vertical Parallax in Dual Monitor Stereoscopic Display

Konstantin Grebenyuk¹, Vladimir Petrov²

¹ Saratov State Medical University, Russia

² Saratov State University, Russia

12:30 – 13:30 Lunch

14:00 – 19:00 St-Petersburg sightseeing bus tour, tour fee is included into registration fee.

Languages – English and Russian, please choose the bus with a Russian or English guide.

Thursday, September 30

9:00 – 13:00 Registration, room 20

9:00 – 10:20 OLEDs

White Column Hall, Session Chair – Prof. T. Tsutsui

9:00 – 9.20

Solution Processed Quantum Dot Light Emitting Device with a Zinc Oxide Nanoparticle Layer

Lei Qian, Ying Zheng, Debasis Bera, Kaushik R. Choudhury, Franky So, Jiangeng Xue, Paul H.

Holloway

Department of Materials Science and Engineering University of Florida, USA

9.20 – 9.40

Understanding carrier recombination and generation processes in organic light-emitting diodes

Tetsuo Tsutsui

Center for Organic Photonics and Electronics Research (OPERA) Kyushu University, Fukuoka,

Japan

9:40 – 10:00

Reactive Conjugated Polymer Containing 9,10-phenanthrenequinone unit

Ping Lu, Zhiming Wang, Yuguang Ma

State Key Laboratory for Supramolecular Structure and Materials, Jilin University, China

10:00 – 10:20

Chemical approach for highly efficient electroluminescent devices

Ken-Tsung Wong

Department of Chemistry, National Taiwan University, Taiwan

10:20 – 10:40 Coffee break

10:40 – 12:30 EL

White Column Hall, Session Chair – Prof. P. Holloway

10:40 – 11:10 (Invited)

High luminance inorganic EL sheets based on peel-off process

Noboru Miura

School of Science & Technology, Meiji Univ., Japan

11:10 — 11:40 (Invited)

Printed phosphor films applied to LCDs and inorganic ELs

Koutoku Ohmi

Graduate School of Engineering, Tottori Univ., Tottori, Japan

11:40 — 12:10 (Invited)

Inorganic electroluminescent display architectures and their performance characteristics

R. Withnall, P.G. Harris, G. R. Fern, T.G. Ireland and J. Silver

Centre for Phosphors and Display Materials, Wolfson Centre, Brunel University, UK

12:30 — 13:30 Lunch

13:30 – 15:10 EL

White Column Hall, Session Chair – S.V.Mjakin

13:30 – 13:50

EL and PL Characteristics in Bi-Activated $(\text{La}_2\text{O}_3)_{0.9}\text{-(Ga}_2\text{O}_3)_{0.1}$ Phosphor Thin Films

Tadatsugu Minami, Jun-ichi Ishino, Toshihiro Miyata

Optoelectronic Device System R&D Center

Kanazawa Institute of Technology, Ishikawa, Japan

13:50 – 14:10

Top-emission printed EL devices using solution-processed ZnO nanocrystals

Hayato Kawasaki, Kazuki Itatani, Toshihiko Toyama, Hiroaki Okamoto

Graduate School of Engineering Science, Osaka University, Japan.

14:10 – 14:30

Development of computer aided design of thin film electroluminescent elements in display devices

O.V. Maksimova, M.K.Samokhvalov

Ulyanovsk State Technical University, Department of electronic devices technology and design, Ulyanovsk, Russia

14:30 – 14:50

EL device with increased brightness on the basis of phosphors modified by an irradiation

M.M. Sychov¹, V.V. Bakhmetiev¹, V.G. Korsakov¹, S.V. Mjakin¹,
N.N. Botchkareva², A.A. Dorofeev², I.V. Vasiljeva³

¹St. Petersburg State Institute of Technology, Russia

²All-Russian Scientific Research Institute of Experimental Physics, Sarov, Russia

³Engineering Technology Center RADIANT, Ltd.

14:50 – 15:10 Coffee break

Parallel Sessions

9:00 - 12:30 LCDs

Act Hall, Session Chair – Prof. N.V.Kamanina

9:00 – 9:30 (Invited)

A Despeckler Based on a Single FLC Cell (new results)

Alexander A. Andreev, Igor N. Kompanets

P.N. Lebedev Physical Institute, Moscow, Russia

9:30 – 10:00 (Invited)

Nanostructures influence on the surface and bulk features of the optical materials

N.V. Kamanina^{a,b}, P.Ya. Vasilyev^a, V.I. Studeonov^a

^aVavilov State Optical Institute, St. Petersburg, Russia

^bElectrotechnical University (“LETI”), St. Petersburg, Russia

10:00 – 10:20

Small angle light scattering by PDNLC monolayer

V. A. Loiko¹, V. Ya. Zyryanov², A. V. Konkolovich¹, A. A. Mischevich¹

¹Stepanov Institute of Physics, National Academy of Sciences of Belarus, Minsk, Belarus

²Kirensky Institute of Physics, Siberian Branch, Russian Academy of Sciences, Krasnoyarsk, Russia

10:20 – 10:40

Porous films filled with LC: possible applications

D.A. Semerenko, D.V. Shmeliova, S.V. Pasechnik, V.G. Chigrinov, V.A. Tsvetkov

Moscow State University of Instrument Engineering and Computer Science, Russia

10:40 – 11:00 Coffee break

LCDs (continued) Session Chair – V.V.Belyaev

11:00 – 11:30 (Invited)

Driving Parameters Extraction for 2+2 Dynamic Drive Scheme for Bistable Cholesteric LCD

Andriy Rybalochka

V. Lashkaryov Institute of Semiconductor Physics, Kyiv, Ukraine

11:30 — 11:50

Pretilt Angle Effects on Response Time of Dual Frequency Liquid Crystal

I.F. Galin*, E.A. Konshina

St. Petersburg State University of Information Technology, Mechanics and Optics, Saint-Petersburg, Russia

11:50 – 12:10

Property – structure relationship for liquid crystals

S.M. Pestov

Moscow State Academy of Fine Chemical Technology Moscow, Russia

12:10 – 12:30

Polarization Characteristics of Holographic Polarization Diffraction Grating Formed in Liquid-Crystal Composites

G.M. Zharkova, A.P. Petrov, S.A. Strel'tzov, V.M. Khachaturjan

Khristianovich's Institute of Theoretical and Applied Mechanics SB RAS, Novosibirsk, Russia

12:30 – 13:30 Lunch

13:30 – 15:10 LCDs

Act Hall, Session Chair – Prof. B.A. Umansky

13:30 – 14:00 (Invited)

A Complex for LC Substances and Materials Characterization

V.V. Belyaev, V.Y. Baranov, D.N. Chausov, A.M. Gorbunov, A.S. Solomatin

Moscow Region State University, Theoretical Physics Department & Science and Education Centre for Physical and Chemical Investigations of Materials and Nanosystems, Moscow, Russia

14:00 – 14:20

Light Valves Based on LC Materials with Ion-Surfactant Operation Modes

V.Ya. Zyryanov^{1,2}, M.N. Krakhalev^{1,2}, O.O. Prishchepa^{1,2}, A.P. Gardymova^{1,2},

V.S. Sutormin^{1,2}, V.A. Loiko³

¹Kirensky Institute of Physics, Siberian Branch, RAS, Krasnoyarsk, Russia

²Siberian State Aerospace University and Siberian Federal University, Krasnoyarsk

³Stepanov Institute of Physics, National Academy of Sciences of Belarus, Minsk

14:20 – 14:40

Antiferroelectric liquid crystal in electric field

P.V. Dolganov, V.M. Zhilin

Institute of Solid State Physics, RAS, Moscow Region, Chernogolovka, Russia

14:40 – 15:10

Dichroic polarizers for visible and ultraviolet areas of the spectrum

S. Shahab, L. Filippovich, N. Ariko, V. Agabekov⁽¹⁾

⁽¹⁾Institute of New Materials Chemistry of NAS of Belarus, Minsk, Belarus

Institute of Physical Organic Chemistry of NAS of Belarus, Minsk, Belarus

15:10 – 15:30 Coffee break

15:30 – 17:30 Poster Session

18:00 – 21:00

Conference banquet with Russian folklore performance, see map

Friday, October 1

9:00 – 10:20 LCDs

Act Hall, Session Chair – Prof. V.V.Danilov

9:00 – 9:20

Monomolecular organosilicon films for LC alignment

V.G. Mazaeva¹, M.V. Sobolevskii¹, V.V. Belyaev², V.I. Svitov, I.G. Kokaulina³

¹ State Scientific Centre for Organoelement Chemistry and Technology, Moscow, Russia

² Education & Research Lab of Theoretical and Applied Nanotechnologies, Moscow Region State University, Russia

³ Moscow State Institute for Radio-Engineering, Electronics and Automation (Technical University), Russia

9:20 – 9:40 The fluorescent semi-conductor CdSe/ZnS nanocrystals in electrooptical LC cell

V.V. Danilov¹, A.V. Baranov², A.O. Orlova², A.I. Kchrebtov³, M.V. Mukhina², A.V. Veniaminov²

¹Petersburg State Transport University, St.-Petersburg, Russia

²St.Petersburg State University of Information Technologies, Mechanics and Optics (Technical University), St. Petersburg, Russia

³S.I. Vavilov State Optical Institute, St.-Petersburg, Russia

9:40 – 10.00

Fast Anharmonic In-Plane-Switching Mode in Chiral Nematics

B.A. Umanskii, S.P. Palto, M.I. Barnik, L.M. Blinov, N.M. Shtykov

Shubnikov Institute of Crystallography of RAS, Moscow, Russia

10:00 – 10:20

10:20 – 10:40 Coffee break

10:40 – 12:30 Display Materials

Act Hall, Session Chair: Prof. Gu Xu

10:40 – 11:10 (Invited)

Hybrid materials based on surface-modified nano-sized zeolites: moisture sorption in organic electronic devices

Paolo Vacca

SAES Getters S.p.A., Italy

11:10 – 11:30

Magnified Hard X-ray Imaging

Gu Xu

Department of Materials Science and Engineering, McMaster University, Hamilton, Ontario, Canada

11:30 – 11:50

Luminescence of the guest substances in porous matrixes

V.N. Pak

Herzen State Pedagogical University, St-Petersburg, Russia

11:50 – 12:10

Creation of vacuum installation for deposition of organic and organic-inorganic multicomponent nanofilms

Iu. Kolomzarov

V. Lashkaryov Institute of Semiconductor Physics of NASU, Kyiv, Ukraine

12:10 – 12:30

Preparation and characterization of hydrophobic concentrate of silver nanoparticles, a perspective variant of electronic ink for electrophoretic displays

Popovetskiy P. S., Bulavchenko A.I.

Nikolaev Institute of Inorganic Chemistry, Siberian Branch of the Russian Academy of Sciences, Novosibirsk, Russia

12:30 – 13:30 Lunch

13:30 – 14:30 Display Materials

Act Hall, Session Chair: Prof. Yu. Startsev

13:30 – 13:50

Modeling of Linear Shrinkage of Display Glass Substrates

Yury Startsev

Federal Agency of Air Transport, University of Civil Aviation, St.-Petersburg, Russia

13:50 – 14:10

On the modification of metal-organic europium-sodium isoquinoline-2-carboxylate and aluminium tri-8-oxyquinoline complexes by polymers with partly-uncompensated charge and magnetic nanoparticles

Klimov B.N., Zayarskii D.A., Portnov S.A., Zhuravlyov K.P., Zakharevich A.M.

Saratov State University, Saratov, Russia

14:10 – 14:30

Study of spectral properties of some europium (III) phthalocyanines

A.V. Ziminov, J.A. Polevaya, T.A. Yurre, S.M. Ramsh

St. Petersburg State Technological Institute (Technical University), St. Petersburg, Russia

Parallel Sessions

9:00 - 11:00 Emissive Displays

White Column Hall, Session Chair: Prof. A.Smirnov

9:00 – 9:30 (Invited)

Novel Light Sources Using Field Emitters

Hidenori Mimura¹, Yoichiro Neo¹, Toru Aoki¹, Takahiro Matsumoto²

¹Research Institute of Electronics, Shizuoka University, Hamamatsu, Japan

²R&D Center, Stanley Electric Corporation, Tsukuba, Japan

9:30 – 10:00 (Invited)

Microdisplays with nanostructured materials: new technological approaches

A.Smirnov, A.Hubarevich, A.Stsiapanau, A.Rumiantsau

Laboratory of Information Displays and Optical Processing Systems, Belarusian State University of Informatics and Radioelectronics, Minsk, Belarus

10:00 – 10:20

Nanoporous silicon formation in ammonium fluoride solution for Si-based optoelectronic devices

A. Hubarevich¹, H.Y. Yu¹, A. Smirnov², A. Stsiapanau², A. Zinovjev², J. Solovjov³

¹ Nanyang Technological University, School of EEE, Singapore

² Belarusian State University of Informatics and Radioelectronics, Minsk, Belarus

³ Transistor Plant, RPC “Integral”, Minsk, Belarus

10:20 – 10:40

Nanocomposite Materials for MEMS Elements of Microdisplays and Projection Systems

Yu.V. Timoshkov¹, V.I. Kurmashev², A.A. Sakova¹, V.I. Timoshkov³

¹Belarus State University of Informatics and Radioelectronics, Minsk, Belarus

²Minsk Institute of Management, Minsk, Belarus

³ASML, Eindhoven, Netherlands

10:40 – 11:00

Laser phosphor display (LPD): introduction to the technology and its advantages

Nikolay Nemchuk, Sergey Bukesov, Roger Hajjar

Prysm Inc, USA.

11:00 – 11:20 Coffee break

11:20 – 12:30 LEDs

White Column Hall, Session Chair: Prof. Y. Fujiwara

11:20 – 11:50 (Invited)

Status and Trends of Ukrainian Government's Program on LED Lighting

V. Sorokin

Lashkaryov Institute of Semiconductor Physics, Kyiv, Ukraine

11:50 – 12:10

Super high brightness LED backlit unit for AM LCDs

A.Berezovik¹, B.Astafjev¹, P.Poznyak¹, A.Smirnov¹, L.Vasiliev², A.Zhuravlyov

¹Belarusian State University of Informatics and Radioelectronics, Minsk, Belarus

²A.V. Luikov Head and Mass Transfer Institute, NAS Belarus

12:10 – 12:30

On board AM TFT LCD panel backlight design utilizing high brightness LEDs

V.S.Ilyasov*, N.P.Soschin**, V.A.Bolshukhin**, V.N.Ulasyuk*

*ZAO "ELTAN Ltd." Fryazino, Moscow region, Russia

** R&PC "LYUMINOPHOR" Fryazino, Moscow region, Russia

12:30 – 13:30 Lunch

13:30 - 14:50 LEDs

White Column Hall, Session Chair: Prof. V. Sorokin

13:30 – 14:00 (Invited)

Room-temperature operation of red light-emitting diodes with europium-doped gallium nitride grown by organometallic vapor phase epitaxy

Yasufumi Fujiwara, Atsushi Nishikawa, Yoshikazu Terai

Division of Materials and Manufacturing Science, Graduate School of Engineering, Osaka University, Osaka, Japan

14:00 – 14:30 (Invited)

Nanoscaled Silicon Carbide on Silicon: New Material for Optoelectronics

S.A. Kukushkin, A.V. Osipov

Institute of Problems of Mechanical Engineering, St. Petersburg, Russia

14:30 – 14:50

Monolithic White LEDs: Approaches, Technology, Properties

A. F. Tsatsulnikov, W. V. Lundin¹, A. V. Sakharov¹, E. E. Zavarin¹, S. O. Usov², A. E. Nikolaev¹, A. E. Chernyakov², A. L. Zakgeim², N. A. Cherkashin³, M. Hytch³

¹ Ioffe Physical Technical Institute, RAS, St. Petersburg, Russia

² SHMRE Center, RAS, St. Petersburg, Russia

³ CEMES-CNRS—University de Toulouse, Toulouse, France

14:50 – 15:10 Coffee break

15:10 – 15:30 Closing Session, Prizes and Awards

White Column Hall

POSTER PRESENTATIONS

PHOSPHORS FOR DISPLAYS, BACKLIGHT AND LIGHTINGS

1. Highly bright and highly stable nano-encapsulated organic luminophores for displays, backlight and lightings

Yuliia A. Kudriavtseva, Oleksii P. Klochko, Inna G. Yermolenko,
Sania U. Khabuseva, Vadim I. Sidorov, Leonid D. Patsenker
State Scientific Institution "Institute for Single Crystals", NAS of Ukraine
60, Lenin Ave., 61001 Kharkiv, Ukraine.

2. Clustering effects in copper sulfide conductive layer on the surface of ZnS

A.L. Zagranichek, M.M. Sychov, N.M. Sergeeva, V.V. Bakhmetjev
St.Petersburg Institute of Technology (Technical University) , St.Petersburg, Russia

3. Plasma processing for phosphor modification

K.A. Ogurtsov, A.A. Eruzin, V.V. Bakhmetiev, M.M. Sychov
St. Petersburg State Institute of Technology (Technical University), St. Petersburg, Russia

4. Synthesis of white light emitting powdered SrS:Pr phosphors

V.V. Bakhmetyev, V.G. Korsakov, M.M. Sychov, H. Tamamura*, Y. Nakanishi**
Saint-Petersburg State Institute of Technology (Technical University), Russia
* Showa Denko K.K., Japan
** Research Institute of Electronics, Shizuoka University, Japan

5. Doping of ZnS based phosphors with Cu₂S nanoparticles

V.V. Bakhmetyev, E.V. Mikhailova, V.G. Korsakov, Y.V. Chelodjuk, M.M. Sychov
Saint-Petersburg State Institute of Technology (Technical University), St-Petersburg, Russia

6. Investigation of photoluminescent phosphors for white LEDs

M.N. Tsvetkova, V.G. Korsakov, A.A. Evstrapov, E.V. Tsvetkova
Saint-Petersburg State Institute of Technology (Technical University), St-Petersburg, Russia

7. Spectrum Shifting Polymeric Films for Electroluminescent Displays, Backlight and Lightings

Sania U. Khabuseva, Vadim I. Sidorov, Olga M. Semenova, Iryna A. Fedyunyayeva, Sergiy M. Starko, Anatoliy L. Tatarets, Oksana O. Sokolyk, Leonid D. Patsenker
State Scientific Institution "Institute for Single Crystals", NAS of Ukraine, Kharkiv, Ukraine

8. Low-voltage cathodophosphor (Zn,Cd)S:Ag,In,Sb with red-orange color of luminescence

Eugene A. Sosnov
Saint-Petersburg State Institute of Technology (Technical University), St-Petersburg, Russia

9. Express method of phosphor perspectivity definition for white LED production

Denis N. Khmil, A.M. Kamuz, P.Ph. Oleksenko, N.G. Aleksenko, O.A. Kamuz
V. Lashkaryov Institute of Semiconductor Physics, NAS of Ukraine, Kyiv, Ukraine

10. Optical properties of colloidal CdSe/CdS core/shell quantum dots

Anastasia V. Popelo, Roman B. Vasiliev
Lomonosov Moscow State University, Faculty of Materials Science, Moscow, Russia

11. Synthesis of Y₂O₂S:Eu phosphor powder with uniform spherical grain shapes

A.O.Dmitrienko, V.P.Dmitrienko, E.S.Speranskaya
Saratov State University, Saratov, Russia

12. Influence of intrinsic defects on the luminescence properties of Y₂O₃:Eu

¹Siglovaya N. V., ²Vorobyov V. A., ¹Sinelnikov B. M., ¹Manashirov O. Ja.
NCSTU, 2, Kulakov av., Stavropol, Russia
² SSC RAS, 13, 1-st Promishlennaja, Stavropol, Russia

13. Development of Luminescent Materials for Plasma Display Panel

¹Manashirov O. Ja., ¹Sinelnikov B. M., ²Vorobyov V. A.
¹NCSTU, 2, Kulakov av., Stavropol, Russia
² SSC RAS, 13, 1-st Promishlennaja, Stavropol, Russia

14. Formation of dispersed electroluminescent materials (ELP)€ based on zinc chalcogenides

V.M.Ishchenko
Stavropol State University, Stavropol, Russia

15. New electrophosphors alternating field on the basis of zinc sulfide, white color of the luminance

S.M.Tischenko
Southern Scientific Centre Russian Academy of Sciences, Stavropol, Russia

16. The Influence of Nitric-Plasmatic Treatment on Change in Zink-Sulfide Electroluminescent Substance Acid-Basic Properties.

T.S.Minakova, V.V.Bakhmet'ev*, A.P.Philimonov, K.A. Ogurtsov, A.A. Eruzin, M.M.Sychov
Tomsk State University, Tomsk, Russia

OLEDs

1. Peculiarities of encapsulation of OLED structures

O.A.Grachev, B.A.Kondratskiy, A.U. Kruchinin, N.N.Usov
JSC Cyclone, Moscow, Russia

2. Organic Electrochemiluminescent Lighting Cell

A. Smirnov¹, A. Stsiapanau¹, Yu.Radzionau¹, J. Solovjov², Sun Xiaowei³, Kam Chan Hin³
¹ Belarusian State University of Informatics and Radioelectronics, Minsk, Republic of Belarus,
² Transistor Plant, RPC "Integral", Minsk, Republic of Belarus
³ Nanyang Technological University, School of EEE, Singapore

3. Degradation of Alq₃ Thin Films and Stretched Behavior

G. Baldacchini^{1*}, P. Chiacchiaretta², R. M. Montereali³, R. B. Pode⁴, M.A. Vincenti³
¹ENEA guest, Rome, Italy
²Department of Neuroscience and Imaging, University of Chieti "G. D'Annunzio", Italy
⁴Department of Physics, Kyung Hee University, South Korea

4. Optical investigation of photo-bleaching effects in organic Alq₃

F. Bonfigli, D. Brogioli, M. A. Vincenti, R.M.Montereali
ENEA, UTAPRAD-MNF Laboratory, Frascati, Rome, Italy

5. Electroluminescence of doped organic-inorganic PFO-POSS based composites

N.S. Eremina¹, K.M.Degtyarenko¹, R.M.Gadirov¹, T.N.Kopylova¹, G.V.Mayer¹, A.V.Kukhta²
¹Siberian Physical and Technical Institute, Tomsk, Russia
²B.I.Stepanov Institute of Physics, Minsk, Belarus.

6. Cruciform DPVBi: Synthesis, Morphology, Optical and Electroluminescent Properties

Suijun Liu, Feng Li, Feng He, Yuguang Ma
State Key Lab for Supramolecular Structure and Materials, Jilin University, Changchun, China.

7. Phenanthro[9,10-d]imidazol-2-yl Group as A New Building Block for Blue-Light-Emitting Materials

Zhiming Wang, Ping Lu, Yuguang Ma
State Key Laboratory for Supramolecular Structure and Materials, Jilin University, Changchun, China

8. Photo- and electroluminescent properties of complexes of rare-earth ions with N-vinylcarbasoles

R.Yu. Smyslov¹, A.V. Yakimansky¹, E.V. Anufrieva¹, T.D. Ananieva¹, T.N. Nekrasova¹, M.Ya. Goikhman¹, I.V. Podeshvo¹, V.A. Ilichev², M.N. Bochkarev²
¹Institute of Macromolecular compounds of Russian Academy of Sciences, St. Petersburg, Russia
²G. A. Razuvaev Institute of Organometallic Chemistry of Russian Academy of Sciences

9. Synthesis and light emitting properties of novel polyfluorenes containing benzothiadiazole and Nile Red-substituted carbazole units in the backbone

G.I. Nosova*, E.V. Zhukova*, D.A. Lypenko**, E. I. Mal'tsev**, R.Yu. Smyslov*, N.A. Solovskaya*, T.N. Nekrasova*, A.V. Yakimansky*
*Institute of Macromolecular Compounds of the Russian Academy of Sciences, St. Petersburg, Russia,
**A.N. Frumkin Institute of physical chemistry and electrochemistry of the Russian Academy of Sciences, Moscow, Russia

10. Transient Electroluminescence and Transport of Charge Carriers in Thin Polymer Films

A.R. Tameev¹, V.R. Nikitenko², D.A. Lypenko¹, A.V. Vannikov¹
¹A.N.Frumkin Institute of Physical Chemistry and Electrochemistry of the Russian Academy of Sciences, Moscow, Russia
²National Research Nuclear University "MEPhI", Moscow, Russia

11. Mesogenic lanthanide complexes as OLED's components

Yuriy Galyametdinov^{1,2}, Vagif Dzhabarov^{1,2}, Elena Molostova¹, Andrey Knyazev¹, Dmitry Lapaev², Vladimir Lobkov²
¹Kazan State Technological University, Department of Physical and colloid chemistry, Kazan, Russia
²Kazan Physical-Technical Institute, RAS, Kazan, Russia

12. Single emissive white OLED by co-doping system

Wook Song¹, You Hyun Kim¹, Mei Meng¹, Koung-Woo Kim¹, Hyung-Jin Yang¹, Sang Youn Lee², Woo Young Kim*
¹School of Display Engineering, Hoseo University, Chungnam, South Korea.
²Semiconductor Display Engineering, Hoseo University, Beabang-Eup, Asan-City, Chungnam, South Korea.

13. Optical and morphologic properties of europium isoquinoline-1-carboxylates in the solid state, solutions, thin films and polymeric matrices

B.N. Klimov¹, D.A. Zayarsky¹, K.P. Zhuravlev², S.A. Portnov¹, V.A. Kudryashova²

¹ Faculty of Nano- and Biomedical Technologies, Saratov State University, Saratov, Russia

² V.A. Kotelnikov Institute of Radioengineering and Electronics of RAS, Fryazino Moscow reg., Russia

14. Multi-layered electroluminescent organic structures based on iridium(III) complexes

D.A. Lypenko, A.V. Dmitriev, E.I. Mal'tsev

A.N. Frumkin Institute of Physical Chemistry and Electrochemistry of the Russian Academy of Sciences, Moscow, Russia

15. White electroluminescence of silicon-containing polymer

D.A. Lypenko^{*}, N.N. Rasulova^{**}, S.I. Pozin^{*}, S.A. Ponomarenko^{**}, E.I. Mal'tsev^a

A.N. Frumkin Institute of Physical Chemistry and Electrochemistry, RAS, Moscow, Russia

^{**}N.S. Enikolopov Institute of Synthetic Polymer Materials, RAS, Moscow, Russia

16. White Organic Light-Emitting Diodes Using mCP as Inducer-layer

Sang Youn Lee¹, You Hyun Kim², Wook Song², Meng Mei², Koung-Woo Kim², Hyung-Jin Yang², Woo Young Kim^{1,2,*}

¹ Semiconductor Display Engineering, Hoseo University, Chungnam, South Korea.

² School of Display Engineering, Hoseo University, Chungnam, 336-795 South Korea.

17. Chemical modification of HOMO and LUMO of photoalignment materials

Alexander Muravsky, Irina Kukhta, Vladimir Agabekov, Pavel Malashko, Andrei Matur

Institute of Chemistry of New Materials of National Academy of Sciences of Belarus, Minsk, Belarus

18. Novel polymeric host materials constructed by silane-cabarzole backbone and electron-affinitive cyanoethyl substituent for blue phosphorescence dopant in polymer light emitting device

Dehua Hu, Ping Lu, Yuguang Ma, Gang Cheng

State Key Laboratory for Supramolecular Structure and Materials, Jilin University, Changchun, China

LCDs

1. Nanostructured relief to modify the orientation of the liquid crystals materials

N.V. Kamanina^a, N.A. Shurpo^a, S.V. Serov^a, A.V. Smidt^a, P.Ya. Vasilyev^a, V.I. Studeonov^a

^a Vavilov State Optical Institute, St. Petersburg, Russia,

^b Electrotechnical University ("LETI"), St. Petersburg, Russia

2. Nanocomposites Consisting of Gold Nanorods in Nematic or Smectic Liquid Crystals

S. Torgova¹, E. Pozhidaev¹, A. Lobanov, V. Minchenko¹, B. Khlebtsov²

¹ P.N. Lebedev Physical Institute, Russian Academy of Sciences, Moscow, Russia

² Institute of Biochemistry and Physiology of Plants and Microorganisms, Russian Academy of Sciences, Saratov, Russia

3. Coherent transmittance and reflectance by PDChLC monolayer

V. A. Loiko¹, A. V. Konkolovich¹, A. A. Miskevich¹, A.V. Emelyanenko², E.P. Pozhidaev³

¹ B. I. Stepanov Institute of Physics of the National Academy of Sciences of Belarus, Minsk, Belarus

² Department of Physics, Moscow State University, Moscow, Russia

³ P.N. Lebedev Physical Institute, Moscow, Russia

4. Nanostructured alumina as an effective LC alignment media

A.Smirnov, A.Stsiapanau, E.Mukha

Belarusian State University of Informatics and Radioelectronics, Minsk, Belarus

5. Orientation of Mesogen Molecules on Different Surfaces

A.K. Dadivanyan, Yu.M. Ryabova, D.N. Chausov, V.V. Belyaev, A.S. Solomatin

Moscow Region State University, Moscow, Russia

6. Translational and rotation self-diffusion in polymeric systems including photo- and termopolymerized systems by an interference-holography method and a method of photoinduced optical anisotropy

Vladimir Kozenkov, Victor Belyaev, Grigoriy Tumovskii, Alexey Spakhov

Moscow Region State University, Theoretical Physics Department & Science and Education Centre for Physical and Chemical Investigations of Materials and Nanosystems, Moscow, Russia

7. Selective reflection wavelength modulation in photosensitive cholesteric liquid crystals for information recording

M. Aronishidze, A. Chanishvili, G. Chilaya, G. Petriashvili, N. Pondjavidze, S. Tavzarashvili, K. Tevdorashvili, Z. Wardosanidze

V.Chavchanidze Institute of Cybernetics, Tbilisi Georgia

8. Cholesteric liquid crystal – fullerene system for information displays

Z.Yu. Hotra A.V., Fechan, V.I. Kotsun

Lviv Polytechnic National University, Lviv, Ukraine

9. The method of view angle increasing of TFT mobile displays

Mykytyuk Z.M., Fechan A.V., Levenets V.V., Sushynskyy O.Ye.,

Lviv Polytechnic National University, Lviv, Ukraine

10. A 0.28" SVGA LCoS Micro Display for Portable Projectors

Gwang-Jun Lee¹, Jungho Kim¹, Kee-Jeong Yang¹, Hong-Kun Lyu¹, Byeong-Dae Choi¹ Youn-Hwan Lee², Hoon-ju Chung²

¹Division of Nano & Bio Technology, DGIST, , Daegu, Korea

²School of electronic Engineering, Kumoh National Institute of Technology, Gyungbuk, Korea

11. Chiral nematic and columnar mesogenic structures and their future application

O.B. Akopova, S.M. Pestov*

*Moscow State Academy of Fine Chemical Technology, Moscow, Russia

Research Institute of nanomaterials. Ivanovo State University. Ivanovo, Russia,

12. Electrooptic of Photonic Liquid Crystals with Transformation of Photonic Zones by Confined Geometry, Impurities and Defects

V. K. Dolganov

Institute of Solid State Physics, Russian Academy of Sciences, Chernogolovka, Russia

13. Absorption and Luminescence in Tunable Chiral Photonic Liquid Crystals

V. K. Dolganov¹, V. A. Belyakov²

¹Institute of Solid State Physics, Russian Academy of Sciences, Chernogolovka, Russia

²L.D. Landau Institute for Theoretical Physics, Russian Academy of Sciences, Moscow, Russia

14. A Method to Improve In-plane Uniformity of LC Inorganic Alignment Film by RF Magnetron Sputtering

Jungho Kim, Gwang-Jun Lee, Kee-Jeong Yang, Hong-Kun Lyu, Byeong-Dae Choi

Division of Nano & Bio Technology, DGIST, Hosan-Dong, Dalseo-Gu Daegu, Korea

15. Polarimetric Validation of the Determination of the Director Tilt Angle at the LC Interface Using Calcite Plates with the Known Position of the Optical Axis

A.A. Karetnikov, N.A. Karetnikov, A.P. Kovshik, E.I. Rjuntsev

Department of Physics, St. Petersburg State University, St. Petersburg, Petrodvorets, Russia

16. Oblique Orientation of the Nematic Liquid Crystal Director on a Polyimide Layer

A.A. Karetnikov, N.A. Karetnikov, A.P. Kovshik, E.I. Rjuntsev, V.M. Svetlichnyi, V.V.

Kudryavtsev

Department of Physics, St. Petersburg State University, St. Petersburg, Russia

Institute of Macromolecular Compounds RAS, Bolshoy pr. 31, St. Petersburg, Russia

St. Petersburg State University of Information Technology, Mechanics and Optics, Saint-Petersburg, Russia

EL

1. Optical properties of the electroluminescent panels

O.A. Izumrudov, N.P. Lazareva

St. Petersburg Electrotechnical University St-Petersburg, Russia

2. Chemical technology of flexible electroluminescent panels on the basis of latex

O.A. Cheremisina, M.M. Sychov*, V.V. Popov**, V.G. Korsakov*

Saint-Petersburg State University of Service and Economy, St.-Petersburg, Russia

* Saint-Petersburg State Institute of Technology (Technical University), St.-Petersburg, Russia

** Open Company «Surel», St.-Petersburg, Russia

3. Development of electroluminescent light source (ELLS)

A.A. Dorofeev¹, N.N. Botchkareva¹, M.M. Sychov²

¹All-Russian Scientific Research Institute of Experimental Physics, Sarov, Russia

²St. Petersburg State Institute of Technology, Russia

4. Synthesis and characterization of electroluminescent performances and surface properties of nanosized ZnS:Mn phosphors

V.V. Bakhmet'ev, V.G. Korsakov, E.V. Mikhailova, S.V. Mjakin, M.M. Sychov

Saint-Petersburg State Institute of Technology (Technical University), St-Petersburg, Russia

5. EL Characteristics of TFEL Devices Fabricated Using Rare Earth-Activated La₂O₃ Phosphor Thin Films

Toshihiro Miyata, Jun-ichi Ishino, Yuuki Nishi, Tadatsugu Minami

Optoelectronic Device System R&D Center, Kanazawa Institute of Technology, Ishikawa, Japan

6. Electroluminescent light roll to roll technology based on a conductive & transparent fabric

Muriel Lantus, Peter Chabreck, Uriel Sonderegger

R&D Engineer Sefar AG Freibach CH-9425 The Switzerland

7. High-luminance electroluminescence device using submicron-sized ZnS:Mn powder

Taewon Jeong*, Sanghyen Park, Minjong Bae, Seonjin Song, Jeonghee Lee, Jinyoung Kim¹, SeGi Yu¹, Intaek Han

Material Application Group, Samsung Advanced Institute of Technology, Gyeonggi-do, Korea

¹Department of Physics, Hankuk University of Foreign Studies, Kyounggi-do, Korea

8. Enhanced field strength of the inorganic electroluminescence by controlling the position of carbon nanotube layer

Jin-Young Kim^{1,§}, Taewon Jeong², Shang Hyeun Park², Jeonghee Lee², Intaek Han², Donggeun Jung¹, SeGi Yu^{3,*}

¹ Department of Physics, BK 21 Physics Research Division, Institute of Basic Science, Sungkyunkwan University, Suwon, Korea

² Advanced Material Lab, Samsung Advanced Institute of Technology, Yongin, Korea

³ Department of Physics, Hankuk University of Foreign Studies, Yongin, Korea

9. Low temperature process for preparing phosphor layers by spin-coating using submicron phosphor particles in inorganic TFEL devices

Yudai Yamashita¹, Yoshinobu Miyamoto^{1,2}, Koutoku Ohmi¹

¹ Graduate School of Engineering, Tottori Univ., Tottori, Japan.

² Electronic Display Research Center Tottori Univ., Tottori, Japan

LEDs

1. Aluminum and gallium nitrides on silicon: the role of intermediate SiC layer in chloride vapor phase epitaxy technology

V.N.Bessolov, Yu.V.Zhilyaev, E.V.Konenkova, L.M.Sorokin, N.A.Feoktistov, Sh.Sharofidinov, M.P.Sheglov, S.A.Kukushkin*), L.I. Mets*), A.V.Osipov*)

A.F.Ioffe Physico-Technical Institute, Saint-Petersburg, Russia

*) Institute of Science of Machines Problems, 199178, Saint-Petersburg, Russia

2. Influence of LED drivers configuration on a temperature condition and efficiency of LED lamps

V. Sorokin, V. Kornaga, V. Neshta, O. Oliynyk,

V. Lashkaryov Institute of Semiconductor Physics, NAS of Ukraine, Kyiv, Ukraine

3. Light distribution control by optical elements of LED

A.Galinskiy, V.Sorokin, R.Zelinskyy

V. Lashkaryov Institute of Semiconductor Physics, NAS of Ukraine, Kyiv, Ukraine

4. Approximate junction temperature change measurement for white LED lamp

V. Sorokin, A. Rybalochka, O. Oliynyk, D. Galinskiy

V. Lashkaryov Institute of Semiconductor Physics, NAS of Ukraine, Kyiv, Ukraine

DISPLAY MATERIALS

1. Plasma-resistant conductive coatings

K.A. Ogurtsov, A.A. Eruzin, A.V. Knyazev, M.M. Sychov

St. Petersburg State Institute of Technology (Technical University), St. Petersburg, Russia

2. Enhancement of dielectric properties for cyan ester of poly(vinyl alcohol) – BaTiO₃ composites by chemical modification of barium titanate with oxide additives

S.V. Miakin¹, T.I. Panova², O.A.Shilova², Ju.S.Fomchenkova¹, V.G. Korsakov¹, M.M. Sychov¹

¹ St.Petersburg State Institute of Technology (Technical University), St.-Petersburg, Russia

² Institute of Silicate Chemistry of the Russian Academy of Sciences, St.-Petersburg, Russia

3. Residual stress distribution into display glass and how avoid the warping of glass substrate when cut it

Yury Startsev

Federal Agency of Air Transport, University of Civil Aviation, St.-Petersburg, Russia

4. Electrochromic windows on the basis of nanomaterials synthesized by sol-gel method

Merkushev O.M.

Saint-Petersburg State Institute of Technology (Technical University), St-Petersburg, Russia

5. Long afterglow polymer composites

A.I.Lavrentyeva, O.O.Nikolaev, V.P.Britov, V.V.Bogdanov

Saint-Petersburg State Institute of Technology (Technical University), Saint-Petersburg, Russia

6. Possibilities of studying nanoobjects in technically important materials and nanomaterials by pas method

Eugene Prokopev

Federal State Unitary Enterprise «State Science Centre of the Russian Federation- A.I.Alikhanov Institute for theoretical and experimental physics» - FSUE SSC – ITEP

7. Effect of ion exchange properties on the luminescence spectra parameters of Eu^{2+} and Eu^{3+} ions in phosphate and borphosphate glasses

T.V.Bocharova, D.S.Sysoev, N.O.Tagilzeva

Saint- Petersburg State Institute of Technology (Technical University), St-Petersburg, Russia

8. Optical properties of blue luminophores oriented in polymer matrix

V. Agabekov^{a,b}, N.Ariko^a, L.Filippovich^a, N. Halinowski^b

^a Institute of Physical Organic Chemistry of NAS of Belarus, Minsk, Belarus

^b Institute of New Materials Chemistry of NAS of Belarus, Minsk, Belarus

9. Nanostructured transparent conductive electrodes for displays and solar cells

A.Smirnov, A.Stsiapanau, A.Hubarevich, E.Mukha

Belarusian State University of Informatics and Radioelectronics, Minsk, Belarus

EMISSIVE DEVICES

1. Modeling dependence of electric field from form of electrodes in PDP

Alexander M. Proshkov

JSC «Plasma», Ryazan, Russia

DISPLAY METROLOGY

1. Radioluminescent sources for luminescent and photometric measurements

A.G.Mikhalchenko

St.Petersburg Institute of Technology (Technical University), St-Petersburg, Russia

2. A PDP as a colorimetric tool to investigate colour vision

Baptiste Laborie^{1,2}, Sabine Langlois¹ Françoise Viénot²

¹ Renault, France

² Muséum national d'histoire naturelle, Centre de Recherche sur la Conservation des Collections, Paris, France

3. The quality rating of displays and the identical national standards on base of the international standards ISO

Zagaryants G. S., Mikhailov O.M., Shakhov N.G.

ANO NTC CE «ISEP», St-Petersburg, Russia

