

International Congress on Energy Fluxes and Radiation Effects

September 21-26, 2014

Tomsk, Russia

4th International Congress on High Current Electronics, Modification of Materials with Particle Beams and Plasma Flows and Radiation Physics and Chemistry of Condensed Matter

General Chairman of the Congress

Gennady Mesyats

P.N. Lebedev Physical Institute of the Russian Academy of Sciences

Chairman of Program Committee

Nikolay Ratakhin

Institute of High Current Electronics SB RAS

A traditional International Congress on Energy Fluxes and Radiation Effects (EFRE-2014) is to be held in Tomsk, Russia, on September 21-26, 2014.

The Congress combines three International Conferences which are regularly held in Tomsk:

- 18th International Symposium on High Current Electronics
- 12th International Conference on Modification of Materials with Particle Beams and Plasma Flows
- 16th International Conference on Radiation Physics and Chemistry of Condensed Matter

The program of the three conferences covers a wide range of technical areas and modern aspects of pulsed power technology, ion and electron beams, high-power microwaves, plasma and particle beam sources, modification of material properties, pulsed power applications in chemistry, biology and medicine, physical and chemical non-linear processes in inorganic dielectrics under the action of particle and photon beams, and physical principles of radiation-related technologies.

The six-day congress will bring together specialists from different countries and organizations and provide an excellent opportunity to exchange knowledge, make oral contributions and poster presentations, and initiate discussion on the topics of interest to the congress participants.

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The Congress will be held in:

- ✓ Conference Hall of
the Institute of High Current Electronics (**18th SHCE**)
- ✓ Conference Hall of the RUBIN hotel (**12th CMM**)
- ✓ Conference Hall of
the Institute of Atmosphere Optics (**16th RPC**)

Sponsors:



September 21, Sunday

17:00 – 21:00	REGISTRATION (RUBIN hotel)
19:00 – 22:00	Welcome party (RUBIN hotel)

September 22, Monday

8:00 – 13:00	REGISTRATION (RUBIN hotel)
08:30 – 08:50	OPENING CEREMONY
08:50 – 09:20	<p>Plenary Lecture 1 Explosive electron emission and high current electronics</p> <p>Academician Mesyats G.A. <i>P.N. Lebedev Physical Institute RAS, Moscow, Russia</i></p>
09:20 – 09:50	<p>Plenary Lecture 2 Compression Plasma as a New Technological Instrument of Solids Surface Properties Control</p> <p>Prof. Uglov V.V. <i>Belarusian State University, Minsk, Belarus</i></p>
9:50 – 10:20	<p>Plenary Lecture 3 Modern Trends and Development in High-Dose Luminescent Measurements</p> <p>Prof. Kortov V.S. <i>Ural Federal University, Ekaterinburg, Russia</i></p>
10:25 – 10:30	PHOTOGRAPHING
10:30 – 10:50 Coffee Break	
11:00	Start of 18th SHCE, 12th CMM and 16th RPC Sessions

18th International Symposium on High Current Electronics

Co-Chairmen:

Boris Kovalchuk, Academician RAS
Institute of High Current Electronics, Tomsk, Russia

Gennady Remnev,
Institute of HighTechnology Physics, TPU, Tomsk, Russia

Sessions:

- S1** Intense electron and ion beams
- S2** Pinches, plasma focus and capillary discharge
- S3** High power microwaves
- S4** Pulsed power technology
- S5** Discharges with runaway electrons
- S6** Pulsed power applications



September 22, Monday

11:00 – 19:00

Oral Session 1. Discharges with runaway electrons

11:00 – 11:30 Invited	S5-O-905661 Discharges with Runaway Electrons: Simulations and Experiments <u>Y.E. Krasik</u> , S. Yatom, D. Levko, V. Vekselman, S. Tskhai*, V.T. Gurovich <i>Technion, Haifa, Israel</i> <i>*P.N. Lebedev Physical Institute RAS, Moscow, Russia</i>
11:00 – 11:30 Invited	S5-O-905711 Generation of Runaway Electron Beams in Nanosecond-Pulse Discharges <u>T. Shao</u> , C. Zhang, H. Ma, W. Yang, Y. Sun <i>Institute of Electrical Engineering, Beijing, China</i>
12:00 – 12:20	S5-O-000881 Supershort Avalanche Electron Beams in SF₆ <u>V.F. Tarasenko</u> , D.V. Beloplotov, M.I. Lomaev, D.A. Sorokin <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i>
12:20 – 12:40	S5-O-005161 Simulation of an Avalanche of Runaway Electrons Formed in an Atmospheric Pressure Air Discharge <u>E.V. Oreshkin</u> *, S.A. Barengolts*, S.A. Chaikovsky* ^{***} , V.I. Oreshkin** <i>*P.N. Lebedev Physical Institute RAS, Moscow, Russia</i> <i>**Institute of High Current Electronics SB RAS, Tomsk, Russia</i>
12:40 – 14:00 Lunch	
14:00 – 14:30 Invited	S5-O-905811 Wide-Aperture X-Ray Radiation Sources, Based on Atmospheric Pressure Discharges <u>V.I. Karelin</u> , S.N. Buranov, V.V. Gorokhov, P.B. Repin <i>Russian Federal Nuclear Center – All-Russian Research Institute of Experimental Physics, Sarov, Russia</i>

<p>14:30 – 15:00 Invited</p>	<p>S5-O-905781 Conditions for Streamer-To-Diffuse Discharge Transition in Atmospheric Pressure Air Gaps P. Tardiveau <i>Paris-Sud University, CNRS, Orsay, France</i></p>
<p>15:00 – 15:20</p>	<p>S5-O-003661 Measurement of Runaway Electrons Preionized Diffuse Discharge Plasma Parameters by Optical Emission Spectroscopy Methodes <u>M.I. Lomaev</u>^{*,**}, D.A. Sorokin[*], T.I. Banokina^{***}, V.F. Tarasenko^{*,***} <i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>**Tomsk State University of Control Systems and Radioelectronics, Tomsk, Russia</i> <i>***National Research Tomsk State University, Tomsk, Russia</i></p>
<p>15:20 – 15:40</p>	<p>S5-O-003951 Experimental and Numerical Study of the Nanosecond High-Voltage Discharge Formation in Sharply-Nonuniform Electric Field <u>E.Kh. Baksht</u>, S.Ya. Belomyttsev, A.G. Burachenko, A.A. Grishkov, V.A. Shklyayev, V.F. Tarasenko <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
<p>15:40 – 17:00 Poster Session & Coffee Break</p>	
<p>17:00 – 17:20</p>	<p>S5-O-000901 Run-Away Electron Preionized Diffuse Discharge as Efficient Source of Laser Radiation <u>A.N. Panchenko</u>, M.I. Lomaev, N.A. Panchenko, V.F. Tarasenko, A.I. Suslov <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
<p>17:20 – 17:40</p>	<p>S5-O-004251 Experimental Investigation Of Nanoseconds Discharge Initial Stage In Air Of Atmospheric Pressure <u>A.A. Trenkin</u>, V.I. Karelin, Yu.M. Shibitov <i>Russian Federal Nuclear Center – All-Russian Research Institute of Experimental Physics, Sarov, Russia</i></p>

17:40 – 18:00	<p>S5-O-003641 X-Ray Parameters at the Formation of Corona Discharge</p> <p><u>D.V. Rybka</u>, A.G. Burachenko, I.D. Kostyrya, V.F. Tarasenko <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
18:00 – 18:20	<p>S5-O-003561 Ionization Wave Speed during Breakdown of Discharge Gap “Point-Plane”</p> <p><u>D.V. Beloplotov</u>^{*,**}, M.I. Lomaev[*], D.A. Sorokin[*], V.F. Tarasenko^{*,**}</p> <p><i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>**National Research Tomsk State University, Tomsk, Russia</i></p>
18:20 – 18:40	<p>S5-O-003601 Reducing the Complexity of Monte Carlo Modeling of Electron Avalanches in Gases</p> <p>G.Z. Lotova <i>Institute of Computational Mathematics and Mathematical Geophysics SB RAS, Novosibirsk, Russia</i></p>
18:40 – 19:00	<p>S5-O-005201 Pulse-Periodic Generation of Supershort Avalanche Electron Beams and X-Ray Emission</p> <p><u>A.G. Burachenko</u>, E.H. Baksht, M.V. Erofeev, V.F. Tarasenko <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>

Poster Session 1.1. Discharges with runaway electrons

1	<p>S5-P-005501 Optimum Beam Energy for Generation of Runaway Electron Avalanches in Laboratory Conditions</p> <p><u>V.A. Shklyae</u>^{*,**}, V.V. Ryzhov^{*,**}</p> <p><i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>**National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
2	<p>S5-P-002281 Decreasing of the Divergence of Runaway Electron Beam Generated in Atmospheric Pressure Gas Media Containing the Hot Channel</p> <p><u>V.V. Lisenkov</u>, V.A. Shklyae^{*,**}</p> <p><i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i> <i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>**National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
3	<p>S5-P-003151 Calculation of Electrode Shape from Given Electric Field Distribution Using Finite Element Method</p> <p><u>D.S. Farafonov</u>, V.A. Shklyae^{*,**}</p> <p><i>OAO "NPC Polus", Tomsk, Russia</i> <i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>**National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
4	<p>S5-P-003562 Space-Time Distribution of Nitrogen Radiation in Breakdown of Discharge Gap with Non-Uniform Electric Field</p> <p><u>D.V. Beloplotov</u>^{*,**}, M.I. Lomaev[*], D.A. Sorokin[*], <u>V.F. Tarasenko</u>^{*,**}</p> <p><i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>**National Research Tomsk State University, Tomsk, Russia</i></p>
5	<p>S5-P-003681 Runaway Electrons During Breakdown Under Voltage Pulses with Rise Time 0.6 Microsecond</p> <p><u>I.D. Kostyrya</u>, V.F. Tarasenko</p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>

6	<p>S5-P-003682 Generation of Runaway Electron Beams in Gas Diode with Dielectric Films</p> <p><u>I.D. Kostyrya</u>, V.F. Tarasenko <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
7	<p>S5-P-003911 Air Gap Breakdown on Runaway Electrons</p> <p><u>A.G. Sadykova</u>, S.A. Shunailov, M.I. Yalandin, A.V. Gurevich*, K.P. Zybin*, A.F. Sadykov**, M.D. Kolomiets*** <i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i> *P.N. Lebedev Physical Institute RAS, Moscow, Russia **Institute of Metal Physics UD RAS, Ekaterinburg, Russia ***Ural Federal University, Ekaterinburg, Russia</p>
8	<p>S5-P-003952 Formation of Diffuse and Spark Discharges in Nonuniform Electric Field in Pulse Repetition Mode</p> <p><u>E.H. Baksht</u>, A.G. Burachenko, M.V. Erofeev, V.F. Tarasenko <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
9	<p>S5-P-004171 Dielectric Films and Water Modification in Diffuse Barrier Discharge, Formed by Predionization Fast Electrons at an Pulse Short Rise-Time ff Voltage</p> <p><u>V.M. Orlovskij</u>, V.A. Panarin, M.A. Shulepov <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
10	<p>S5-P-004611 Formation of the Harmonic High-Frequency Oscillations in the Dischargers Based on the Photoelectron Open Discharge</p> <p><u>P.A. Bokhan</u>, P.P. Gugin, M.A. Lavrukhin, D.E. Zakrevsky <i>Rzhanov Institute of Semiconductor Physics SB RAS, Novosibirsk, Russia</i></p>
11	<p>S5-P-004661 Measuring Technique of Current Pulses of Picosecond Duration in Real Time Mode</p> <p><u>D.V. Rybka</u>, E.V. Balzovskii, V.F. Tarasenko <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
12	<p>S5-P-004711 Research on Characteristics of Low-Pressure Gas Discharge in Hollow Cathode</p> <p><u>T.V. Koval</u>, I.V. Lopatint, A.S. Ogorodnikov, Bao Hung Nguyen <i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>

13	<p>S5-P-004731 Simulation of High Pressure Nanosecond Gas Discharge in Coaxial Gap</p> <p><u>A.V. Kozyrev</u>, V.Yu.Kozhevnikov, N.M. Dmitrieva*</p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>*National Research Tomsk State University, Tomsk, Russia</i></p>
14	<p>S5-P-005202 Research Pulse-Periodic Source UV-Radiation Based on Diffuse Discharge Initiated by Run-Away Electron Beam</p> <p><u>A.G. Burachenko</u>, E.H. Baksht, M.I. Lomaev, A.N. Panchenko, V.F. Tarasenko</p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
15	<p>S5-P-000882 Nanosecond-Pulse Breakdown with the Inversion of Effect Polarity</p> <p><u>V.F. Tarasenko</u>, D.V. Beloplotov, M.I. Lomaev, D.A. Sorokin</p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
16	<p>S5-O-005321 Generating High Energy Electrons in High-Voltage Pulsed Discharges in Air, Developing in Regime of Current Channels Microstructuring</p> <p><u>A.A. Trenkin</u>, V.I. Karelin</p> <p><i>Russian Federal Nuclear Center – All-Russian Research Institute of Experimental Physics, Sarov, Russia</i></p>

Poster Session 1.2. Pulsed power applications

1	<p>S6-P-000751 Characteristics of Deposition of Siliceous Coatings from Ablation Plasma Formed Using a High-Intensive Ion Beam</p> <p><u>R.V. Sazonov</u>, G.E. Kholodnaya, D.V. Ponomarev, G.E. Remnev <i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
2	<p>S6-P-000761 Characteristics of Propagation of a Nanosecond Pulse Electron Beam Under Forevacuum Pressures</p> <p><u>G.E. Kholodnaya</u>, R.V. Sazonov, D.V. Ponomarev, G.E. Remnev <i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
3	<p>S6-P-002203 Mobile Installation for Radiation Disinfecting</p> <p><u>M.E. Balesin</u>*, A.S. Boreysho**, I.M. Evdokimov**, M.Yu. Saenko**, S.Yu. Sokovnin*.,****, M.G. Tscherbakov***, S.V. Scherbinin*****</p> <p>*Institute of Electrophysics UD RAS, Ekaterinburg, Russia **LLC Research and Production Enterprise "Laser Systems", Saint Petersburg, Russia ***Military Base ****Ural Federal University, Ekaterinburg, Russia</p>
4	<p>S6-P-002211 Features of Laser Radiation Gain in the Gas Amplifier of the THL-1001 Laser System</p> <p><u>A.G. Yastremskii</u>*, N.G. Ivanov*, V.F. Losev***, Yu.N. Panchenko*</p> <p>*Institute of High Current Electronics SB RAS, Tomsk, Russia **National Research Tomsk Polytechnic University, Tomsk, Russia</p>
5	<p>S6-P-002751 Determination of Relative Biological Effectiveness of Pulsed X-Rays in Comparison with the Standard Gamma Radiation on Human Peripheral Blood Lymphocytes in the Range of Therapeutic Doses</p> <p><u>A.A. Belenko</u>, K.A. Kravchenko, O.P. Kutenkov*, S.A. Vasilyev**, A.S. Urazova, I.N. Lebedev**, M.A. Bol'shakov*, V.V. Rostov*</p> <p><i>National Research Tomsk State University, Tomsk, Russia</i> *Institute of High Current Electronics SB RAS, Tomsk, Russia *Research Institute of Medical Genetics SB RAMS, Tomsk, Russia</p>

6	<p>S6-P-002853 Influence of the Electrodes Erosion on Arc Dynamics in High Current Railguns</p> <p>A.V. Kharlov <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
7	<p>S6-P-003461 Effect of Electro Discharge Parameters on the Destructive Action of Plasma Channel in Solid Media</p> <p><u>N.S. Kuznetsova</u>, V.V. Lopatin, A.S. Yudin <i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
8	<p>S6-P-003662 Generation of Neutrons during a Nanosecond High-Voltage Discharge in Low Pressure Deuterium</p> <p><u>M.I. Lomaev</u>*,***, B.A. Nechaev**, V.N. Padalko**, G.N. Dudkin**, D.A. Sorokin*, V.F. Tarasenko*****, E.N. Schuvalov** <i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>**National Research Tomsk Polytechnic University, Tomsk, Russia</i> <i>***Tomsk State University of Control Systems and Radioelectronics, Tomsk, Russia</i> <i>****National Research Tomsk State University, Tomsk, Russia</i></p>
9	<p>S6-P-003663 Splashing of Electrodes Material at the High-Voltage Nanosecond Discharge in Deuterium, Hydrogen, Helium and Argon</p> <p><u>M.I. Lomaev</u>*,***, B.A. Nechaev**, V.N. Padalko**, G.N. Dudkin**, D.A. Sorokin*, V.F. Tarasenko*****, E.N. Schuvalov** <i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>**National Research Tomsk Polytechnic University, Tomsk, Russia</i> <i>***Tomsk State University of Control Systems and Radioelectronics, Tomsk, Russia</i> <i>****National Research Tomsk State University, Tomsk, Russia</i></p>
10	<p>S6-P-003971 Radiation Sources in the UV Spectral Range</p> <p><u>Yu.N. Panchenko</u>*, A.V. Puchikin*, V.F. Losev*** <i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>**National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
11	<p>S6-P-004371 Influence of Current Modulation on Volume Discharge Homogeneity and Efficiency of a Wide-Aperture XeCl-Laser</p> <p><u>I.N. Kononov</u>, A.N. Panchenko, V.F. Tarasenko <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>

12	<p>S6-P-004721 Discharge-Pumped KrF Laser</p> <p><u>S.A. Yampolskaya</u>, Yu.I. Bychkov, Yu.N. Panchenko, A.V. Pavlinsky, A.V. Puchikin, A.G. Yastremskii</p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
13	<p>S6-P-004841 Control Andformation of the Output Radiation Intensityprofile in an Excimer Laser</p> <p><u>M.V. Andreev</u>, Yu.N. Panchenko, A.V. Pavlinsky</p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
14	<p>S6-P-005272 Application of High-Power Nanosecond Microwave Pulses in a Non- Equilibrium Plasma Chemistry</p> <p>M.S. Arteev</p> <p><i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
15	<p>S6-P-905801 Study of Physicochemical Processes Accompanying Air Purification from Styrene Vapor by Pulsed Electron Beam</p> <p><u>I.E. Filatov</u>, Yu.S. Surkov, S.A. Nikiforov</p> <p><i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i></p>
16	<p>S6-P-905802 Products of Cs2 Decomposition in Air under the Influence of Streamer Corona</p> <p><u>I.E. Filatov</u>, D.L. Kuznetsov, V.V. Uvarin, Yu.S. Surkov, S.A. Nikiforov, G.G. Ugodnikov</p> <p><i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i></p>
17	<p>S6-P-905831 The Fragmentation of Polysilicon Bar by Using Pulsed Power Technology</p> <p><u>Yaohong Sun</u>, Rongyao Fu, Yinghui Gao, Ping Yan</p> <p><i>Institute of Electrical Engineering CAS, Beijing, China</i></p>
18	<p>S6-P-906011 Protective Properties of Metal Ceramic Packages under the Fast Electron Irradiation of CMOS Circuits</p> <p>F.P. Korshunov*, <u>A.P. Lazar</u>*, S.B. Lastovski*, S.S. Grabchikov*, B.A. Kablambaev**, V.I. Oreshkin**, N.A. Vasilenkov***</p> <p>* Researcher, Radiation Effects Laboratory, Scientific and Practical Research Centre of NAS of Belarus, Minsk, Belarus, E-mail: LazarMBX@physics.by ** Institute of High Current Electronics SB RAS, Tomsk, Russia *** ZAO «Innovatsionnye Tekhnologii «TEST-PRIBOR», Moscow, Russia</p>

September 23, Tuesday

9:00 – 18:00

Oral Session 2. Intense electron and ion beams

9:00 – 9:50 Invited	S1-O-001901 Modern Mathematical Models for Three-Dimensional Problems of Electron Optics V.Ya. Ivanov <i>Institute of Computational Technologies SB RAS, Novosibirsk, Russia</i>
9:50 – 10:10	S1-O-001491 Dynamics of the Molten Metal in a Vacuum Arc Cathode Spot: Splashing Threshold <u>N.M. Zubarev</u> , G.A. Mesyats* <i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i> <i>*P.N. Lebedev Physical Institute RAS, Moscow, Russia</i>
10:10 – 10:30	S1-O-000351 Hard X-Ray Generation in a Radial Foil Rod-Pinch Diode S.A. Sorokin <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i>
10:40 – 11:00 Coffee Break	
11:00 – 11:20	S1-O-003061 Investigation of Plasma Bunches Generated by Pulsed Surface Flashover in Vacuum <u>P.A. Morozov</u> , R.V. Emlin, I.F. Punanov, K.A. Khrushchev <i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i>
11:20 – 11:40	S1-O-003771 Research of Transfer Efficiency of Low-Energy High-Current Electron Beam in Plasma Channel in External Magnetic Field <u>E.S. Vagin</u> , V.P. Grigoriev <i>National Research Tomsk Polytechnic University, Tomsk, Russia</i>
11:40 – 12:00	S1-O-004991 Plasma Channel Formation in Inert Gases He and Ar by a Low-Energy Electron Beam <u>I.L. Zvigintsev</u> , V.P. Grigoriev <i>National Research Tomsk Polytechnic University, Tomsk, Russia</i>

12:00 – 12:20	<p>S1-O-004671 Quantitative X-Ray Diagnostics for Measuring of the Electron Beam Current Density Distribution on a Metal Target</p> <p><u>V.V. Kurkuchekov</u>, I.A. Ivanov*, I.V. Kandaurov*, Yu.A. Trunev*</p> <p><i>National Research Novosibirsk State University, Novosibirsk, Russia</i> <i>*Budker Institute of Nuclear Physics SB RAS, Novosibirsk, Russia</i></p>
12:20 – 12:40	<p>S1-O-004141 Numerical Simulation of the Secondary Plasma Surface in the Ion Beam Formation</p> <p><u>V.T. Astrelin</u>***, V.I. Davydenko***, A.V. Kolmogorov*</p> <p><i>*Budker Institute of Nuclear Physics SB RAS, Novosibirsk, Russia</i> <i>**National Research Novosibirsk State University, Novosibirsk, Russia</i></p>
12:40 – 14:00 Lunch	
14:00 – 14:20	<p>S1-O-002141 The Angle Dependence of a Ion Flow Parameters in a Electron Beam Plasma Cloud Acceleration Process</p> <p><u>I.L. Muzyukin</u>, D. Volzhaninov*</p> <p><i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i> <i>*Ural Federal University, Ekaterinburg, Russia</i></p>
14:20 – 14:40	<p>S1-O-005081 HARD X-RAY SOURCES BASED ON OF HIGH-CURRENT PINCH DIODES</p> <p><u>V.K. Petin</u>, A.A. Chertov, A.V. Lavrinovich</p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
14:40 – 15:00	<p>S1-O-005131 Effect of Electron Extraction from a Grid Plasma Cathode on the Generation of Emission Plasma</p> <p><u>V.N. Devyatkov</u>*, N.N. Koval***</p> <p><i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>**National Research Tomsk State University, Tomsk, Russia</i></p>
15:00 – 15:20	<p>S1-O-005351 Investigation of Plasma Emitter Based on Reflective Discharge with the Cathode Spot for Intense Pulsed Submillisecond Electron Beam</p> <p>S.V. Grigoriev, <u>P.V. Moskvin</u></p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>

15:20 – 15:40	<p>S1-O-005352 Multiarcs Plasma Emitter for Submillisecond Electron Beam with Energy up to 100 keV and Current Level up to 1 kA</p> <p><u>S.V. Grigoriev</u>, M.S. Vorobyov, S.A. Sulakshin, P.V. Moskvina <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
15:40 – 17:00 Poster Session & Coffee Break	
17:00 – 17:20	<p>S1-O-005451 Electron Source with Grid Plasma Emitter for Generating Submillisecond Duration Intense Beam</p> <p><u>M.S. Vorobyov</u>, V.N. Devyatkov, N.N. Koval, S.A. Sulakshin, P.M. Schanin <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
17:20 – 17:40	<p>S1-O-003711 Electron Accelerator with a Multi-Apertured Plasma Emitter</p> <p><u>M.S. Vorobyov</u>, N.N. Koval, S.A. Sulakshin, V.V. Shugurov <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
17:40 – 18:00	<p>S1-O-003611 Energy Transfer in a Blumlein Pulse Forming Line Operating in Bipolar Pulse Formation Mode</p> <p><u>A.I. Pushkarev</u>, Y.I. Isakova, I.P. Khaylov <i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>

Poster Session 2. Intense electron and ion beams

1	<p>S1-O-000541 The Review of Recent Results on Low-Energy, High-Current Electron Beams Production G.E. Ozur <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
2	<p>S1-O-001902 New Approach in the Aberration Theory for Solving of 3D Electron Optics Problems V.Ya. Ivanov <i>Institute of Computational Technologies SB RAS, Novosibirsk, Russia</i></p>
3	<p>S1-O-002691 Surface Modification of a Dispersion-Hardening 67KN5B Alloy by Ion and Electron Beams <u>B.K. Rakhadilov</u>, M.K. Skakov, D.B. Zarva, A.V. Gul'kin <i>National Nuclear Center of the Republic of Kazakhstan, Kurchatov, Kazakhstan</i></p>
4	<p>S1-P-000371 Transition of Low-Current Discharge with Self-Heated Hollow Cathode into High-Current Pulse Mode <u>A.I. Menshakov</u>, N.V. Gavrilov, A.I. Lipchak <i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i></p>
5	<p>S1-P-000681 Various Mechanisms of Generation of Plasma at Low Pressures S.P. Nikulin <i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i></p>
6	<p>S1-P-000741 Investigations on Generation of a Nanosecond Pulse Electron Beam <u>D.V. Ponomarev</u>, G.E. Kholodnaya, G.E. Remnev, M.I. Kaykanov, R.V. Sazonov <i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>

7	<p>S1-P-001011 On Negative Anode Voltage Drop of High-Current Vacuum Arc</p> <p><u>D.L. Shmelev</u>, S.A. Barenholts*</p> <p><i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i> <i>*A.M. Prokhorov General Physics Institute RAS, Moscow, Russia</i></p>
8	<p>S1-P-001012 Hybrid Computational Model of Diffuse High-Current Vacuum Arc</p> <p><u>D.L. Shmelev</u>, I.V. Uimanov</p> <p><i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i></p>
9	<p>S1-P-001041 Focusing and Transport of Moderate Energy Electron Beams with Gas-Discharge Plasma Lens</p> <p><u>A. Goncharov</u>, V. Gushenets*, A. Dobrovolskiy, I. Litovko**, E. Oks*,***</p> <p><i>Institute of Physics NAS, Kiev, Ukraine</i> <i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>**Kiev Institute for Nuclear Research NAS, Kiev, Ukraine</i> <i>***Tomsk State University of Control Systems and Radioelectronics, Tomsk, Russia</i></p>
10	<p>S1-P-001061 Energy Density Redistribution of Low-Energy, High-Current Electron Beam with the Use of Ferromagnetic Inserts</p> <p>P.P. Kiziridi, G.E. Ozur</p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
11	<p>S1-P-001151 A Theoretical Study of an Influence of Electric Fields on Profiles of Atomic Spectral Lines</p> <p>E.V. Koryukina</p> <p><i>National Research Tomsk State University, Tomsk, Russia</i></p>
12	<p>S1-P-001152 Regularities in the Behavior of Transition Probabilities in the Emission Spectrum of Argon in an Alternating Electric Field</p> <p><u>E.V. Koryukina</u>, V.I. Koryukin*</p> <p><i>National Research Tomsk State University, Tomsk, Russia</i> <i>*Siberian State Medical University, Tomsk, Russia</i></p>

13	<p>S1-P-001492 Model of a Wedge-Electrode Corona Discharge under Saturation</p> <p><u>G.S. Boltachev</u>, N.M. Zubarev*, O.V. Zubareva <i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i> <i>*P.N. Lebedev Physical Institute RAS, Moscow, Russia</i></p>
14	<p>S1-P-002091 Investigation of the Parameters of the Ion Flux from the Vacuum Discharge Plasma in the Double-Pulse Discharge Arrangement</p> <p><u>Yu.A. Zemskov</u>, I.L. Muzukin, I.V. Uimanov <i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i></p>
15	<p>S1-P-002361 Hydrodynamics of the Crater Formation on the Cathode Surface in a Vacuum Arc</p> <p>I.V. Uimanov, G.A. Mesyats* <i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i> <i>*P.N. Lebedev Physical Institute RAS, Moscow, Russia</i></p>
16	<p>S1-P-002362 Preexplosion Processes on the Cathode in Vacuum Arc Cathode Spot</p> <p><u>I.V. Uimanov</u>, S.A. Barengolts*, D.L. Shmelev <i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i> <i>*A.M. Prokhorov General Physics Institute RAS, Moscow, Russia</i></p>
17	<p>S1-P-002621 The Influence of Preliminary High Power Ion Treatment of WC-Co Hard Alloy on the Structure, Adhesion and Tribological Properties of Deposited Diamond Coatings</p> <p><u>V.V. Uglov</u>, G.E. Remnev*, S.A. Linnik*, A.K. Kuleshov, D.P. Rusalsky <i>Belarusian State University, Minsk, Belarus</i> <i>*National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
18	<p>S1-P-003571 Assessment of Thermodynamic Parameters of Shock Wave Plasma Gas</p> <p><u>O.V. Vasileva</u>, Yu.N. Isaev <i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>

19	<p>S1-P-003901 Reflectometry of Electron Diode with Explosive Emission Cathode</p> <p><u>S.A. Shunailov</u>, K.A. Sharypov, V.G. Shpak, M.R. Ulmaskulov, M.I. Yalandin, V.V. Rostov*, M.D. Kolomiets**</p> <p><i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i> <i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>**Ural Federal University, Ekaterinburg, Russia</i></p>
20	<p>S1-P-003902 Polishing Effect of Metal Cathodes with Aging by Subnanosecond Voltage Pulses</p> <p><u>S.A. Shunailov</u>, K.A. Sharypov, M.R. Ulmaskulov, M.I. Yalandin, V.V. Rostov*, M.D. Kolomiets**</p> <p><i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i> <i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>**Ural Federal University, Ekaterinburg, Russia</i></p>
21	<p>S1-P-003903 Kinematic Effects at Electron Beam Front with Variation of Initiation Conditions for Explosive Emissive Cathode</p> <p><u>S.A. Shunailov</u>, K.A. Sharypov, M.R. Ulmaskulov, M.I. Yalandin, V.V. Rostov*</p> <p><i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i> <i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
22	<p>S1-P-003991 Cell Proliferation in the Mouse Hippocampus and Hypothalamus after Exposure to Nanosecond Repetitively-Pulsed X-Rays</p> <p><u>A.V. Kereva</u>***, M.Yu. Khodanovich*, N.M. Nemirovich-Danchenko*, M.A. Bolshakov***, O.P. Kutenkov**, E.P. Krutenkova*, M.S. Kudabaeva*, E.S. Pan*, Yu.N. Semjonova*</p> <p><i>*National Research Tomsk State University, Tomsk, Russia</i> <i>**Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
23	<p>S1-P-004071 Nanosecond Repetitively-Pulsed X-Rays Affect C-Fos Expression and Behavior in Mice</p> <p><u>A.V. Kereva</u>***, M.Yu. Khodanovich*, N.M. Nemirovich-Danchenko*, M.A. Bolshakov***, O.P. Kutenkov**, E.P. Krutenkova*, M.S. Kudabaeva*, E.S. Pan*, Yu.N. Semjonova*</p> <p><i>*National Research Tomsk State University, Tomsk, Russia</i> <i>**Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>

24	<p>S1-P-004441 Application of a Plasma Anode for Improving an Operation Stability of the Electron Source with a Beam Extraction into the Atmosphere</p> <p>E.N. Abdullin <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
25	<p>S1-P-004442 Generation of Microsecond Electron Beams with the Electron Energy of 100 keV in the Vacuum Diode with a Plasma Anode</p> <p><u>E.N. Abdullin</u>, R.N. Glazkov, M.V. Novikov <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
26	<p>S1-P-005132 Plasma-Cathode Electron Source Based on a Multi-Arc Low-Pressure Pulsed Discharge in a Longitudinal Magnetic Field</p> <p><u>V.N. Devyatkov*</u>, N.N. Koval*** <i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>**National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
27	<p>S1-P-005251 Annular Electron Beam with Virtual Cathode in Coaxial Diode with Magnetic Insulation</p> <p><u>I.K. Kurkan***</u>, A.A. Grishkov*, I.V. Pegel*** <i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>**National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
28	<p>S1-P-005252 Foil-Less Plasma-Filled Diode for HPM Generator</p> <p><u>I.K. Kurkan***</u>, A.A. Eltchaninov*, B.M. Kovaltchuk*, A.A. Zherlitsyn* <i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>**National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
29	<p>S1-P-005281 Reconstruction of the Electron Beam Spectrum from an Attenuation Curve for Vacuum and Gas Diodes</p> <p><u>M.S. Vorobyov*</u>, E.Kh. Baksht*, N.N. Koval***, A.V. Kozyrev***, V.F. Tarasenko*** <i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>**National Research Tomsk State University, Tomsk, Russia</i></p>

30	<p>S1-P-906051 Experimental Studies of Electric Characteristics of High-Current Self-Magnetic Pinch Diode of Pulsed Electron Accelerator «Gamma 1»</p> <p>N.V. Zavyalov, V.S. Gordeev, V.T. Punin, A.V. Grishin, S.T. Nazarenko, V.S. Pavlov, V.A. Demanov, D.A. Kalashnikov, A.V. Kozachek, K.V. Strabykin, S.Yu. Puchagin, M.A. Moisejevskikh, <u>D.O. Mansurov</u>, B.P. Mironychev, R.A. Mayorov, V.L. Mayornikova.</p> <p><i>Russian Federal Nuclear Center – VNIIEF, Sarov, Russia</i></p>
31	<p>S1-P-906062 Evaluation of Radiation Dose Parameters of Electrophysical Facility «Gamma-4»</p> <p>N.V. Zavyalov, V.S. Gordeev, <u>S.Yu. Puchagin</u>, A.L. Mozgovoy, A.V. Grishin, E.S. Berdnikov, K.V. Strabykin, D.O. Mansurov, M.A. Moisejevskikh.</p> <p><i>Russian Federal Nuclear Center – VNIIEF, Sarov, Russia</i></p>

September 24, Wednesday

9:00 – 18:00

Oral Session 3.1. Pinches, plasma focus and capillary discharge

9:00 – 9:20	<p>S2-O-905662 Converging Shock Waves Generated by Underwater Electrical Explosion OD Spherical Wire Array</p> <p><u>Y.E. Krasik</u>, O. Antonov, S. Efimov, M. Kozlov, V.T. Gurovich <i>Technion, Haifa, Israel</i></p>
9:20 – 9:40	<p>S2-O-001882 Thermodynamical Description of the Metal Solid and Liquid States, and the “Crystal-Liquid” and “Liquid-Vapour” Phase Transitions at the Intensive Pulse Energy Input</p> <p><u>N.B. Volkov</u>, E.A. Chingina <i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i></p>
9:40 – 10:00	<p>S2-O-905751 Thermodynamic Properties and Phase Changes of Refractory Metals under Pulsed Power Influences</p> <p>K.V. Khishchenko <i>Joint Institute for High Temperatures RAS, Moscow, Russia</i></p>
10:00 – 10:20	<p>S2-O-002121 Experimental and Numerical Study of Metallic Electrode Parameters during Power Transmission by Submicrosecond Current Pulse with Linear Density Above 1 MA/Cm via Magnetically Insulated Transmission Lines</p> <p><u>S.I. Tkachenko</u>***, E.V. Grabovskii***, P.V. Satorov****, G.M. Oleinik***, V.V. Aleksandrov***, Yu.G. Kalinin*****, O.G. Olhovskaya*****, K.V. Khishchenko**, P.R. Levashov**</p> <p><i>*Moscow Institute of Physics and Technology, Dolgoprudny, Russia</i> <i>**Joint Institute for High Temperatures RAS, Moscow, Russia</i> <i>***RF SRC Troitsk Institute for Innovation and Fusion Research, Moscow, Russia</i> <i>****Keldysh Institute of Applied Mathematics RAS, Moscow, Russia</i> <i>*****SRC “Kurchatov Institute”, Moscow, Russia</i></p>

10:20 - 10:40	<p>S2-O-004851 3D MHD Simulation of Capillary Discharge for the BELLA Project</p> <p><u>G.A. Bagdasarov</u>*, P.V. Sasorov*, O.G. Olkhovskaya*, S.S. Bulanov**, C.G.R. Geddes***, H.-S. Mao***, C.B. Schroeder***, E. Esarey***, W.P. Leemans***</p> <p><i>*Keldysh Institute of Applied Mathematics RAS, Moscow, Russia</i> **University of California, Berkeley, USA ***Lawrence Berkeley National Laboratory, Berkeley, USA</p>
10:40 – 11:00 Coffee Break	
11:00 - 11:20	<p>S2-O-905681 Magnetic Probe Diagnostics in Powerful High Pressure Discharge</p> <p><u>M.E. Pinchuk</u>***, A.V. Budin*, V.V. Leont'ev*, A.G. Leks*, A.A. Bogomaz*, Ph.G. Rutberg*, A.A. Pozubenkov*</p> <p><i>*Institute for Electrophysics and Electric Power RAS, Saint Petersburg, Russia</i> **National Research St. Petersburg State Polytechnical University, Saint Petersburg, Russia</p>
11:20 - 11:40	<p>S2-O-002651 Experimental Research of X-Pinch Neck Formation</p> <p><u>A.P. Artyomov</u>, S.A. Chaikovskiy, A.V. Fedunin, N.A. Labetskaya, V.I. Oreshkin</p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
11:40 - 12:00	<p>S2-O-003301 Experimental Research of the Fine Foils Explosion Dynamics</p> <p><u>A.S. Zhigalin</u>, A.G. Rousskikh, V.I. Oreshkin, S.A. Chaikovskiy, V.V. Kuznetsov*</p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i> *Kutateladze Institute of Thermophysics SB RAS, Novosibirsk, Russia</p>
12:00 - 12:20	<p>S2-O-003291 Study of the Implosion of Mg and Bi Metal-Puff Z – Pinches</p> <p><u>A.G. Rousskikh</u>, A.S. Zhigalin, R.B. Baksht*, N.A. Labetskaya, S.A. Chaikovskiy, V.I. Oreshkin</p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i> *Tel Aviv University, Tel Aviv, Israel</p>

12:20 – 12:40	<p>S2-O-004241 Neutron Emission from Deuterium Gas-Puffs at the Current Level above 2 MA</p> <p><u>A.V. Shishlov</u>, R.K. Cherdizov, F.I. Fursov, V.A. Kokshenev, B.M. Kovalchuk, N.E. Kurmaev, A.Yu. Labetsky, N.A. Ratakhin*, D. Klir*, J. Cikhardt*, J. Kravarik*, P. Kubes*, K. Rezac*, O. Sila*, H. Orcikova**, K. Turek**, G.N. Dudkin***, B.A. Nechaev***, V.N. Padalko***</p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>*Czech Technical University in Prague, Prague, Czech Republic</i> <i>**Nuclear Physics Institute, Academy of Science of Czech Republic, Prague, Czech Republic</i> <i>***National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
12:40 – 14:00 Lunch	
15:40 – 17:00 Poster Session	

Oral Session 3.2. High power microwaves

14:00 – 14:20	<p>S3-O-000971 Formation of Solitons under Cyclotron Resonance Interaction of Superradiance Pulses and CW Signals with Rectilinear Electron Beams</p> <p><u>N.S. Ginzburg</u>, I.V. Zotova, A.S. Sergeev, E.R. Kocharovskaya, V.Yu. Zaslavsky, A.G. Sadykova*, S.A. Shunailov*, M.I. Yalandin*</p> <p><i>Institute of Applied Physics RAS, Nizhny Novgorod, Russia</i> <i>*Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i></p>
14:20 – 14:40	<p>S3-O-001531 Plasma in a Resonant Microwave Pulse Compressor: Observation, Characterization, and Influence on Radiation Extraction</p> <p><u>A. Shlapakovski</u>, L. Belin, M. Donskoy, Y.E. Krasik, E. Shamiloglu*</p> <p><i>Tehnonion, Haifa, Israel</i> <i>*University of New Mexico, Albuquerque, USA</i></p>

14:40 - 15:00	<p>S3-O-004092 Experimental Study of a Frequency Tunable Coaxial BWO with Modulating Reflector</p> <p><u>R.V. Tsygankov</u>, A.I. Klimov, I.V. Pegel, E.M. Totmeninov, V.V. Rostov</p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
15:00 - 15:20	<p>S3-O-004551 Klystrode-Like Multi-GW Microwave Oscillators With Selective Cavities and TM02 Irradiated Modes</p> <p>J. Zhang, J.C. Ju, W. Li, H.W. Yang, A.A. Elchaninov*, R.V. Tsygankov*, A.V. Gunin*, V.V. Rostov*</p> <p><i>College of Optoelectronic Science and Engineering, NUDT, Changsha, China</i></p> <p><i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
15:20 - 15:40	<p>S3-O-001391 Influence of the Diffraction Reflector Geometry on the Mode Composition in the Azimuthally Nonuniform Multiwave Cherenkov Generator</p> <p><u>M.P. Deichuly</u>, V.I. Koshelev</p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
15:40 – 17:00 Poster Session & Coffee Break	
17:00 - 17:20	<p>S3-O-001461 Ultrawideband Radiators Simulation in Homogeneous Lossy Media</p> <p><u>M.Yu. Zorkaltseva</u>, V.I. Koshelev, A.A. Petkun</p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
17:20 – 17:40	<p>S3-O-001711 Radiation of High-Power Ultrawideband Pulses by a Cylindrical Spiral Antenna</p> <p><u>Yu.A. Andreev</u>, A.M. Efremov, V.I. Koshelev, B.M. Kovalchuk, A.A. Petkun, K.N. Sukhushin, M.Yu. Zorkaltseva</p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
17:40 - 18:00	<p>S3-O-001371 Half-Horn and Strip-Line Antennas for Measurements of Pulses of High Power Ultra-Wideband Radiation</p> <p><u>V.M. Fedorov</u>, V.Y. Ostashev, V.P. Tarakanov, A.V. Ul'ynov</p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>

Poster Session 3.1. Pinches, plasma focus and capillary discharge

1	<p>S2-O-001881 Towards Understanding of Electrodynamic Processes of Plasma Channel Formation during the Electromagnetic Pulse with Picosecond Front Propagation along the Coaxial Line Containing an Open-Ended or Microwire-Enclosed Gap</p> <p><u>N.B. Volkov</u>, S.V. Barakhvostov, K.A. Nagayev, S.I. Tkachenko*</p> <p><i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i> <i>*Moscow Institute of Physics and Technology, Dolgoprudny, Russia</i></p>
2	<p>S2-O-000691 Basic Phenomena in Plasma Opening Switches</p> <p>S.V. Loginov</p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
3	<p>S2-P-000352 Neutron Production in Deuterium Gas-Puff Liner Implosions</p> <p>S.A. Sorokin</p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
4	<p>S2-P-003292 Experiments on the Compression of Metal-Puff Z-Pinches on Generator MIG with Current Level up to 2.3 MA</p> <p><u>A.G. Rousskikh</u>, A.S. Zhigalin, R.B. Baksht*, N.A. Labetskaya, S.A. Chaikovskiy, V.I. Oreshkin, Yu.A. Sukovaticin, E.N. Volkov</p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>*Tel Aviv University, Tel Aviv, Israel</i></p>
5	<p>S2-P-003293 Preliminary Results for the Use of Counter Plasma Jets for Creation of Quasispherical Liner</p> <p><u>A.G. Rousskikh</u>, A.S. Zhigalin, R.B. Baksht*, N.A. Labetskaya, S.A. Chaikovskiy, V.I. Oreshkin</p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>*Tel Aviv University, Tel Aviv, Israel</i></p>

6	<p>S2-P-003331 Investigation of Foil Material Influence on Uniformity of Electrical Explosion</p> <p><u>A.N. Grigoriev</u>, A.V. Pavlenko, E.I. Karnaukhov <i>All-Russian Scientific Research Institute for Technical Physics, Snezhinsk, Russia</i></p>
7	<p>S2-P-004061 A Laser-Induced Discharge through a Vacuum Diode</p> <p><u>A. Boldarev</u>, V. Gasilov, A. Krukovski, V. Novikov, I. Tsygvintsev, O. Olkhovskaya, I. Romanov* <i>Keldysh Institute of Applied Mathematics RAS, Moscow, Russia</i> <i>*P.N. Lebedev Physical Institute RAS, Moscow, Russia</i></p>
8	<p>S2-P-004431 Measurements of the Plasma Parameters of the Pseudospark Discharge</p> <p><u>I.A. Shemyakin</u>, Y.D. Korolev, O.B. Frants, N.V. Landl <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
9	<p>S2-P-004811 Research of Dependence of Implosion Parameters from Types of Configurations in Experiments with Deuterium Gas Puff on a GIT-12 Generator</p> <p>R.K. Cherdizov, F.I. Fursov, V.A. Kokshenev, N.E. Kurmaev, A.Yu. Labetsky, A.V. Shishlov, D. Klir*, J. Cikhardt*, J. Kravarik*, P. Kubes*, K. Rezac*, O. Sila* <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>*Czech Technical University in Prague, Prague, Czech Republic</i></p>
10	<p>S2-P-004471 Dynamics of Large-Scale Instabilities in Conductors Electrically Exploded In Strong Magnetic Fields</p> <p><u>I.M. Datsko</u>, C.A. Chaikovsky, N.A. Labetskaya, V.I. Oreshkin <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
11	<p>S2-P-005091 Diffusion of the Fast Rising Strong Magnetic Fields into The Conductor</p> <p><u>N.A. Labetskaya</u>, V.I. Oreshkin, C.A. Chaikovsky, I.M. Datsko, N.I. Kuskova*, A.D. Rud** <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>*Institute of Pulse Processes and Technologies of NAS of Ukraine, Mykolayiv, Ukraine</i> <i>**G.V. Kurdyumov Institute for Metal Physics of NAS of Ukraine, Kiev, Ukraine</i></p>

12	<p>S2-P-905682 Electrode Erosion in High Current High Pressure Arcs</p> <p><u>M.E. Pinchuk</u>***, O.M. Stepanova***, N.K. Kurakina*, A.A. Bogomaz*</p> <p><i>*Institute for Electrophysics and Electric Power RAS, Saint Petersburg, Russia</i> <i>**National Research St. Petersburg State Polytechnical University, Saint Petersburg, Russia</i> <i>***Saint Petersburg State University, Saint Petersburg, Russia</i></p>
13	<p>S2-P-003892 Mechanism of the Current Quenching in High-Current Low-Pressure Pulsed Glow Discharge</p> <p><u>N.V. Landl</u>*, Yu.D. Korolev***, O.B Frants*, I.A. Shemyakin*, V.G. Geyman*</p> <p><i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>**National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
14	<p>S2-P-905971 Hybrid X-Pinch on a Small Scale Generator King</p> <p><u>I.N. Tilikin</u>, T.A. Shelkovenko, S.A. Chaikovskiy, V.B. Zorin, V.M. Romanova, A.R. Mingaleev, S.N. Mishin S.A. Pikuz</p> <p><i>P. N. Lebedev Physical Institute, Moscow, Russia</i></p>
15	<p>S2-P-905981 Modification of Dielectric Surface in Strong Magnetic Fields</p> <p><u>S.I. Krivosheev</u>, V.V. Platonov*, O.M. Tatsenko*, G.A. Shneerson, A.V. Filippov*</p> <p><i>St.-Petersburg State Polytechnic University, St.-Petersburg, Russia,</i> <i>* Russian Federal Nuclear Center – VNIIEF, Sarov, Russia</i></p>
16	<p>S2-P-906061 Design of Electrophysical Facility «Gamma-4»</p> <p>N.V. Zavyalov, V.S. Gordeev, V.T. Punin, A.V. Grishin, S.T. Nazarenko, V.S. Pavlov, V.A. Demanov, T.F. Shikhanova, D.A. Kalashnikov, A.V. Kozachek, S.L. Glushkov, K.V. Strabykin, <u>S.Yu. Puchagin</u>, D.O. Mansurov, B.P. Mironychev, R.A. Mayorov, V.L. Mayornikova</p> <p><i>Russian Federal Nuclear Center – VNIIEF, Sarov, Russia</i></p>

Poster Session 3.2. High power microwaves

1	<p>S3-O-004091 Oversized Resonant Slow Wave Structure for a Multigigawatt Cherenkov Oscillator</p> <p><u>R.V. Tsygankov</u>, V.V. Rostov, A.A. Elchaninov <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
2	<p>S3-P-000281 Behavioral and Metabolic Responses of Laboratory Mice after Exposure the Brain to Nanosecond Repetitive Pulsed Microwaves</p> <p><u>A.V. Kereya</u>^{*,**}, M.A. Bolshakov^{*,**}, T.A. Zamoshchina^{*,**,*}, <u>I.R. Knyazeva</u>^{*,**,*}, O.P. Kutenkov[*], Yu.N. Semjonova^{**}</p> <p><i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>**National Research Tomsk State University, Tomsk, Russia</i> <i>***Siberian State Medical University, Tomsk, Russia</i></p>
3	<p>S3-P-000712 High Power Microwave Coupler</p> <p><u>A.I. Klimov</u>, E.M. Totmeninov <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
4	<p>S3-P-000721 Explosive Emission Carbone Fiber Cathode for High Power Microwave</p> <p><u>E.M. Totmeninov</u>, I.V. Pegel, O.P. Kutenkov <i>Institute of High Current Electronics, Tomsk, Russia</i></p>
5	<p>S3-P-000791 Cascade Switches of Microwave Resonant Compressors</p> <p><u>S.N. Artemenko</u>, V.A. Avgustinovich, S.A. Gorev, S.A. Novikov, Yu.G. Yushkov <i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
6	<p>S3-P-000851 Cryoelectron Resonant Compressor of Microwave Pulses</p> <p><u>S.N. Artemenko</u>, G.M. Samoylenko <i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>

7	<p>S3-P-000921 Oversized Interference Switches of Resonant Microwave Compressors</p> <p><u>S.A. Novikov</u>, V.A. Avgustinovich, S.N. Artemenko, V.L. Kaminsky, Yu.G. Yushkov</p> <p><i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
8	<p>S3-P-001251 Controlled Energy Extraction from Resonant Cavity</p> <p><u>S.A. Gorev</u>, V.A. Avgustinovich, S.N. Artemenko, S.A. Novikov, Yu.G. Yushkov</p> <p><i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
9	<p>S3-P-001372 Modification of the Frequency Spectrum of Ultra-Wideband Radiator</p> <p><u>V.M. Fedorov</u>, V.Y. Ostashev, A.V. Ul'ynov</p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
10	<p>S3-P-001871 Switching of Storage and Extracting Modes in Superconducting Resonant Microwave Compressors with Interference Switch</p> <p><u>S.N. Artemenko</u>, G.M. Samoilenko</p> <p><i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
11	<p>S3-P-001931 S-Band Vacuum Microwave Calorimeter</p> <p><u>A.I. Klimov</u>, A.A. Elchaninov, V.V. Rostov</p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
12	<p>S3-P-002551 Output of Microwave Energy from the Resonator Managed Transformation Mode Oscillations</p> <p><u>V.S. Igumnov</u>, V.A. Avgustinovich, S.N. Artemenko, Yu.G. Yushkov</p> <p><i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
13	<p>S3-P-002811 Electromagnetic Waves of Tem-Type in Plasma Waveguides with Multiply Connected Cross Section in the External Magnetic Field</p> <p><u>I.N. Kartashov</u>, M.V. Kuzelev</p> <p><i>Lomonosov Moscow State University, Moscow, Russia</i></p>

14	<p>S3-P-003581 A New Coaxial High Power Microwave Source Based on Dual Beams</p> <p><u>Y. Li</u>, X. Zhang <i>College of Optoelectronic Science and Engineering, NUDT, Changsha, China</i></p>
15	<p>S3-P-003931 Two-Channel Setup for Experiments on Resonant Interaction of Powerful Microwave Pulse with Relativistic Electron Beam</p> <p><u>K.A. Sharypov</u>, V.G. Shpak, S.A. Shunailov, M.R. Ulmaskulov, M.I. Yalandin, N.S. Ginzburg*, I.V. Zotova*, E.R. Kocharovskaya*, V.Yu. Zaslavsky* <i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i> <i>*Institute of Applied Physics RAS, Nizhny Novgorod, Russia</i></p>
16	<p>S3-P-003932 Experimental Approaches on Fast Variation Phasing System in Multichannel Pulse-Periodic Relativistic BWO</p> <p><u>K.A. Sharypov</u>, V.G. Shpak, S.A. Shunailov, M.R. Ulmaskulov, M.I. Yalandin, I.V. Romanchenko*, V.V. Rostov* <i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i> <i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
17	<p>S3-P-004281 Power of the Led Cluster in Housing and Communal Lightning Devices</p> <p><u>R.H. Tukshaitov</u>, A. Yisihaketu, R.N. Nigmatullin* <i>Kazan State Power Engineering University, Kazan, Russia</i> <i>*Research Center for Power Engineering Problems RAS, Kazan, Russia</i></p>
18	<p>S3-P-004521 Investigations of an X-Band Overmoded Cerenkov High-Power Microwave Generator without an External Magnetic Field</p> <p><u>L. Guo</u>, Z. Li, T. Shu <i>College of Optoelectronic Science and Engineering, NUDT, Changsha, China</i></p>
19	<p>S3-P-004591 The Influence of the Drift Tube Length on the Structure of the Radiation Field of Multiwave Cherenkov Generator</p> <p><u>V.N. Kornienko</u>, V.A. Cherepenin <i>Kotel'nikov Institute of Radio Engineering and Electronics RAS, Moscow, Russia</i></p>

20	<p>S3-P-004701 Investigation of Generation of Electromagnetic Radiation in a Coaxial Vircator with Radially Diverging Beam</p> <p><u>T.V. Koval</u>, N.M. Hung, A.G. Zherlitsyn*, G.G. Kanaev*, V.P. Shiyan* <i>Institute of Cybernetics, National Research Tomsk Polytechnic University, Russia</i> <i>*Institute of High Technology Physics of National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
21	<p>S3-P-005271 Long Time Synchronization of Resonant Microwave Compressors by Laser Beam</p> <p><u>M.S. Arteev</u>, V.A. Avgustinovich, S.N. Artemenko, V.L. Kaminsky, S.A. Novikov, Yu.G. Yushkov <i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
22	<p>S3-P-004331 Source of High Power Nanosecond Electromagnetic Emission in Terms of X-Band Selfheated Pulsed Magnetron</p> <p><u>P.Yu. Chumerin</u>, V.N. Slinko, A.V. Peresipkin, N.I. Skripkin*, V.P. Gubanov**, O.B. Koval'chuk**, A.S. Stepchenko** <i>National Research Tomsk Polytechnic University, Tomsk, Russia</i> <i>*Scientific and Production Complex Pluton, Moscow, Russia</i> <i>**Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
23	<p>S3-P-004332 Researching of the Resonant Microwave Compression with Using Serial P-I-N Diodes in the Mechanism of the Switch</p> <p><u>P.Yu. Chumerin</u>, V.N. Slinko, A.S. Peresipkin <i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
24	<p>S3-P-004333 The Research of the Resonant Microwave Pulses Compression of the Gunn Oscillator</p> <p><u>P.Yu. Chumerin</u>, V.N. Slinko, A.S. Peresipkin, V.I. Yurchenko*, V.A. Kochumeev* <i>National Research Tomsk Polytechnic University, Tomsk, Russia</i> <i>*Federal Research Institute of Semiconductor Devices, Tomsk, Russia</i></p>
25	<p>S3-P-005071 Purification of the Output Modes of Overmoded Relativistic Backward Wave Oscillators through Mode-Coupled Method</p> <p><u>Y. Yuan</u>, J. Zhan, D. Zhang <i>College of Optoelectronic Science and Engineering, National University of Defense Technology, Changsha, China</i></p>

26	<p>S3-P-905651 Amplifier and Noise Generator of the GHz Frequency Band Based on the Plasma Relativistic Microwave Installation</p> <p><u>I.E. Ivanov</u>, P.S. Strelkov, D.V. Shumeiko <i>A.M. Prokhorov General Physics Institute RAS, Moscow, Russia</i></p>
27	<p>S3-P-905741 Two-Channel RF Source Based on Gyromagnetic Nonlinear Transmission Lines</p> <p><u>I.V. Romanchenko</u>, V.V. Rostov, V.Yu. Konev, A.V. Gunin <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>

Oral Session 4. Pulsed power technology

<p>9:00 - 9:20</p>	<p>S4-O-004802 Applicability Evaluation of High Voltage Discharge to Demolition the Nuclear Debris <u>K. Uemura</u>, N. Yazawa*, K. Yano**, V. Kukhta <i>*ITAC Ltd, Japan</i> <i>**Hitachi General Electric Nuclear Energy Co., Japan</i> <i>***Japan Atomic Energy Agency, Japan</i></p>
<p>9:20 - 9:40</p>	<p>S4-O-001581 Experiment Study of Conical Magnetically Insulated Transmission Line on a 10-Stage Linear Transformer Driver <u>Guo Fan</u>, Zou Wenkang, Chen Lin, Xie Weiping <i>Institute of Fluid Physics, Mianyang, China</i></p>
<p>9:40 - 10:00</p>	<p>S4-O-005641 Energy Coupling between the LC Circuit and Dynamic Z-pinch Load: Analytical Approximation <u>A.A. Kim***</u>, V.I. Oreshkin*, M.G. Mazarakis*** <i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>**National Research Tomsk Polytechnic University, Tomsk, Russia</i> <i>***Sandia National Laboratories, Albuquerque, USA</i></p>
<p>10:00 - 10:20</p>	<p>S4-O-005631 Stability of the Pulse Shape in Square Pulse LTD's With 5th Harmonics <u>V.M. Alexeenko*</u>, S.S. Kondratiev*, S.V. Vasiliev*, V.A. Synebryukhov*, A.A. Kim**, M.G. Mazarakis***, J. Leckbee***, M.L. Kiefer*** <i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>**National Research Tomsk Polytechnic University, Tomsk, Russia</i> <i>***Sandia National Laboratories, Albuquerque, USA</i></p>
<p>10:20 - 10:40</p>	<p>S4-P-005312 Long Life-Time, Corona Stabilized Gas Switches for Repetitively Operated Marx Generators E.G. Krastelev <i>Joint Institute for High Temperatures RAS, Moscow, Russia</i></p>

10:40 – 11:00 Coffee Break

11:20 - 11:40	<p>S4-O-003761 Modernization on THL-100 a Hybrid Femtosecond Laser System</p> <p><u>V.F. Losev</u>*,**, E.N. Abdullin*, S.V. Alekseev*, M.V. Ivanov*, N.G. Ivanov*, G.A. Mesyats***, Yu.N. Panchenko*, N.A. Ratakhin*</p> <p><i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>**National Research Tomsk Polytechnic University, Tomsk, Russia</i> <i>***P.N. Lebedev Physical Institute RAS, Moscow, Russia</i></p>
11:40 – 12:00	<p>S4-O-005461 Examination of Two Variants of MPOS/LCD Concatenation in the Experiments with Double Gas Puffs on the GIT-12 Generator</p> <p><u>V.A. Kokshenev</u>, A.Yu. Labetsky, A.V. Shishlov, N.E. Kurmaev, F.I. Fursov, R.K. Cherdizov</p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
12:00 - 12:20	<p>S4-O-001741 A Novel Multi-Output Pulsed Power System and it's Power Synthesis</p> <p><u>Yue Zhao</u>***, <u>Lin Chen</u>***, <u>Liangji Zhou</u>**</p> <p><i>*China Academy of Engineering Physics, Mianyang, China</i> <i>**University of Science and Technology of China, Hefei, China</i></p>
12:20 - 12:40	<p>S4-O-004211 Toroidal Core Pulse Transformer with an Output Voltage of 1.2 MV</p> <p><u>A.V. Lavrinovich</u>, A.A. Kachalkov, V.K. Petin</p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
<p>12:20 – 14:00 Lunch</p>	
14:00 - 14:20	<p>S4-O-002531 Superfast High Voltage Thyristor Switch</p> <p><u>S.N. Rukin</u>, A.I. Gusev, S.K. Lyubutin</p> <p><i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i></p>
14:20 - 14:40	<p>S4-O-001551 Investigation on Conduction Properties of High Current GAAS RCSS</p> <p><u>Jiang Ping</u>, Liu Hongwei, Yuan Jianqiang, Liu Jinfeng, Wang Lingyun, Ma Xun, Li Hongtao, Xie Weiping</p> <p><i>Institute of Fluid Physics, Mianyang, China</i></p>

14:40 - 15:00	<p>S4-O-003791 Generation of Gigawatt Pulses with Subnanosecond Rise Time by Semiconductor Switches</p> <p><u>A.I. Gusev</u>, S.K. Lyubutin, M.S. Pedos, B.G. Slovikovsky, S.P. Timoshenkov, S.N. Rukin, S.N. Tsyranov <i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i></p>
15:00 - 15:20	<p>S4-O-004621 Influence of the Secondary Emission on the Breakdown Formation Time in the Swu\Itches Based on the Open Discharge</p> <p><u>M.A. Lavrukhin</u>, P.A. Bokhan, P.P. Gugin, D.E. Zakrevsky <i>Rzhanov Institute of Semiconductor Physics SB RAS, Novosibirsk, Russia</i></p>
15:20 - 15:40	<p>S4-O-002851 24 kV/75 kA High Current Protection Inductor</p> <p><u>A.V. Kharlov</u>, B.M. Kovalchuk, E.V. Kumpyak, G.V. Smorudov, N.V. Tsoy <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
15:40 – 17:00 Poster Session & Coffee Break	
17:20 City-tour & Banquet	

Poster Session 4. Pulsed power technology

1	<p>S4-P-005462 High-Power Generator of Quasi-Rectangular Pulses</p> <p>V.A. Kokshenev <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
2	<p>S4-P-004221 Dependence of the Breakdown Voltages of Subnanosecond Gas Diodes from the Gas Pressure and the Degree of the Discharge Gap Overvoltage</p> <p><u>S.N. Ivanov</u>, K.A. Sharypov, V.G. Shpak <i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i></p>
3	<p>S4-P-002511 Optimization of the Vacuum Insulator Stack of the MIG Pulsed Power Generator</p> <p><u>S.A. Chaikovsky</u>, G. Khamzakhan* <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>*National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
4	<p>S4-P-003811 Numerical Simulation and Analysis of Energy Loss in a Nanosecond Spark Gap Switch</p> <p><u>I.V. Lavrinovich</u>, V.I. Oreshkin <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
5	<p>S4-P-003812 Effect of the Discharge Circuit and Spark Gap Parameters on Energy Loss in an HCEICAP 80-0.25 Capacitor-Switch Assembly Operating onto a Low-Impedance Load</p> <p>I.V. Lavrinovich <i>Institute of High Current Electronics SB RAS, Tomsk Russia</i></p>

6	<p>S4-P-003922 In-Phased Operation of Multi-Channel Ka-Band BWOs</p> <p><u>M.R. Ulmaskulov</u>, V.G. Shpak, M.S. Pedos, I.V. Romancheko*, V.V. Rostov*, S.N. Rukin, K.A. Sharypov, S.A. Shunailov, M.I. Yalandin</p> <p><i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i> <i>*Institute of High Current Electronics SB RAS, Tomsk Russia</i></p>
7	<p>S4-P-003921 High-Voltage Front Sharpening and Waveform Modification by Ferrite Lines</p> <p><u>M.R. Ulmaskulov</u>, S.A. Shunailov</p> <p><i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i></p>
8	<p>S4-P-004222 The Measuring of the Breakdown Formation Time of Subnanosecond Discharge in Nitrogen at High Pressures</p> <p><u>S.N. Ivanov</u>, K.A. Sharypov, V.G. Shpak</p> <p><i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i></p>
9	<p>S4-P-001981 Studies of Dependence of Cathode Plasma Jet Velocity on Design of Electrode Array in a Low Inductance Vacuum Spark</p> <p><u>V.L. Paperny</u>, A.V. Beklemishchev, S.P. Gorbunov, D.B. Semenov</p> <p><i>Irkutsk State University, Irkutsk, Russia</i></p>
10	<p>S4-P-003701 Improvement of XeF (C-A) Amplifier Parameters of THL-100 Terawatt Laser System</p> <p><u>N.G. Ivanov*</u>, E.N. Abdullin*, V.F. Losev***</p> <p><i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>**National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
11	<p>S4-P-004511 Low-Voltage High-Current Discharge Initiation in a Vacuum Diode</p> <p><u>A.A. Zherlitsyn</u>, B.M. Kovalchuk, N.N. Pedin</p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
12	<p>S4-P-004512 Plasma-Filled Diode Power Increase due to the Growth of the Current Rise Rate</p> <p><u>A.A. Zherlitsyn</u>, B.M. Kovalchuk, N.N. Pedin</p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>

13	<p>S4-P-005171 Simple Cladding Technique for Constructing CVD</p> <p>K. Hojatzadeh <i>IRAN Electronic and Communication Research Center, Tehran, Iran</i></p>
14	<p>S4-P-005261 Diagnostics of Sub-Nanosecond High Voltage Pulses</p> <p><u>N.M. Bykov</u>*, I.K. Kurkan*[·]**[·], A.S. Stepchenko* <i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>**National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
15	<p>S4-P-000441 A High-Voltage IGBT-Based Switch</p> <p><u>A.V. Ponomarev</u>, A.I. Gusev, M.S. Pedos, Y.I. Mamontov <i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i></p>
16	<p>S4-P-005381 Complex of the Electrophysical Equipment for Electropulse Technologies</p> <p>I.V. Ermilov <i>JSC Russian Technology Group, Moscow, Russia</i></p>
17	<p>S4-P-002852 Finite Element Analysis for Stress, Temperature and Magnetic Fields of a 70 kA Inductor</p> <p>A.V. Kharlov <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
18	<p>S4-O-000692 Power Flow in the POS-TO-LOAD Transition Region</p> <p>S.V. Loginov <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
19	<p>S4-P-905832 Study on the Velocity of the Single-Stage Coil Electromagnetic Launchers</p> <p><u>Xuzhe Xu</u>, Yaohong Sun, Ping Yan <i>Institute of Electrical Engineering CAS, Beijing, China</i></p>
20	<p>S4-P-905841 Development of Frequency-Tuned High Voltage AC Power Supply for DBD Application</p> <p><u>Yinghui Gao</u>, Rongyao Fu, Kun Liu, Xueke Che*, Tao Shao, Yaohong Sun, Ping Yan <i>Institute of Electrical Engineering CAS, Beijing, China</i> <i>*Equipment Academy, Beijing, China</i></p>

September 26, Friday

9:00 - 12:40

Oral Session 5. Pulsed power applications

9:00 - 9:20	<p>S6-O-005291 Marx Generator Based Mobile Complex for Lightning Current Tests of Grounding Systems</p> <p><u>Y.A. Bykov</u>, V.P. Smirnov, E.V. Grabovskiy*, G.M. Ieynik*, A.N. Gribov*, E.M. Bazelyan**</p> <p><i>Joint Institute for High Temperatures RAS, Moscow, Russia</i> <i>*RF SRC Troitsk Institute for Innovation and Fusion Research, Moscow, Russia</i> <i>**Krzhizhanovsky Power Engineering Institute, Moscow, Russia</i></p>
9:20 – 09:40	<p>S6-O-005511 Magnetic Pulsed Welding of Stainless Steel and Oxide Dispersionstrengthened Steel Tubes with End Plugs</p> <p><u>V.I. Krutikov</u>, S.N. Pararin, V.V. Ivanov, D.S. Koleukh, A.V. Spirin, J.-G. Lee*, M.-K. Lee*, C.-K. Rhee*</p> <p><i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i> <i>*Korea Atomic Energy Research Institute (KAERI), Daejeon, Republic of Korea</i></p>
09:40 - 10:00	<p>S6-P-001451 Electroerosion Generator of Aerosol Metal and Oxide Nanoparticles</p> <p><u>I.V. Beketov</u>, A.V. Bagazeev, E.I. Azarkevich, V.V. Ivanov, A.I. Medvedev, D.S. Portnov, A.M. Murzakaev</p> <p><i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i></p>
10:00 - 10:20	<p>S6-O-002202 Accelerator URT-1M-300 for Mobile Installation</p> <p><u>S.Yu. Sokovnin</u>*,**, M.E. Balezin*, S.V. Scherbinin*.,**</p> <p><i>*Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i> <i>**Ural Federal University, Ekaterinburg, Russia</i></p>
10:20 - 10:40	<p>S6-P-005311 300 kV, Nanosecond Pulsed Power Generator with a Glycerin Insulated Peaking Capacitor for Fine Disintegration of Quartz</p> <p><u>E.G. Krastelev</u>, A.A. Sedin, V.I. Tugushev</p> <p><i>Joint Institute for High Temperatures RAS, Moscow, Russia</i></p>

10:40 – 11:00 Coffee Break

11:00 - 11:20	<p>S6-O-001751 Electrical Discharge Phenomena Application for Solid Fossil Fuels Insitu Conversion</p> <p><u>A.A. Bukharkin</u>, V.V. Lopatin, S.M. Martemyanov, I.A. Koryashov <i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
11:20 - 11:40	<p>S6-P-003421 Multi-Borehole Electro-Blast for Concrete Monolith Splitting Off</p> <p><u>A.S. Yudin</u>, N.S. Kuznetsova, V.V. Lopatin <i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
11:40 - 12:00	<p>S6-O-001571 Antitumor Effects of Pulsed X-Ray Radiation</p> <p><u>M.A. Buldakov</u>, O.P. Kutenkov*, M.A. Bolshakov**, V.V. Rostov*, N.V. Cherdyntseva <i>Cancer Research Institute, SB RAMS, Tomsk, Russia</i> <i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>**National Research Tomsk State University, Tomsk, Russia</i></p>
12:00 - 12:20	<p>S6-O-005611 Comparative Assessment of Repetitive Pulsed X-Ray Radiation Efficiency on Functional Activity of Mice Liver Mitochondria</p> <p><u>I.R. Knyazeva</u>***, V.V. Ivanov** <i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>**Siberian State Medical University, Tomsk, Russia</i></p>
12:20 - 12:40	<p>S6-O-004011 20-cm Guided Discharge Produced by Compact Marx Generator Simultaneously Triggered with Femtosecond Laser Filaments</p> <p><u>L. Arantchouk</u>, A. Houard*, G. Point*, Y. Brele, J. Larour, J. Carbone*, Y.B. Andre, A. Mysyrowicz* <i>Laboratoire de Physique des Plasmas, Ecole Polytechnique, Palaiseau, France</i> <i>*Laboratoire d'Optique Appliquée - ENSTA ParisTech, Ecole Polytechnique, Palaiseau, France</i></p>

13:00 – 13:30 Closing Ceremony (Rubin Hotel)

12th International Conference on Modification of Materials with Particle Beams and Plasma Flows

Co-Chairmen:

Nikolai Koval,
Institute of High Current Electronics, Tomsk, Russia

Valery Krivobokov,
Institute of Physics and Technology, TPU, Tomsk, Russia

Sessions:

- C1** Beam and plasma sources
- C2** Fundamentals of modification processes
- C3** Modification of material properties
- C4** Coatings deposition
- C5** Nanoscience and nanotechnology



September 22, Monday

11:00 – 15:20

Oral Session 1. Beams and plasma sources

11:00 - 11:40 Invited	<p>C1-O-004971 Electrostatic Trap Effect in Glow Discharges A.S. Metel <i>Moscow State University of Technology "STANKIN", Moscow, Russia</i></p> <p>C1-O-004973 Broad Beams of High-Energy Reactive Gas Molecules <u>A.S. Metel</u>, V.P. Bolbukov, M.A. Volosova, S.N. Grigoriev, Yu.A. Melnik <i>Moscow State University of Technology "STANKIN", Moscow, Russia</i></p>
11:40 - 12:00	<p>C1-O-000991 Unbalance Magnetron Plasma Source for Ion Mass-Separator <u>V.L. Paperny</u>, V.I. Krasov, N.V. Astrakchantsev*, N.V. Lebedev* <i>Irkutsk State University, Irkutsk, Russia</i> <i>*National Research Irkutsk State Technical University, Irkutsk, Russia</i></p>
12:00 - 12:20	<p>C1-O-002321 Electron Beam Characteristics for Sub-Nanosecond Pulse Interaction with Metal Targets <u>K.A. Nagayev</u>, S.V. Barakhvostov, I.L. Muzyukin, I.S. Turmyshev, V.P. Tarakanov*, U.A. Zemskov, E.A. Chingina, N.B. Volkov <i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i> <i>*Joint Institute for High Temperatures RAS, Moscow, Russia</i></p>
12:20 - 12:40	<p>C1-O-000911 Generation of Low-Temperature Plasma of Low-Pressure Arc Discharges for Synthesis of Wear-Resistant Nitride Coatings <u>O.V. Krygina</u>, N.N. Koval, I.V. Lopatin, V.V. Shugurov <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
12:40 – 14:00 Lunch	

14:00 - 14:20	<p>C1-O-001761 Electric and Thermal Characteristics of Steam Plasma Generator</p> <p><u>A.S. Anshakov</u>***, S.I. Radko**, E.K. Urbakh*, A.E. Urbakh*, V.A. Faleev*</p> <p><i>*Kutateladze Institute of Thermophysics SB RAS, Novosibirsk, Russia</i> <i>**Novosibirsk State Technical University, Novosibirsk, Russia</i></p>
14:20 - 14:40	<p>C1-O-002911 Electron Beam Current Density Distribution of the Pulsed Fore-Vacuum Plasma Source Based on Arc Discharge</p> <p><u>A.V. Kazakov</u>, A.V. Medovnik, V.A. Burdovitsin, E.M. Oks</p> <p><i>Tomsk State University of Control Systems and Radioelectronics, Tomsk, Russia</i></p>
14:40 - 15:00	<p>C1-O-004771 Pulsed Non-Self Sustained Glow Discharge with Large Hollow Cathode</p> <p><u>V.V. Denisov</u>, Yu.H. Akhmadeev, V.V. Yakovlev, I.V. Lopatin, P.M. Schanin, S.S. Kovalskiy, N.N. Koval</p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
15:00 - 15:20	<p>C1-O-002881 On the Focused Beam Parameters of an Electron Gun with a Plasma Emitter</p> <p><u>S. Kornilov</u>, N. Rempe, A. Beniyyash*</p> <p><i>Elion LTD., Tomsk, Russia</i> <i>*Institute of Materials Science, Leibniz University of Hannover, Garbsen, Germany</i></p>
15:20 - 15:40	<p>C5-O-002371 Novel Nanocarbon Cathodes for Explosive Electron Emission</p> <p><u>P. Kuzhir</u>*, V. Baryshevsky, N. Belous, A. Gurinovich, E. Gurnevich, S. Maksimenko*, P. Molchanov, M. Shuba, V. Arkhipov**, A. Guselnikov**, A. Okotrub**, T. Kaplas***, Y. Svirko***</p> <p><i>Research Institute for Nuclear Problems, Belarusian State University, Minsk, Belarus</i> <i>*National Research Tomsk State University, Tomsk, Russia</i> <i>**Nikolaev Institute of Inorganic Chemistry SB RAS, Novosibirsk, Russia</i> <i>***Institute of Photonics, University of Eastern Finland, Joensuu, Finland</i></p>
<p>15:40 – 17:00 Poster Session & Coffee Break</p>	

Poster Session 1. Beams and plasma sources

1	<p>C1-P-005021 Development and Experimental Characterization of an Electron Beam Source Based on a Plasma Emitter and Multiple Aperture Electron Optical System</p> <p><u>I.V. Kandaurov</u>, V.T. Astrelin, Yu.A. Trunev, V.V. Kurkuchekov* <i>Budker Institute of Nuclear Physics SB RAS, Novosibirsk, Russia</i> <i>*National Research Novosibirsk State University, Novosibirsk, Russia</i></p>
2	<p>C1-P-002941 Extracting Electrons and Ions Out of Reflex-Discharge with a Hollow Cathode by Alternating Electric Field</p> <p><u>V.Ya. Martens</u>, M.M. Makovsky, I.V. Nikitin <i>North-Caucasus Federal University, Stavropol, Russia</i></p>
3	<p>C1-O-004972 A Source of Metal Vapor and Pulsed Beams of High-Energy Gas Molecules</p> <p><u>A.S. Metel</u>, V.P. Bolbukov, M.A. Volosova, S.N. Grigoriev, Yu.A. Melnik <i>Moscow State University of Technology "STANKIN", Moscow, Russia</i></p>
4	<p>C1-P-003311 Fast Neutrals Source with Low Operating Pressure</p> <p><u>V.T. Barchenko</u>, N.A. Babinov <i>Saint-Petersburg Electrotechnical University "LETI", Saint Petersburg, Russia</i></p>
5	<p>C1-P-002521 Modernization of Ion-Plasma Modules for Application of Nanostructured Carbon Coatings</p> <p><u>S.A. Trifonov</u>, V.T. Barchenco, A.A. Lisenkov*, G.A. Nikolaychuk** <i>Saint-Petersburg Electrotechnical University "LETI", Saint Petersburg, Russia</i> <i>*Institute of Problems of Mechanical Engineering RAS, Saint Petersburg, Russia</i> <i>**Ferrite Domen Co., Saint Petersburg, Russia</i></p>
6	<p>C1-P-003131 Extension of Pulsed Inductively-Coupled Plasma in Vacuum</p> <p><u>A.I. Kuzmichev</u>, S.A. Maikut, D.V. Tkachenko, L.Yu. Tsybulskiy <i>Kyiv Polytechnic Institute, Kiev, Ukraine</i></p>

7	<p>C1-P-001681 Generation of Phosphorus Polyatomic Ions in Plasma of a Low-Pressure Discharge with Filament Cathode</p> <p><u>V.I. Gushenets*</u>, E.M. Oks***, A.S. Bugaev*</p> <p><i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>**Tomsk State University of Control Systems and Radioelectronics, Tomsk, Russia</i></p>
8	<p>C1-P-004781 Study of Parameters and Continuous Service Duration of Technological Volumetric Gas-Discharge Plasma Generator with Thermionic Cathode</p> <p><u>D.P. Borisov</u>, A.D. Korotaev, V.M. Kuznetsov</p> <p><i>National Research Tomsk State University, Tomsk, Russia</i></p>
9	<p>C1-P-004921 Study of Influence of the Low-Temperature Hydrogen Plasma Parameters on the Hydrogen Saturation Efficiency of Metals</p> <p><u>V.S. Sypchenko</u>, N.N. Nikitenkov, Yu.I. Tyurin, O.V. Vilhivskaya, T.I. Sigfusson</p> <p><i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
10	<p>C1-O-004351 Investigation of Stationary Non-Self-Sustained Glow Discharge with a Large Area Hollow Cathode</p> <p><u>Yu.H. Akhmadeev</u>, V.V. Denisov, I.V. Lopatin, P.M. Schanin, S.S. Kovalsky</p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
11	<p>C1-O-004772 Pulsed Non-Self-Sustained Arc Discharge with Filament Cathode and Hollow Cathode</p> <p><u>V.V. Denisov</u>, V.V. Yakovlev, S.S. Kovalskiy, N.N. Koval</p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
12	<p>C1-P-004821 Automated Langmuir Probe Measurement System for Investigation of Plasma Parameters of Low-Pressure Discharge</p> <p><u>S.S. Kovalskiy***</u>, V.V. Denisov*, N.N. Koval***, I.V. Lopatin*</p> <p><i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>**National Research Tomsk State University, Tomsk, Russia</i></p>

13	<p>C1-P-005353 E-Beam Installation "SOLO-M" for Surface Modification Metallic and Cermet Materials</p> <p><u>S.V. Grigoriev</u>, A.V. Mikov, P.V. Moskvina, A.D. Teresov <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
14	<p>C1-P-000381 Current-Voltage Characteristics of a Negative Biased Collector in Plasma Generated by Electron Source with a Plasma Emitter</p> <p><u>O.A. Bureyev</u>, N.V. Gavrilov <i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i></p>
15	<p>C1-P-000671 Plasma and Ion Source of Boron Based on Planar Magnetron Discharge</p> <p>A.V. Vizir*, V.I. Gushenets*, E.M. Oks**, K.P. Savkin*, A.S. Bugaev*, G.Yu. Yushkov*</p> <p><i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>**Tomsk State University Of Control Systems and Radioelectronics, Tomsk, Russia</i></p>
16	<p>C1-P-001301 Generation of High Charge States Metal Ion Beams by Vacuum Arc Ion Sources for Surface Modification</p> <p><u>V.P. Frolova</u>*, A.G. Nikolaev*, K.P. Savkin*, G.Yu. Yushkov*, E.M. Oks***</p> <p><i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>**Tomsk State University Of Control Systems and Radioelectronics, Tomsk, Russia</i></p>
17	<p>C1-P-002841 Special Features of Ribbon Electron Beam Formation by Plasma Source under Higher Pressure</p> <p><u>A.S. Klimov</u>, V.A. Burdovitsin, E.M. Oks <i>Tomsk State University of Control Systems and Radioelectronics, Tomsk, Russia</i></p>
18	<p>C1-P-002711 Mass-Charged Composition of Beam Plasma Generated by Fore-Vacuum Plasma Electron Source</p> <p><u>Yu.G. Yushkov</u>*, D.B. Zolotukhin*, E.M. Oks***, K.P. Savkin**, A.V. Tynkov***</p> <p><i>*Tomsk State University of Control Systems and Radioelectronics, Tomsk, Russia</i> <i>**Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>

19	<p>C1-P-002251 Computer Simulation of Magnetron Discharge</p> <p>D.V. Korzhenko, S.N. Yanin <i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
20	<p>C1-P-002381 Bipolar Power Supply for Reactive Magnetron Sputtering</p> <p><u>V.O. Oskirko</u>, A.A. Soloviev, A.P. Pavlov, I.V. Ionov, N.S. Sochugov <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
21	<p>C1-P-001591 Condition for Burning Cesium Plasma Layer Arc with External Ionization</p> <p>V.P. Zimin <i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
22	<p>C1-P-000861 Plasma Treatment of Silicate Melt Obtaining</p> <p><u>G.G. Volokitin</u>, N.K. Skripnikova, O.G. Volokitin, V.V. Shekhovtsov <i>Tomsk State University of Architecture and Building, Tomsk, Russia</i></p>
23	<p>C1-P-003631 The Interrelation of Energy Parameters and Gas Convection Rate in Capacitive Discharge Excilamps</p> <p><u>E.A. Sosnin</u>, A.A. Pikulev*, V.A. Panarin, V.F. Tarasenko <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>*Russian Federal Nuclear Center - All-Russian Research Institute of Experimental Physics, Sarov, Russia</i></p>
24	<p>C1-O-004131 The Model of Microstructure Formation during Magnetron Sputtering</p> <p>M.A. Mikolaychuk, A.G. Knyazeva <i>Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia</i></p>
25	<p>C1-P-005001 Conditions for the Existence of High-Current Low-Pressure Discharge Forms in Circulation Cylindrical Magnetron</p> <p><u>V.T. Barchenko</u>, N.V. Krupovich, S.Yu. Udovichenko <i>Saint-Petersburg Electrotechnical University "LETI", Saint Petersburg, Russia</i></p>

26	<p>C1-P-005521 Simulation of Discharges in ExH-Fields with a Self-Heated Cathode</p> <p><u>L.A. Zyl'kova</u>, A.V. Kozyrev</p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
27	<p>C1-P-905791 Investigation of the Electrical Discharge in the Saline Solutions in a Vicinity of the Threshold Voltages</p> <p><u>Y.D. Korolev</u>*, **, I.A. Shemyakin*, R.V. Ivashov*, V.S. Kasyanov*, N.V. Landl*, Y. Sun***, T. Shao***, Y. Gao***</p> <p><i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>**National Research Tomsk Polytechnic University, Tomsk, Russia</i> <i>***Institute of Electrical Engineering Chinese Academy of Sciences, Beijing, China</i></p>
28	<p>C1-P-906001 Mass and Charge Composition Pulsed Vacuum Arc Discharge Plasma with Compound Ti-Al Cathode</p> <p><u>K.P. Savkin</u>, A.G. Nikolaev, E.M. Oks, V.P. Frolova, G.Yu. Yushkov, S.A. Barenholts*, I.S. Zhirkov**</p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>*Prokhorov General Physics Institute RAS, Moscow, Russia</i> <i>**Linkoping University, Linkoping, Sweden</i></p>

Oral Session 2. Modification of material properties

<p>9:00 - 9:40 Invited</p>	<p>C3-O-002741 Structural and Morfological Features of TiNi Surface Layers Formed with High Current Pulsed Electron Beam <u>A.A. Neyman</u>, V.O. Semin, L.L. Meysner, A.I. Lotkov, N.N. Koval*, A.D. Teresov* <i>Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia</i> <i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
<p>9:40 - 10:00</p>	<p>C3-O-000081 About the Nature of Percolation Conductivity of Artificial Policristalline Graphite E.I. Zhmurikov <i>Budker Institute of Nuclear Physics SB RAS, Novosibirsk, Russia</i></p>
<p>10:00 - 10:20</p>	<p>C3-O-000781 Morphology, Structure and Optical Properties of the Titanium Dioxide Films Synthesised on Air and in an Atmosphere of Oxygen <u>A.N. Latyshev</u>*, V.M. Ievlev*^{***}, S.B. Kushchev^{***}, L.Y. Leonova*, O.V. Ovchinnikov*, A.S. Kotko*, E.V. Popova* <i>*Voronezh State University, Voronezh, Russia</i> <i>*Lomonosov Moscow State University, Moscow, Russia</i> <i>***Voronezh State Technical University, Voronezh, Russia</i></p>
<p>10:20 - 10:40</p>	<p>C3-O-003591 New Binary Molybdates: Synthesis, Structure, Properties <u>O.D. Chimitova</u>, B.G. Bazarov, A.E. Sarapulova*, A. Komarek*, D. Mikhailova*, S.G. Dorzhieva, H. Ehrenberg**, J.G. Bazarova <i>*Baikal Institute of Nature Management SB RAS, Ulan-Ude, Russia</i> <i>**Max Planck Institute for Chemical Physics of Solids, Dresden, Germany</i> <i>***Karlsruhe Institute of Technology, Institute for Applied Materials, Egenstein-Leopoldshafen, Germany</i></p>
<p>10:40 – 11:00 Coffee Break</p>	

11:00 - 11:20	<p>C3-O-001891 Radiation-Thermal Effects in Ni-Ti Alloy at Successive Impact of Krypton Ions and Annealing</p> <p><u>V.P. Poltavtseva</u>, V.I. Antonyuk, S.B. Kislitsin <i>Institute of Nuclear Physics, Almaty, Kazakhstan</i></p>
11:20 - 11:40	<p>C3-O-002181 The Structural-Phase States of Near-Surface Layers in NiTi Alloy Caused By High-Current Electron Beam Treatments</p> <p><u>M.G. Ostapenko</u>^{*,**}, L.L. Meisner^{*,***}, A.A. Lotkov[*], E.Yu. Gudimova^{*,*}, M.A. Zakharova^{***}</p> <p><i>*Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia</i> <i>**National Research Tomsk Polytechnic University, Tomsk, Russia</i> <i>***National Research Tomsk State University, Tomsk, Russia</i></p>
11:40 – 12:00	<p>C3-O-003091 Improving the Exploitation Properties of Titanium Alloy by High Density Plasma</p> <p><u>K.N. Ramazanov</u>, V.V. Budilov, I.S. Ramazanov <i>Ufa State Aviation Technical University, Ufa, Russia</i></p>
12:00 - 12:20	<p>C3-O-003121 Radiation Graft Polymerization of Polymethylmethacrylate on Polymer Films</p> <p><u>M.A. Rezvova</u>, V.D. Zhevnyak, K. Uemura, V. Pak <i>Kemerovo State University, Kemerovo, Russia</i></p>
12:20 - 12:40	<p>C3-O-005441 Comparative Experiments on Ion Bombardment and Mechanical Shock Loading of Al-Cu-Mg Alloys</p> <p><u>V.V. Ovchinnikov</u>, N.V. Gushchina, L.I. Kaigorodova[*], A.N. Grigoriev^{**}, A.V. Pavlenko^{**}, V.V. Plokhoi^{**}</p> <p><i>*Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i> <i>**Institute of Metal Physics UD RAS, Ekaterinburg, Russia</i> <i>***All-Russian Scientific Research Institute for Technical Physics, Snezhinsk, Russia</i></p>
12:40 – 14:00 Lunch	

14:00 - 14:20	<p>C3-O-004651 Effect of Ion-Plasma Modifying Treatment on the Mechanical and Tribological Properties of Titanium Alloys VT6 with Coars and Ultrafine Structure</p> <p><u>V.M Savostikov</u>, A.I. Potekaev, A.N. Tabachenko, E.F. Dudarev, I.A. Shulepov*</p> <p><i>Siberian Physical-Technical Institute of National Research Tomsk State University, Tomsk, Russia</i> <i>*National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
14:20 - 14:40	<p>C3-O-004391 Modification of the Near-Surface Layers of Steel and Copper Plates under the Action of Discharge Plasma</p> <p><u>M.V. Erofeev</u>***, M.A. Shulepov*, V.F. Tarasenko***, K.V. Oskomov*</p> <p><i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>**National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
14:40 - 15:00	<p>C3-O-005571 Formation of Highly Electroconductive Surface Alloys with a Low Energy High-Current Electron Beam</p> <p><u>E.V. Yakovlev</u>, A.B. Markov</p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
15:00 - 15:20	<p>C3-O-002231 Investigation Of NiTi Gradient Surface Layers with Changing Atomic Crystal Structure Formed as a Result of Electron-Beam Impacts</p> <p><u>V.O. Semin</u>, A.A. Neyman*, L.L. Meysner*</p> <p><i>National Research Tomsk State University, Tomsk, Russia</i> <i>*Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia</i></p>
15:20 - 15:40	<p>C3-O-002301 Diffraction Complex Investigation of Silicone Coatings and Modified Surface Layers of Titanium Nickel</p> <p><u>S.N. Meisner</u>, A.I. Lotkov, L.L. Meisner, A.V. Tverdokhlebova</p> <p><i>Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia</i></p>
<p>15:40 – 17:00 Poster Session & Coffee Break</p>	

17:00 - 17:20	<p>C3-O-002611 Stresses in Interface between Coating and Substrate Induced by Thermal Diffusion at External Heating</p> <p>M.V. Chepak-Gizbrekht, A.G. Knyazeva <i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
17:20 - 17:40	<p>C3-O-002671 Evolution of Structure and Phase Composition of Titanium Alloyed with Molybdenum, Chromium and Zirconium after Compression Plasma Flows Impact and High Temperature Influence</p> <p><u>V.I. Shymanski</u>, N.N. Cherenda, V.V. Uglov, V.M. Astashynski*, A.M. Kuzmitski* <i>Belarusian State University, Minsk, Belarus</i> <i>*A.V. Luikov Heat and Mass Transfer Institute NAS, Minsk, Belarus</i></p>
17:40 - 18:00	<p>C3-O-002701 Surface Alloying of Copper Using a Quasistationary Plasma Accelerator</p> <p>N.N. Cherenda*, A.P. Laskovnev**, A.V. Basalaj**, V.V. Uglov*, V.M. Astashynski***, A.M. Kuzmitski*** <i>*Belarusian State University, Minsk, Belarus</i> <i>**Physical Technical Institute NAS, Minsk, Belarus</i> <i>***A.V. Luikov Heat and Mass Transfer Institute NAS, Minsk, Belarus</i></p>

Poster Session 2. Modification of material properties

1	<p>C3-P-005031 Application of Glow-Discharge and Constant Magnetic Field for Hard Alloy Modification</p> <p><u>V. Abidzina</u>, U. Shamiankou, F. Truhachev, M. Belaya, A. Shamiankova, A. Serykko <i>Belarusian-Russian University, Mogilev, Belarus</i></p>
2	<p>C3-P-003801 Application of Intense Pulsed Electron Beams for Repair and Property Recovery of Turbine Blades with Perforate Holes</p> <p><u>A.N. Gromov</u>, V.A. Shulov*, O.A. Bytsenko*, D.A. Teryaev*, A.D. Teryaev*, V.I. Engelko** <i>Chernyshev Machine Building Enterprise, Moscow, Russia</i> <i>*Moscow Aviation Institute, Moscow, Russia</i> <i>**D.V. Efremov Institute of Electrophysical Apparatus, Saint Petersburg, Russia</i></p>
3	<p>C3-P-004601 Action of Discharge Initiated by Runaway Electron Beam on Steel: Composition, Structure and Properties</p> <p><u>M.A. Shulepov</u>, Yu.F. Ivanov, V.F. Tarasenko, A.G. Burachenko <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
4	<p>C3-P-004291 Designing of Wear-Resistant Chrome-Vanadium White Iron Coating: Part 1. Vacuum Electron-Beam Hardfacing</p> <p><u>B.V. Dampilon***</u>, V.G. Durakov**, S.F. Gnusov***, A.I. Ziganshin**, A.M. Tolstokulakov* <i>*National Research Tomsk Polytechnic University, Tomsk, Russia</i> <i>**Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia</i></p>
5	<p>C3-P-004292 Designing of Wear-Resistant Chrome-Vanadium White Iron Coating: Part 2. Multipoint Impulse Electron-Beam Processing</p> <p><u>B.V. Dampilon***</u>, V.G. Durakov**, S.F. Gnusov***, A.I. Ziganshin**, N.Y. Krylova* <i>*National Research Tomsk Polytechnic University, Tomsk, Russia</i> <i>**Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia</i></p>

6	<p>C3-P-000461 Cleaning of GaAs Surface by the Treatment in Atomic Hydrogen Flow and Ultraviolet Irradiation</p> <p><u>E.V. Erofeev</u>, I.V. Fedin*, A.I. Kazimirov*, V.A. Kagadei**</p> <p><i>Research & Production Company "Micran", Tomsk, Russia</i> <i>*Tomsk State University of Control Systems and Radioelectronics, Tomsk, Russia</i> <i>**Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
7	<p>C3-P-001332 Corrosive Characteristics of Aluminum and Steels Substrates with Layers Prepared by Ion Beam Assisted Deposition of Zinc and with Coatings Produced by Electrolytic Zincing</p> <p>V.V. Poplavsky, V.G. Matys</p> <p><i>Belarusian State Technological University, Minsk, Belarus</i></p>
8	<p>C3-P-004631 Corrosion Resistance Improvement of 12% Cr Ferritic-Martensitic Steel by Pulsed Plasma Treatment</p> <p><u>V.L. Yakushin</u>, P.S. Dzhumaev, B.A. Kalin, A.T.Khein, M.V. Leont'eva-Smirnova*, I.A. Naumenko*, V.I. Pol'skii</p> <p><i>National Research Nuclear University MEPhI (Moscow Engineering Physics Institute), Moscow, Russia</i> <i>*JSC A.A. Bochvar All-Russian Scientific Research Institute for Inorganic Materials, Moscow, Russia</i></p>
9	<p>C3-P-002491 Hydrogen upon Non-Polar Surfaces of ZnO: Ab Initio Study</p> <p><u>A. Usseinov</u>, E.A. Kotomin*, Yu.F. Zhukovskii*, J. Purans*, A. Akilbekov, A.K. Dauletbekova</p> <p><i>L.N. Gumilyov Eurasian National University, Astana, Kazakhstan</i> <i>*Institute of Solid State Physics, Riga, Latvia</i></p>
10	<p>C3-P-002161 Effect of a Pulsed Electron Beam Irradiation on the Structural and Phase State and Hydrogen Degassing of Zr-1Nb Alloy</p> <p><u>E.N. Stepanova</u>, G.P. Grabovetskaya*, I.P. Mishin*, A.D. Teresov**</p> <p><i>National Research Tomsk Polytechnic University, Tomsk, Russia</i> <i>*Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia</i> <i>**Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>

11	<p>C3-P-004121 Energy Exchange in Metal-Hydrogen Systems under Radiation Exposure</p> <p><u>Yu.I. Tyurin</u>, V.D. Khoruzhii, Yu.A. Sivov, I.P. Chernov, I.N. Sigfusson*</p> <p><i>National Research Tomsk Polytechnic University, Tomsk, Russia</i> <i>*Innovation Centre Iceland, Reykjavik, Iceland</i></p>
12	<p>C3-P-003191 Enhancement of the Performance of Cutting Tools by the Irradiation in Glow-Discharge Plasma</p> <p><u>V. Abidzina</u>, U. Shamiankou, M. Belaya, A. Shamiankova</p> <p><i>Belarusian-Russian University, Mogilev, Belarus</i></p>
13	<p>C3-P-001171 Increase in Reflectivity Films of the Aluminum Films in the UV Range by Means of Change of Micro Stress in the Coating</p> <p><u>S.P. Umnov</u>, O.Kh. Asainov</p> <p><i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
14	<p>C3-P-001271 Investigation of the Surface Properties of Steel 52100 after Treatment by Pulsed Concentrated Energy Fluxes</p> <p><u>V.V. Demidenko</u>, S.K. Pavlov, M.V. Zhuravlev, G.E. Remnev</p> <p><i>Institute of High Technology Physics of National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
15	<p>C3-P-001331 Investigation of Active Layers of the Methanol and Ethanol Oxidation Electrocatalysts Prepared Using Ion Beam Assisted Deposition Technique</p> <p><u>V.V. Poplavsky</u>, A.V. Dorozhko, V.G. Matys</p> <p><i>Belarusian State Technological University, Minsk, Belarus</i></p>
16	<p>C3-P-002451 Influence of Compressive Plasma Flows Treatment Parameters on Structure and Microhardness of the Zr Coating/T15K6 Hard Alloy System</p> <p><u>E.A. Krutsilina</u>, V.V. Uglov, A.K. Kuleshov, V.M. Astashynski*, A.M. Kuzmitski*</p> <p><i>Belarusian State University, Minsk, Belarus</i> <i>*A.V. Luikov Heat and Mass Transfer Institute NAS, Minsk, Belarus</i></p>

17	<p>C3-P-002761 Methane-Hydrogen Mixtures Production from Hydrocarbon Gas Using Microwave Plasma</p> <p><u>A.G. Zherlitsyn</u>, K.S. Lazar, V.P. Shejan <i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
18	<p>C3-P-005442 Radiation Annealing of the Alloy 1424 (Al-Mg-Li-Zn) with Powerful Beams of Accelerated Ions</p> <p><u>V.V. Ovchinnikov</u>, F.F. Mahinko, S.M. Mozharovsky, N.V. Gushchina, L.I. Kaigorodova* <i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i> <i>*Institute of Metal Physics UD RAS, Ekaterinburg, Russia</i></p>
19	<p>C3-P-004682 Residual Stress State in Oxide Dispersive Steel Due to Irradiation by Swift Heavy Ions</p> <p><u>V.V. Uglov</u>, V.A. Skuratov*, S.V. Zlotski <i>Belarusian State University, Minsk, Belarus</i> <i>*Joint Institute for Nuclear Research, Dubna, Russia</i></p>
20	<p>C3-P-003752 Regularities of Nanostructured Electron-Beam Hardening of Metal-Ceramic (Hard) Alloys Surface Layer</p> <p><u>Yu.F. Ivanov***</u>, A.D. Teresov*, Yu.A. Denisova*, V.E. Ovcharenko***, A.V. Belyj**** <i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>**National Research Tomsk Polytechnic University, Tomsk, Russia</i> <i>***Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia</i> <i>****Physical Technical Institute NAS, Minsk, Belarus</i></p>
21	<p>C3-P-004021 Study of Hydrogen Accumulation in Palladium, Silver and Silverpalladium Alloy</p> <p><u>N.N. Nikitenkov</u>, Yu.I. Tyurin, V.S. Sypchenko, I.V. Dushkin, A.N. Nikitenkov, O.V. Vilkhivskaya, I. Sigfusson* <i>*National Research Tomsk Polytechnic University, Tomsk, Russia</i> <i>**University of Iceland, Innovation Centre, Reykjavik, Iceland</i></p>
22	<p>C3-P-001621 Surface Resistance of Ceramic and Polymeric Insulators after Combined Metal and Gas Ion Implantation</p> <p><u>K.P. Savkin*</u>, A.S. Bugaev*, A.G. Nikolaev*, E.M. Oks***, M.V. Shandrikov*, A.V. Tynkov***, G.Yu. Yushkov* <i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>**Tomsk State University of Control Systems and Radioelectronics, Tomsk, Russia</i></p>

23	<p>C3-P-000931 Self-Organized Bimodal Structure Of The CuCr-Contact Alloys</p> <p><u>V. Durakov*</u>, S. Gnyusov*^{***}, B. Dampilon*^{***}</p> <p><i>*Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia</i> <i>**National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
24	<p>C3-P-002891 Special Features of Beam Plasma Generated Inside a Glass Tube by Forevacuum Plasma Electron Source</p> <p><u>D.B. Zolotukhin</u>, V.A. Burdovitsin, E.M. Oks*</p> <p><i>Tomsk State University of Control Systems and Radioelectronics, Tomsk Russia</i> <i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
25	<p>C3-P-003321 Singularities and Regularities of Phase Formation in Zr-Y-O System</p> <p><u>A.A. Klopotov*^{***}</u>, O.S. Tolkachev*^{***}, Y.F. Ivanov*^{****,*****}, O.G. Volokitin*</p> <p><i>*Tomsk State University of Architecture and Building, Tomsk, Russia</i> <i>**National Research Tomsk State University, Tomsk, Russia</i> <i>***National Research Tomsk Polytechnic University, Tomsk, Russia</i> <i>****Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
26	<p>C3-P-003241 Simulation of Electron-Beam Surfacing of Coatings with FeB and FeTi Modifying Particles with Taking into Account Physical-Chemical Transformations</p> <p><u>O.N. Kryukova</u>, A.G. Knyazeva*</p> <p><i>Institute of Strength Physics and Materials Science, Tomsk, Russia</i> <i>*National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
27	<p>C3-P-003001 Stability of the Electrical Breakdown Channel in Ionic Crystals</p> <p>V.D. Kulikov</p> <p><i>Tomsk Agricultural Institute of Novosibirsk State Agrarian University, Tomsk, Russia</i></p>
28	<p>C3-P-002731 Structure and Tribological Properties of Copper Alloyed with Zirconium Atoms under the Influence of Compression Plasma Flows</p> <p><u>A.V. Basalaj</u>, A.P. Laskovnev, N.N. Cherenda*, V.V. Uglov*, V.M. Astashynski***, A.M. Kuzmitski**</p> <p><i>Physical Technical Institute NAS, Minsk, Belarus</i> <i>*Belarusian State University, Minsk, Belarus</i> <i>**A.V. Luikov Heat and Mass Transfer Institute NAS, Minsk, Belarus</i></p>

29	<p>C3-O-003691 Structural-Phase Conditions of the "Ta-Coating/NiTi-Substrate" Surface Layers Melted with Low-Energy High-Current Electron Beam</p> <p><u>E.Yu. Gudimova</u>^{*,**}, L.L. Meisner^{*,**}, A.I. Lotkov[*], M.G. Ostapenko[*]</p> <p><i>*Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia</i> <i>**National Research Tomsk State University, Tomsk, Russia</i></p>
30	<p>C3-O-004691 Synthesis of Aluminum Oxide and Zirconium Dioxide with Combination of Spray Dryer Method and Reverse Precipitation Method</p> <p><u>A.E. Ileya</u>, G.V. Lyamina[*]</p> <p><i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
31	<p>C3-P-906031 Sputtering and Erosion of Constructional Materials after Pulse Plasma Streams Influence</p> <p>A.M. Zhukeshov, <u>A.T. Gabdullina</u>, A.U. Amrenova, A. Kaibar, Beysenbaev S.K.</p> <p><i>Science Research Institute of Experimental and Theoretical Physics Kazakh National university named al-Farabi, Almaty, Kazakhstan</i></p>

Oral Session 3.1. Modification of material properties

<p>9:00 - 9:20</p>	<p>C3-O-004392 Atmospheric Pressure Plasma Jet Driven by Dielectric Barrier Discharge <u>M.V. Erofeev</u>^{*,**}, V.F. Tarasenko^{*,**} <i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>**National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
<p>9:20 - 9:40</p>	<p>C3-O-003941 The Metals and Alloys Surface Nitriding in DC and Pulsed Modes of Nonself-Sustained Glow Discharge with a Large Area Hollow Cathode <u>I.V. Lopatin</u>, Yu.H. Akhmadeev, V.V. Denisov <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
<p>9:40 - 10:00</p>	<p>C3-O-003751 Structure and Properties of Surface Al-Si-Ti-Cu Alloy, Syntesized on Silumin by Melting of (Ti-Cu) Film/(Al-Si) Substrate System <u>Yu.F. Ivanov</u>^{*,**}, O.V. Krysina[*], E.A. Petrikova[*], A.D. Teresov[*] <i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>**National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
<p>10:00 - 10:20</p>	<p>C3-O-004413 Plasmon Dispersion Engineering in Gase via Al-Doping <u>D.M. Lubenko</u>[*], Yu.M. Andreev^{**,***}, K.A. Kokh^{****,*****}, G.V. Lanskii^{**,***}, V.F. Losev^{*,*****}, V.A. Svetlichnyi^{***} <i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>**Institute of Monitoring of Climatic and Ecological Systems SB RAS, Tomsk, Russia</i> <i>**Siberian Physical-Technical Institute of National Research Tomsk State University, Tomsk, Russia</i> <i>***V.S. Sobolev Institute of Geology and Mineralogy SB RAS, Novosibirsk, Russia</i> <i>****National Research Novosibirsk State University, Novosibirsk, Russia</i> <i>*****National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>

10:20 - 10:40	<p>C3-O-005561 Pulsed Ion Beam Effect on the Titanium and Zirconium Alloys</p> <p><u>I.P. Chernov</u>, E.V. Berezneeva, P.A. Beloglazova, N.S. Pushilina, G.E. Remnev</p> <p><i>National Research Tomsk Polytechnic University, Tomsk Russia</i></p>
<p>10:40 – 11:00 Coffee Break</p>	
11:00 - 11:20	<p>C3-O-004801 Intermetallic Free Aluminum Surface Treatment with SOLO Electronbeam Irradiation</p> <p><u>K. Uemura</u>, P. Raharjo, K. Murakami*, M. Okano*</p> <p><i>ITAC Ltd. Takarazuka, Japan</i></p> <p><i>*Industrial Technology Center of Okayama Prefecture, Okayama, Japan</i></p>
11:20 - 11:40	<p>C3-O-004981 Modification of the Fuel Claddings Surface with a Wide Range Spectrum Ion Beam</p> <p><u>N.V. Volkov</u>, B.A. Kalin, R.A. Valikov, A.S. Yashin, R.Sh. Yapparov</p> <p><i>National Research Nuclear University MEPhI (Moscow Engineering Physics Institute), Moscow, Russia</i></p>
11:40 – 12:00	<p>C3-O-005601 Formation of Gradient Layers of the Ti-Nb Alloy System by Electronbeam Surfacing</p> <p><u>I.A. Glukhov</u>, Yu.P. Sharkeev, A.Yu. Eroshenko, M.G. Golkovski*, V.A. Bataev**, S.V. Fortuna</p> <p><i>Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia</i></p> <p><i>*Budker Institute of Nuclear Physics SB RAS, Novosibirsk, Russia</i></p> <p><i>**Novosibirsk State Technical University, Novosibirsk, Russia</i></p>
12:00 - 12:20	<p>C3-O-005341 Electron-Ion-Plasma Alloying of Silumin with Titanium</p> <p><u>E.A Petrikova</u>*, Yu.F. Ivanov***, E.A. Budovskih***, A.D. Teresov*</p> <p><i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p> <p><i>**National Research Tomsk Polytechnic University, Tomsk, Russia</i></p> <p><i>***Siberian State Industrial University, Novokuznetsk, Russia</i></p>

12:20 - 12:40	<p>C3-O-005111 An Electron Beam Treatment on Wear Resistance of the VT1-0 Titanium</p> <p><u>N.V. Girsova</u>*, B.P. Gritsenko*^{****}, Y.F. Ivanov**^{****}, K.V. Krukovskiy*, A.D. Teresov**, N.N. Koval**</p> <p><i>*Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia</i> <i>**Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>***National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
12:40 – 14:00 Lunch	
15:40 – 17:00 Poster Session	

Oral Session 3.2. Fundamentals of modification processes

14:00 - 14:20	<p>C2-O-002662 Comparative Analysis of Material Surface Formation Processes under the Action of Different Types of Intense Energy Flows Treatment</p> <p><u>A.Ya. Levvy</u>, V.M. Astashynski*, N.N. Cherenda**, V.V. Uglov**, A.P. Yalovets</p> <p><i>National Research South Ural State University, Chelyabinsk, Russia</i> <i>*A.V. Luikov Heat and Mass Transfer Institute of the NAS, Minsk, Belarus</i> <i>**Belarusian State University, Minsk, Belarus</i></p>
14:20 - 14:40	<p>C2-O-004361 Ion Trajectories Calculation for Negatively Biased Needle Electrode in the Volume Discharge Plasma</p> <p><u>A.G. Remnev</u>, K. Uemura, A.V. Kozyrev*, V.V. Lopatin**</p> <p><i>*ITAC Ltd., Takarazuka, Japan</i> <i>**Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>***Institute of High Technology Physics, Tomsk, Russia</i></p>
14:40 - 15:00	<p>C2-P-003511 The Analysis of Possibilities of the Magnetron Sputtering System for High-Rate Deposition of Functional Coatings</p> <p><u>G.A. Bleykher</u>, V.P. Krivobokov, A.V. Yuryeva</p> <p><i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>

15:00 - 15:20	<p>C2-O-003051 Numerical Modeling of Physical Processes and Structural Changes in Metals under Intensive Irradiation with Use of CRS Code: Dislocations, Twinning, Evaporation and Stress Waves</p> <p><u>A.E. Mayer</u>, E.N. Borodin*, V.S. Krasnikov**, P.N. Mayer <i>Chelyabinsk State University, Chelyabinsk, Russia</i> *Institute of Problems of Mechanical Engineering RAS, Saint Petersburg, Russia **National Research South Ural State University, Chelyabinsk, Russia</p>
15:20 - 15:40	<p>C2-O-003821 The Effect of Irradiating Regimes with Intense Pulsed Electron Beams on Crater Creation Taking Place on the Surface of Targets from Nickel Alloys</p> <p><u>V.A. Shulov</u>, A.N. Gromov*, D.A. Teryaev, O.A. Bytzenko, V.I. Engelko** <i>Moscow Aviation Institute, Moscow, Russia</i> *Chernyshev Moscow Machine-Building Enterprise, Moscow, Russia **D.V. Efremov Institute of Electrophysical Apparatus, Saint Petersburg, Russia</p>
15:40 – 17:00 Poster Session & Coffee Break	
17:00 - 17:20	<p>C2-O-003361 Unfiltered Aluminum Vacuum Arc Plasma Application for Intermetallic Layers Formation using High-Frequency Short-Pulse Plasma Immersion Ion Implantation Method</p> <p><u>D.O. Sivin</u>, A.I. Ryabchikov, A.I. Bumagina <i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
17:20 - 17:40	<p>C2-P-004641 Effect of Pulsed Plasma Flows Treatment on the Microstructure of Chromium Ferritic-Martensitic Steel EK-181</p> <p><u>P.S. Dzhumaev</u>, O.V. Emelyanova, V.L. Yakushin, B.A. Kalin, M.G. Ganchenkova, A.T. Khein, M.V. Leont'eva-Smirnova*, R.Z. Valiev**, N.A. Enikeev** <i>National Research Nuclear University MEPhI (Moscow Engineering Physics Institute), Moscow, Russia</i> *JSC A.A. Bochvar All-Russian Scientific Research Institute for Inorganic Materials, Moscow, Russia **Ufa State Aviation Technical University, Ufa, Russia</p>

17:40 - 18:00

**C2-O-004942 Melting of Thin Metal Film on
Dielectric Substrate under the Action High Power
Ion Beam Nanosecond Duration**

V.S. Kovivchak, T.V. Panova, R.B. Burlakov, E.V. Knyazev
Omsk F.M. Dostoevsky State University, Omsk, Russia

Poster Session 3.1. Modification of material properties

1	<p>C3-P-003281 Effect of Power Mode on Resistance IR-LEDs to the Fast-Neutron Irradiation</p> <p>A.V. Gradoboev, V.V. Sednev <i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
2	<p>C3-P-003282 Effect of Electric Field Built of Pn-Junction on IR-LEDs Resistance under Irradiation by Gamma-Rays</p> <p><u>A.V. Gradoboev</u>, V.V. Sednev <i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
3	<p>C3-P-005361 Effect of Crossed Electric and Magnetic Fields on Ion Nitriding in a Glow Discharge</p> <p>K.N. Ramazanov, R.K. Vafin <i>Ufa State Aviation Technical University, Ufa, Russia</i></p>
4	<p>C3-P-000941 Effect of Ion Implantation on the Antibacterial Properties of Materials Medical Implants</p> <p><u>A.G. Nikolaev</u>*, E.M. Oks***, A. Oztarhan***, E. Sokullu****, G.Yu. Yushkov*, V.P. Frolova*</p> <p><i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>**Tomsk State University of Control Systems and Radioelectronics, Tomsk, Russia</i> <i>***Izmir University, Uckuyular, Izmir, Turkey</i> <i>****Izmir Katip Celebi University, Cigli Main Campus, Izmir, Turkey</i></p>
5	<p>C3-P-005011 Modification of the Co and Ni-Based Powder Alloys Coatings Properties by Added Irradiation</p> <p>D.L. Alontseva <i>D. Serikbayev East Kazakhstan State Technical University, Ust-Kamenogorsk, Kazakhstan</i></p>
6	<p>C3-P-000661 Modification of Zirconia Ceramics by Treating the Surface of Powerful Pulsed Ion Beams</p> <p><u>S.A. Ghyngazov</u>, I.P. Vasil'ev, T.S. Frangulyan, A.V. Chernyavski <i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>

7	<p>C3-P-002271 Modeling of Heat Transfer, Structural Features and Mechanical Properties of Boride Layers on Carbon Steels, Formed under the Influence of the Electron Beam</p> <p><u>D.E. Dasheev</u>, I.N. Badmaeva, A.E. Polukonova, N.N. Smirnyagina, A.S. Milonov, V.M. Khaltanova*</p> <p><i>Institute of Physical Materials Science SB RAS, Ulan-Ude, Russia</i> <i>*Buryat State University, Ulan-Ude, Russia</i></p>
8	<p>C3-P-004961 Numerical Simulation of Physical and Chemical Processes at Laser Sintering of Metal Powders</p> <p>S.N. Sorokova</p> <p><i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
9	<p>C3-P-002042 Osseointegration and Elastic Properties of Porous Titanium – Diamond-Like Carbon – Bone Tissue Composite</p> <p><u>A.B. Vladimirov</u>, A.P. Rubshtein, E.B. Makarova*, S.A. Plotnikov</p> <p><i>Institute of Metal Physics UD RAS, Ekaterinburg, Russia</i> <i>*V.D. Chaklin Ural Scientific & Research Institute of Traumatology and Orthopaedics, Ekaterinburg, Russia</i></p>
10	<p>C3-P-001991 Phase and Structure Transformations in Doped Barium Cerate at Heavy Ion Irradiation</p> <p><u>T.I. Aksenova</u>, I.V. Khromushin, T. Tuseyev, K.K. Munasbaeva, Yu.V. Ermolaev*, V.N. Ermolaev*, A.S. Seitov*</p> <p><i>Institute of Nuclear Physics, Almaty, Kazakhstan</i> <i>*Kazakh National Technical University after K.I. Satpayev, Almaty, Kazakhstan</i></p>
11	<p>C3-P-003753 Structure and Properties of the Surface Alloy Ti – Y, Formed by the Combined Method Joining the Electric Explosion Alloying and the Electron – Beam Treatment</p> <p><u>Yu.F. Ivanov***</u>, K.V. Sosnin***, V.E. Gromov***, N.N. Morozova**, A.D. Teresov*</p> <p><i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>**National Research Tomsk Polytechnic University, Tomsk, Russia</i> <i>***Siberian State Industrial University, Novokuznetsk, Russia</i></p>

12	<p>C3-P-004751 Surface Modification of 65G Steel by Electrospark Alloying and Electron-Beam Influence Methods</p> <p><u>Yu.A. Denisova</u>, Yu.F. Ivanov, E.A. Petrikova, E.A. Kolubaev*, A.D. Teresov, V.V. Shugurov</p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia,</i> <i>*Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia</i></p>
13	<p>C3-O-002692 Plasma-Electrolytic Modification of High-Speed Steel Surface Layers</p> <p>B.K. Rakhadilov, M.K. Skakov</p> <p><i>National Nuclear Center of the Republic of Kazakhstan, Kazakhstan</i></p>
14	<p>C3-P-000291 Transport Charge of Gallium Arsenide Films Synthesized on Polycrystalline Silicon by Ionics Ablation</p> <p><u>S.K. Pavlov</u>, A.V. Kabyshev, F.V. Konusov, G.E. Remnev</p> <p><i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
15	<p>C3-P-001811 The Influence of a Diffusion Discharge in the Air at Atmospheric Pressure on the Electro-Physical Properties of Narrow-Gap Semiconductors CdHgTe</p> <p><u>D.V. Grigoryev</u>, A.V. Voitsekhovsii, A.G. Korotaev, A.P. Kokhanenko, I.V. Romanov, V.F. Tarasenko*, M.A. Shulepov*</p> <p><i>National Research Tomsk State University, Tomsk, Russia</i> <i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
16	<p>C3-P-004022 The Plasma-Immersion Ion Implantation of Titanium in Stainless Steel and Aluminium in Titanium</p> <p><u>A.I. Bumagina</u>, I.A. Shulepov, D.O. Sivin, A.N. Sutygina, N.N. Nikitenkov, O.V. Vilhivskaya, A.K. Bozhenko, I.N. Khimich</p> <p><i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>

17	<p>C3-P-003322 Titanium Surfaces during Formation of Silicides and Borides Initiated by High-Energy Treatment. Modification of Structure and Properties</p> <p><u>A.A. Klopotov</u>*,** Yu.F. Ivanov**** A.I. Potekaev**, O.G. Volokitin*, V.D. Klopotov****</p> <p>*Tomsk State University of Architecture and Building, Tomsk, Russia **National Research Tomsk State University, Tomsk, Russia ***Institute of High Current Electronics SB RAS, Tomsk, Russia ****National Research Tomsk Polytechnic University, Tomsk, Russia</p>
18	<p>C3-P-002631 The Formation of NiCrBSi Coatings with Increased Wear Resistance by Gas Powder Laser Cladding</p> <p><u>N.N. Soboleva</u>, A.V. Makarov, I.Yu. Malygina, A.L. Osintseva</p> <p><i>Institute of Engineering Science UD RAS, Ekaterinburg, Russia</i></p>
19	<p>C3-P-003101 Using of the Effect of the Hollow Cathode for Local Ion Nitriding of Machine Parts</p> <p><u>K.N. Ramazanov</u>, V.V. Budilov, U.G. Khusainov, I.V. Zolotov</p> <p><i>Ufa State Aviation Technical University, Ufa, Russia</i></p>
20	<p>C3-P-003411 Using of Non-Steady State Low-Current Plasmatron for Dielectric Surface Adhesion Increasing</p> <p><u>I.A. Shemyakin</u>, Y.D. Korolev, O.B. Frants, N.V. Landl, V.S. Kasyanov, A.V. Bolotov, V.G. Geiman</p> <p><i>Institute of High Current Electronics, Tomsk, Russia</i></p>
21	<p>C3-P-003721 Formation of Wave-Guide Layers in Lithium Niobate with the Use of Copper Implantation and Diffusion</p> <p><u>L.N. Orlikov</u>, S.I. Arestov, K.M. Mambetova</p> <p><i>Tomsk State University of Control Systems and Radioelectronics, Tomsk, Russia</i></p>
22	<p>C3-P-004451 Formation of Biocompatible Layers on the Implant Surface Using Vacuum Arc Deposition and Subsequent Pulsed Electron-Beam Treatment</p> <p><u>A.D. Teresov</u>, V.V. Shugurov, Yu.F. Ivanov, Yu.A. Denisova, E.A. Petrikova, Yu.H. Akhmadeev, N.N. Koval</p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>

23	<p>C3-P-005342 Modification of Coating (ZrN) / Substrate (AlSi) System by a Pulsed Electron Beam</p> <p><u>E.A. Petrikova*</u>, Yu.F. Ivanov**,**, A.D. Teresov*, S.V. Tkachenko**, O.V. Krysin*</p> <p><i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>**National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
24	<p>C3-O-002081 Features of Electron-Beam Treatment of Low-Alloyed and Grey Cast Iron SCH20</p> <p><u>N.N. Smirnyagina</u>, V.D. Ochirov, D.E. Dasheev</p> <p><i>Institute of Physical Materials Science SB RAS, Ulan-Ude, Russia</i></p>
25	<p>C3-O-002151 Structure and Physical Properties of CsCrTi0.5(MoO₄)₃</p> <p><u>S.G. Dorzhieva</u>, J.G. Bazarova, B.G. Bazarov</p> <p><i>Baikal Institute of Nature Management SB RAS, Ulan-Ude, Russia</i></p>
26	<p>C3-O-003441 Fragmented Structure and Orientation Relationships between Different Fragments in TiNi Surface Layer after Ion Implantation</p> <p><u>A.V. Tverdokhlebova</u>, L.L. Meisner, S.N. Meisner</p> <p><i>Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia</i></p>
27	<p>C3-O-003521 Radiation Synthesis and Properties of the Copolymer Based on Nvinylpyrrolidone and Methacrylic Ester in the Presence of Synthetic Ion Exchangers</p> <p><u>V.M. Le</u>, V.D. Zhevnyak, V. Pak</p> <p><i>Kemerovo State University, Kemerovo, Russia</i></p>
28	<p>C3-O-003541 Microstructure of Layers in Multilayer Thermal Barrier Coatings on the Basis of ZrO₂ / SiAlN</p> <p><u>M.V. Fedorischeva</u>, V.P. Sergeev, M.P. Kalashnikov, V.V. Neyfeld</p> <p><i>Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia</i></p>
29	<p>C3-O-004681 Radiation Effects in Nanocrystalline TiZrAl(Si)N Films Irradiated by He Ions</p> <p><u>V.V. Ugllov</u>, G. Abadias*, S.V. Zlotski, A.Y. Rovbut, S.S. Leshkevich, I.A. Saladukhin</p> <p><i>Belarusian State University, Minsk, Belarus</i> <i>*University of Poitiers, Poitiers, France</i></p>

30	<p>C3-O-005581 Formation of Carbon Steel - Stainless Steel Surface Alloy on Carbon Steel Substrate</p> <p><u>V.I. Petrov</u>, A.B. Markov, E.V. Yakovlev <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
31	<p>C3-O-004401 The Regularities of Wear of Titanium Nickelide Modified by the Method of High-Dose Ion Implantation and Electric-Spark Alloying</p> <p><u>K.V. Krukovskiy</u>, O.A. Kashin, A.I. Lotkov <i>Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia</i></p>
32	<p>C3-P-905991 Structural Conversion of Surface Layer Mg by the Action High Power Beam Ions of Carbon</p> <p>E.V. Golosov*, M.V. Zhidkov*, Y.R. Kolobov*,****, <u>A.E. Ligachev**</u>, G.V. Potyomkin***, G.E. Remnev***, M.Y. Smoljakova***</p> <p><i>*Belgorod State University, Belgorod, Russia</i> <i>**Institute of the general physics A.M.Prokhorov RAS, Moscow, Russia</i> <i>***Tomsk Polytechnic University, Tomsk, Russia</i> <i>****Institute of the structural macrokinetic and problem materials RAS, Moscow, Russia</i></p>
33	<p>C3-P-905992 The Properties Surface of Steel 12x18н10т by Pulse Ion Beam of Carbon Treated</p> <p>E.V. Golosov*, M.V. Zhidkov*, Y.R. Kolobov*,****, <u>A.E. Ligachev**</u>, G.V. Potyomkin***, G.E. Remnev***, M.Y. Smoljakova***</p> <p><i>*Belgorod State University, Belgorod, Russia</i> <i>**Institute of the general physics A.M.Prokhorov RAS, Moscow, Russia</i> <i>***Tomsk Polytechnic University, Tomsk, Russia</i> <i>****Institute of the structural macrokinetic and problem materials RAS, Moscow, Russia</i></p>

Poster Session 3.2. Fundamentals of modification processes

1	<p>C2-P-002781 Modeling of Residual Stress and Strain Fields in Homogeneous and Containing Inclusions Targets with a Flat or Perturbed Surface</p> <p><u>V.S. Krasnikov</u>, A.P. Yalovets, S.V. Kashukov <i>National Research South Ural State University, Chelyabinsk, Russia</i></p>
2	<p>C2-O-002661 The Liquid-Phase Mass Transfer in the Target during Processing Plasma Flows</p> <p><u>A.Ya. Levy</u>, A.P. Yalovets <i>National Research South Ural State University, Chelyabinsk, Russia</i></p>
3	<p>C2-P-002801 Modeling of Powder Medium Evolution during Electron and Laser Syntering</p> <p><u>V.V. Pogorelko</u>, A.P. Yalovets <i>National Research South Ural State University, Chelyabinsk, Russia</i></p>
4	<p>C2-O-003831 Structural Changes into Surface Layers of Parts from Titanium Alloy VT9 during Irradiation with Intense Pulsed Electron Beams</p> <p><u>V.A. Shulov</u>, D.A. Teryaev, A.N. Gromov*, O.A. Bytzenko*, G.G. Shirvanyanz, V.I. Engelko** <i>Moscow Aviation Institute, Moscow, Russia</i> <i>*Chernyshev Moscow Machine-Building Enterprise, Moscow, Russia</i> <i>**D.V. Efremov Institute of Electrophysical Apparatus, Saint Petersburg, Russia</i></p>
5	<p>C2-P-005331 Locally Nonequilibrium Model of Nonlinear Heat Conduction in Metallic Systems under Concentrated Energy Flux Irradiation</p> <p><u>G.A. Vershinin</u>, G.I. Gering, T.V. Panova <i>Omsk F.M. Dostoevsky State University, Omsk, Russia</i></p>
6	<p>C2-P-004941 Formation of the Surface Morphology of Cooper Alloys under the Action of a High Power Ion Beam Nanosecond Duration</p> <p><u>V.S. Kovivchak</u>, T.V. Panova, K.A. Michailov <i>Omsk F.M. Dostoevsky State University, Omsk, Russia</i></p>

7	<p>C2-P-003371 Mechanisms of Macroparticles Number Density Decreasing on a Substrate Immersed in Vacuum Arc Plasma at Repetitively Pulsed Biasing</p> <p><u>A.I. Bumagina</u>, A.I. Ryabchikov, D.O. Sivin, , P.S. Ananin, S.V. Dektyarev</p> <p><i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
8	<p>C2-P-003362 Macroparticles Number Density Decreasing on the Sample, Immersed in Vacuum Arc Titanium Plasma, at Repetitively Pulsed Biasing</p> <p><u>D.O. Sivin</u>, A.I. Ryabchikov, A.I. Bumagina, O.S. Tupikova</p> <p><i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
9	<p>C2-P-003372 Investigation of Possibilities of Microparticles Content Decreasing on Substrate Immersed in Vacuum Arc Plasma</p> <p><u>A.I. Bumagina</u>, A.I. Ryabchikov, D.O. Sivin</p> <p><i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
10	<p>C2-P-003391 Influence of Substrate Characteristics and Negative Bias Parameters to the Rate of Vacuum Arc Macroparticles Accumulation</p> <p><u>A.I. Ryabchikov</u>, D.O. Sivin, A.I. Bumagina</p> <p><i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>

September 25, Thursday

9:00 – 16:00

Oral Session 4. Coatings deposition

9:00 - 9:40 Invited	C4-O-003961 Nanocomposite Coatings with an Amorphous Matrix A.D. Korotaev <i>National Research Tomsk State University, Tomsk, Russia</i>
9:40 - 10:00	C4-P-005221 Structure Transformations on the Surface of the Al-Cr, Al-Cr-Si Powder Cathodes Subjected to Vacuum Arc Heating G.A. Pribytkov, V.V. Kozhova, A.P. Savitskii <i>Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia</i>
10:00 - 10:20	C4-O-005211 Characterization of Titanium-Zirconium Surface Alloys Produced by Magnetron Sputtering Deposition and LEHCEB Treatment M. Bestetti, M.F. Brunella, A.B. Markov*, E.V. Yakovlev* <i>Politecnico di Milano, Milano, Italy</i> <i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i>
10:20 - 10:40	C4-O-004111 Laser-Optical Diagnostic of Dispersed Phase Parameters Applied to Additive Technology of Surface Modification by High-Dense Energy Source D.V. Sergachev, A.A. Michalchenko, V.I. Nalivaiko*, E.V. Kartaev, V.I. Kuzmin, G.A. Pinaev** <i>Khristianovich institute of Theoretical and Applied Mechanics SB RAS, Novosibirsk, Russia</i> <i>*Institute of Automation and Electrometry SB RAS, Novosibirsk, Russia</i> <i>**Institute of Laser Physics SB RAS, Novosibirsk, Russia</i>
10:40 – 11:00 Coffee Break	
11:00 - 11:20	C4-P-906041 High Adhesion Metallic Layers Deposition E. Berlin, V. Grigoriev <i>Laboratory of Vacuum Technology, Ltd, Zelenograd, Russia</i>

11:20 - 11:40	<p>C4-O-000471 Combined Surface Treatment of Hard Alloy Cutting Tool</p> <p><u>S.V. Fedorov</u>, A.A. Okunkova, Ye Min Soe <i>Moscow State University of Technology "STANKIN", Moscow, Russia</i></p>
11:40 - 12:00	<p>C4-O-002481 Solid-Phase Transformations Graphite - Amorphous Carbon - Crystal Carbynes by Charged Particles Beams</p> <p><u>A.P. Semenov</u>, I.A. Semenova, N.N. Smirnyagina <i>Institute of Physical Material Science SB RAS, Ulan-Ude, Russia</i></p>
12:00 - 12:20	<p>C4-O-005051 Magnetron Deposition of Protective Coatings on Base of Si-Al-N on Glasses of Windows of Space Vehicles</p> <p><u>V.P. Sergeev</u>*, M.P. Kalashnikov*, A.V. Voronov*, I.A. Bozhko*, E.V. Ribalko*, Yu.F. Khristenko** <i>*Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia</i> <i>**Scientific Research Institute of Applied Mathematics and Mechanics of National Research Tomsk State University, Tomsk, Russia</i></p>
12:20 - 12:40	<p>C4-O-002421 Strain and Fracture of Single-Layer and Gradient-Layered Nanostructured Coatings Based on Titanium Nitride</p> <p><u>S.V. Ovchinnikov</u>, A.D. Korotaev*, Yu.P. Pinzhin <i>Institute of Strength Physics and Material Science SB RAS, Tomsk, Russia</i> <i>*National Research Tomsk State University, Tomsk, Russia</i></p>
12:40 – 14:00 Lunch	
14:00 - 14:20 Invited	<p>C4-O-905851 Comprehensive Electron-Ion-Plasma Surface Modification of Materials and Products</p> <p>N.N. Koval <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>

14:20 - 14:40	<p>C4-O-005562 Properties of ZrO₂ and TiO₂ Coatings on Zirconium Alloys</p> <p><u>I.P. Chernov</u>*, N.S. Pushilina*, E.V. Berezneeva*, N.N. Koval***, O.V. Krysina**, V.N. Kudiyarov*, V.V. Shugurov**</p> <p>*National Research Tomsk Polytechnic University, Tomsk, Russia **Institute of High Current Electronics SB RAS, Tomsk, Russia</p>
14:40 - 15:00	<p>C4-O-005591 Influence of Microarc Oxidation Parameters on the Roughness and Wettability of the Calcium Phosphate Coatings Deposited on the Nanostructured Titanium</p> <p><u>E.G. Komarova</u>, Yu.P. Sharkeev, E.V. Legostaeva, V.V. Chebodaeva</p> <p>Institute of Strength Physics and Materials Science of SB RAS, Tomsk, Russia</p>
15:00 - 15:20	<p>C4-O-002011 Formation Features of the Transition Metals Borides Nanostructure Layers Formed by an Electron-Beam Surfacing of SHS Products in Vacuum and their Strength Properties</p> <p><u>A.S. Milonov</u>, D.E. Dasheev, A.D. Dorzhiev, N.N. Smirnyagina</p> <p>Institute of Physical Materials Science SB RAS, Ulan-Ude, Russia</p>
15:20 - 15:40	<p>C4-O-003011 Investigation of TiN-Cu Composite Layers Properties Received in a Vacuum Installation of Dual Action by Magnetron Sputtering and Arc Evaporation</p> <p><u>D.B-D. Tsyrenov</u>, A.P. Semenov, N.N. Smirnyagina</p> <p>Institute of Physical Materials Science SB RAS, Ulan-Ude, Russia</p>

15:40 - 16:00	<p>C4-O-001821 Formation's Features of Superhard Boride Layers MeB₂ on Carbon Steels under the Influence of Powerful Electron Beams in a Vacuum</p> <p><u>D.E. Dasheev</u>, N.N. Smirnyagina, Z.M. Khaltarov, V.M. Khaltanova*</p> <p><i>Institute of Physical Materials Science SB RAS, Ulan-Ude, Russia</i> <i>*Buryat State University, Ulan-Ude, Russia</i></p>
16:00 – 17:00 Poster Session & Coffee Break	
17:20 City-tour & Banquet	

Poster Session 4.1. Coatings deposition

1	<p>C4-P-003021 Analysis of the Formation Profiles of Implanted Ions Depending on the Structural State of the Target and the Implantation Modes</p> <p><u>V.T. Barchenko</u>, T.S. Pavlenko <i>Saint-Petersburg Electrotechnical University "LETI", Saint Petersburg, Russia</i></p>
2	<p>C4-P-003111 Accuracy and Roughness of TiN Coatings Deposited by Vacuum Arc Plasma</p> <p><u>K.N. Ramazanov</u>, V.V. Budilov, V.V. Postnov, I.I. Yagafarov, B.F. Usmanov <i>Ufa State Aviation Technical University, Ufa, Russia</i></p>
3	<p>C4-P-003171 Electrodeposition of Zinc Alloys in the Presence of X-Ray Radiation Field</p> <p><u>N.G. Valko*</u>, V.M. Anishchik <i>Belarusian State University, Minsk, Belarus</i> <i>*Yanka Kupala State University of Grodno, Grodno, Belarus</i></p>
4	<p>C4-P-003621 Calcium Phosphate Coatings Prepared by RF-Magnetron Sputtering Deposition: Challenges and Prospects</p> <p>V.F. Pichugin <i>National Research Tomsk State University, Tomsk, Russia</i></p>
5	<p>C4-O-004803 Chromium Oxycarbide Coating with PVD and Non Steady Plasma, and Its Applications</p> <p><u>K. Uemura*</u>, T. Kado, V. Kukhta*, K. Shalnov*, T. Tsuchiya* <i>Former National Institute of Advanced Industrial Science and Technology (AIST), Hiroshima, Japan</i> <i>*ITAC Ltd., Takarazuka, Japan</i></p>
6	<p>C4-P-005222 A Structure and Properties of the Coatings Deposited at Vacuum-Arc Evaporation of Al-Cr, Al-Cr-Si Powder Cathodes in Various Gaseous Media</p> <p><u>G.A. Pribytkov</u>, V.V. Korzhova, A.P. Savitskii <i>Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia</i></p>

7	<p>C4-P-000912 The Features of Formation and Characteristics of Single- and Multilayer Ti-Al-N Coatings Prepared by Vacuum Arc Plasma-Assisted Deposition</p> <p><u>O.V. Krygina</u>, N.N. Koval, V.V. Shugurov, A.A. Kalushevich <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
8	<p>C4-P-000913 Structure of Local Environment of Titanium Atoms in Multicomponent Nitride Coatings Prepared by Ion-Plasma Methods</p> <p><u>O.V. Krygina</u>, N.N. Koval, N.A. Timchenko*, Ya.V. Zubavichus**, <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i> *National Research Tomsk Polytechnic University, Tomsk, Russia **National research centre "Kurchatov Institute", Russia, Moscow</p>
9	<p>C4-P-000581 Complementary Electrochromic Device with PMMA Gel Electrolyte</p> <p><u>A.N. Zakharov</u>, P.S. Galkin*, N.F. Kovsharov, A.A. Soloviev <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i> *Nikolaev Institute of Inorganic Chemistry SB RAS, Novosibirsk, Russia</p>
10	<p>C4-P-000611 Heat Saving Covering Material for Greenhouses</p> <p><u>S.V. Rabotkin</u>, A.A. Soloviev, N.F. Kovsharov, M.M. Pugovkin, N.S. Sochugov <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
11	<p>C4-P-001701 Bias-Assisted Magnetron Sputtering of Yttria-Stabilised Zirconia</p> <p><u>A.A. Solovyev</u>, S.V. Rabotkin*, I.V. Ionov*, A.N. Kovalchuk, A.V. Shipilova* <i>National Research Tomsk Polytechnic University, Tomsk, Russia</i> *Institute of High Current Electronics SB RAS, Tomsk, Russia</p>
12	<p>C4-P-000631 The Impact of Electron Beam Pass Number on Composite Coatings Structure and Properties</p> <p><u>A.A. Ignatov</u>, S.F. Gnyusov, V.G. Durakov* <i>National Research Tomsk Polytechnic University, Tomsk, Russia</i> *Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia</p>

13	<p>C4-P-000632 The Formation of Sliding Wear Resistant Composite Coatings on the Basis of High Speed Steel</p> <p><u>A.A. Ignatov</u>, S.F. Gnyusov, V.G. Durakov*</p> <p><i>National Research Tomsk Polytechnic University, Tomsk, Russia</i> <i>*Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia</i></p>
14	<p>C4-P-002461 DLC Coatings Deposition by Magnetron Discharge Plasma</p> <p><u>Y.N. Yurjev</u>, D.A. Zaitcev, D.V. Sidelev, O.S. Tupikova</p> <p><i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
15	<p>C4-P-000871 Deposition Dioxide Titanium Thin Films by Means of Dual Magnetron: Optical and Photocatalytic Properties</p> <p><u>D.V. Sidelev</u>, Y.N. Yurjev</p> <p><i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
16	<p>C4-P-003381 Formation of Composite Ni-Ti and Fe-Ti Coatings with Adjustable Ratio of Components for Photocatalytic Application</p> <p><u>M.V. Shandrikov</u>, K.P. Savkin, A.V. Tyunkov*</p> <p><i>*Institute of High Current Electronics SB RAS, Tomsk, Russia,</i> <i>**Tomsk State University of Control System and Radioelectronics, Tomsk, Russia</i></p>
17	<p>C4-P-002422 Gradient-Layered Coating of Ti-Al-Si-N, Ti-Al-Si-Cu-N - Conditions of Formation and Structure</p> <p><u>S.V. Ovchinnikov</u>, A.D. Korotaev*, Yu.P. Pinzhin, V.A. Slabodchikov*</p> <p><i>Institute of Strength Physics and Material Science SB RAS, Tomsk, Russia</i> <i>*National Research Tomsk State University, Tomsk, Russia</i></p>
18	<p>C4-P-002581 Mathematical Modeling of Ion Implantation Process with Account the Vacancies Generation</p> <p><u>E.S. Parfenova</u>, A.G. Knyazeva</p> <p><i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
19	<p>C4-P-001211 Investigashion of Copper-Alluminum Contact Pair Surface Obtained by Plasmodynamic Method</p> <p><u>Yu.L. Kolganova</u>, A.A. Sivkov, A.S. Saigash, I.I. Shanenkov</p> <p><i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>

20	<p>C4-P-000633 The Formation of Wear Resistant Coatings for Heavy Loaded Parts as Bearing Journals of Gear Shaft</p> <p><u>S.F. Gnyusov</u>, A.A. Ignatov, V.G. Durakov*</p> <p><i>*National Research Tomsk Polytechnic University, Tomsk, Russia</i> <i>**Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia</i></p>
21	<p>C4-P-001121 The Effect of Magnetron Discharge Operation Modes on TiN Coatings Characteristics</p> <p><u>A.S. Mamaev</u>, O.A. Bureyev</p> <p><i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i></p>
22	<p>C4-P-002041 Wear Resistance of Nanocomposite Films with Diamond-Like Carbon Component</p> <p><u>A.B. Vladimirov</u>, S.A. Plotnikov, A.P. Rubshtein</p> <p><i>Institute of Metal Physics UD RAS, Ekaterinburg, Russia</i></p>
23	<p>C4-P-905691 Surface Tension of Deposited Coatings</p> <p><u>S.A. Guchenko</u>, V.M. Yurov, V.Ch. Laurynas, O.N. Zavatskiy</p> <p><i>The Karaganda State University of the name of academician E.A. Buketov, Karaganda, Kazakhstan</i></p>
24	<p>C4-O-001201 The Effect of Electron Beam Injection (100 eV) on the Characteristics of TiN Coatings Deposited by Reactive Magnetron Sputtering</p> <p><u>A.S. Kamenetskikh</u>, N.V. Gavrilov, A.V. Chukin*</p> <p><i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i> <i>*Ural Federal University, Institute of Physics and Technology, Ekaterinburg, Russia</i></p>
25	<p>C4-P-906042 Ion Beam Sputtering Machine with Plasma Assistance</p> <p><u>E. Berlin</u>, V. Grigoriev</p> <p><i>Laboratory of Vacuum Technology, Ltd, Zelenograd, Russia</i></p>

Poster Session 4.2. Nanoscience and nanotechnology

1	<p>C5-P-000821 Use Copper Central Electrode in the Coaxial Accelerator for in Charge TiN-Cu</p> <p><u>A.A. Evdokimov</u>, A.A. Sivkov, D.Yu. Gerasimov, A.I. Usikov <i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
2	<p>C5-P-000822 Using Bimetallic Electrode Coaxial Accelerator for Batch Superhard Material TiN-Cu</p> <p><u>A.A. Evdokimov</u>, A.A. Sivkov, D.Yu. Gerasimov, A.I. Usikov <i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
3	<p>C5-P-001261 On Possibility of Plasmadynamic Synthesis of Ultradispersed Crystalline Phases in Supersonic Plasma Jet Flowing into the Air Atmosphere</p> <p><u>I.I. Shanenkov</u>, A.A. Sivkov, A.Ya. Pak, Yu.L. Kolganova <i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
4	<p>C5-P-001661 Composite Nanoparticles Synthesis</p> <p><u>E.Ch. Khartaeva</u>, B.B. Baldanov*, B.R. Radnaev*, S.B. Batoroev* <i>Institute of Physical Materials Science SB RAS, Ulan-Ude, Russia</i> <i>*Buryat State University, Ulan-Ude, Russia</i></p>
5	<p>C5-P-001721 Boron Carbide Nanopowder Synthesized Using Electrodischarged Plasma</p> <p><u>I.A. Rakhmatullin</u>, A.A. Sivkov, A.F. Makarova <i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
6	<p>C5-P-002021 Reorientation of Single F2-Centers in LiF Crystal</p> <p><u>S.V. Boichenko</u>*, K. König*, S.A. Zilov***, V.P. Dresvyanskiy*, A.L. Rakevich*, A.V. Kuznetsov*, A.V. Bartul*, E.F. Martynovich*** <i>*Irkutsk Branch of Institute of Laser Physics SB RAS, Irkutsk, Russia</i> <i>**Applied Physics Institute of Irkutsk State University, Irkutsk, Russia</i></p>
7	<p>C5-P-002061 On the Possibility of Direct Dynamic Synthesis of Nanodispersed CuO</p> <p><u>A.S. Saigash</u>, A.A. Sivkov, A.S. Ivshutenko <i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>

8	<p>C5-P-002201 Spectral Characteristics of the Nanophosphors, Received on the Basis Of Sr₂Gd₈(SiO₄)₆O₂: EU Polycrystals</p> <p><u>S.Yu. Sokovnin*</u>, M.G. Zuev**, V.G. Il'ves*, I.V. Baklanova</p> <p><i>Institute of Solid State Chemistry UD RAS, Ekaterinburg, Russia</i> <i>*Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i> <i>**Ural Federal University, Ekaterinburg, Russia</i></p>
9	<p>C5-P-002672 Carbide Nanoparticles Formation in the Surface Layers of Metals Byhigh-Intense Pulsed Ion Beams</p> <p><u>V.I. Shymanski</u>, G.E. Remnev*, S.K. Pavlov*, V.V. Uglov</p> <p><i>Belarusian State University, Minsk, Belarus,</i> <i>*National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
10	<p>C5-P-002861 The Plasmadynamic Synthesis of Nanodispersed Silicon Carbide and the Product Characteristics Management</p> <p><u>D.S. Nikitin</u>, A.A. Sivkov</p> <p><i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
11	<p>C5-P-002951 Ability Obtaining the Phase of Iron Oxide</p> <p><u>A.A. Sivkov</u>, A.A. Svechkaneva</p> <p><i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
12	<p>C5-P-003141 Synthesis of Nanoparticles of Specified Size and Obtaining Technology of Opal Matrices</p> <p><u>G.A. Kuralbayeva</u>, A.K. Kopysheva, G.E. Sataeva, I.I. Ganina, K.N. Baymagambetov, A.A. Amirova</p> <p><i>L.N. Gumilyov Eurasian National University, Astana, Kazakhstan</i></p>
13	<p>C5-P-003491 Fine Structure of Energy Spectra in Field Emission Process of Tungstenzirconia Heterostructure</p> <p><u>I.S. Turmyshev</u>, O.R. Timoshenkova, A.M. Murzakaev</p> <p><i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i></p>

14	<p>C5-P-005141 Structural Transformations of Nanoglobular Carbon under the Action of High Energy Pulsed Beams</p> <p><u>Yu.G. Kryazhev</u>, M.V. Trenikhin, N.N. Koval*, G.M. Seropyan**, A.D. Teresov*, V.A. Likholobov</p> <p><i>Institute of Hydrocarbon Processing SB RAS, Omsk, Russia</i> <i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>**Omsk F.M. Dostoevsky State University, Omsk, Russia</i></p>
15	<p>C5-P-005481 Plasmadynamic Synthesis of Ittrium-Barium Cuprates for High-Temperature Superconductors</p> <p><u>K.I. Stepanov</u>, A.A. Sivkov, A.S. Ivashutenko, I.I. Shanenkov</p> <p><i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>

September 26, Friday

9:00 - 12:40

Oral Session 5. Nanoscience and nanotechnology

9:00 - 9:40 Invited	C5-O-905961 Gradient Surface Layers on the Base of Intermetallic Precipitates I.A. Kurzina <i>National Research Tomsk State University, Tomsk, Russia</i>
9:40 - 10:00	C5-O-005491 Universal Vacuum Setup for RF-Magnetron Deposition of Bioactive Coatings: Components and Facilities Yu.P. Sharkeev, K.S. Kulyashova, A.G. Rau*, Yu.A. Glushko, V.Ya. Romanov*, K.G. Salimi** <i>Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia,</i> <i>*TETA Ltd., Tomsk, Russia</i> <i>**BMTechnology, Moscow, Russia</i>
10:00 - 10:20	C5-O-005241 Synthesis of Silica Nanowires from Free Jet Activated by Electron Beam Plasma S.Ya. Khmel <i>Institute of Thermophysics SB RAS, Novosibirsk, Russia</i>
10:20 - 10:40	C5-O-004311 Modification of Ceramics B4C by High Intensity Electron Beam M.S. Petukevich*, M.P. Kalashnikov*, Y.F. Ivanov***, A.D. Teresov*, O.L. Khasanov <i>*National Research Tomsk Polytechnic University, Tomsk, Russia</i> <i>**Institute of High Current Electronics SB RAS, Tomsk, Russia</i>
10:40 – 11:00 Coffee Break	
11:00 - 11:20	C5-O-004861 Symmetric Gradient Theory of Microstructure-Dependent Beams S.A. Lurie <i>Institute of Applied Mechanics RAS, Moscow Russia</i> <i>Institute for Problems in Mechanics RAS, Moscow, Russia</i>

11:20 - 11:40	<p>C5-O-001601 Numerical Justification of the Method of Acoustic Differentiation of Nanoparticles by the Sizes. Current State of Methods of Division of Disperse Materials</p> <p>S.V. Kalashnikov, A.V. Nomoyev <i>Buryat State University, Ulan-Ude, Russia</i></p>
11:40 - 12:00	<p>C5-O-002601 Interaction of Nanoparticles and Polymer Disperced Liquid Crystals</p> <p><u>N.A. Romanov</u>, A.V. Nomoev <i>Buryat State University, Ulan-Ude, Russia</i></p>
12:00 - 12:20	<p>C5-P-005541 Bioactive Calcium Phosphate Coatings Deposited by RF-Magnetron Method: Structure and Properties</p> <p><u>K.S. Kulyashova</u>, Yu.P. Sharkeev, A.A. Mamaeva*, A.V. Panichkin*, R.K. Aubakirova*, Yu.A. Glushko, A.B. Sainova <i>Institute of Strength Physics and Materials Science SB RAS Tomsk, Russia</i> <i>*Center of Earth Sciences, Metallurgy and Ore Beneficiation, Almaty, Kazakhstan</i></p>
12:20 - 12:40	<p>C5-O-003481 Microwave Plasma Etching of Carbon Nanotube Arrays</p> <p><u>D.V. Gorodetskiy</u>, O.V. Polyakov, M.A. Kanygin, L.G. Bulusheva, A.V. Okotrub <i>Nikolaev Institute of Inorganic Chemistry SB RAS, Novosibirsk, Russia</i></p>
<p>13:00 – 13:30 Closing Ceremony (Rubin Hotel)</p>	

16th International Conference on Radiation Physics and Chemistry of Condensed Matter

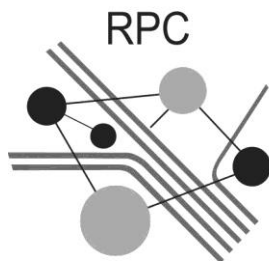
Co-Chairmen:

Vladimir Lopatin,
Institute of High-Technology Physics, TPU, Tomsk, Russia

Viktor Lisitsyn,
Institute of High-Technology Physics, TPU, Tomsk, Russia

Sessions:

- R1** Elementary processes
- R2** Nonlinear effects
- R3** Surface phenomena
- R4** Physical basis of radiation-related technologies
- R5** Methods of testing



September 22, Monday

11:00 – 18:00

Oral Session 1.1. Elementary processes

11:00 - 11:40 Invited	R1-O-000561 The Role of Deep Centers in Formation of Luminescent and Dosimetric Properties of Wide-Gap Materials S.V. Nikiforov, V.S. Kortov <i>Ural Federal University, Ekaterinburg, Russia</i>
11:40 - 12:00	R1-O-001231 Optical, Emission and Time-Resolved Spectroscopies of the Thin Nanostructured Layers Based on Anion-Defective Gamma-Alumina <u>A.I. Surdo</u> ^{*,***} , M.I. Vlasov [*] , V.G. Il'ves ^{***} , I.I. Milman ^{**} , V.A. Pustovarov ^{**} , A.I. Slesarev ^{**} , S.Yu. Sokovnin ^{***} , V.Yu. Yakovlev ^{****} <i>*Institute of Industrial Ecology UD RAS, Ekaterinburg, Russia</i> <i>**Ural Federal University, Ekaterinburg, Russia</i> <i>***Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i> <i>****National Research Tomsk Polytechnic University, Tomsk, Russia</i>
12:00 - 12:20	R1-O-001241 Influence of the Phototransfer Effects on the TL and OSL Yields, Kinetics and Emission Spectra in TLD-500 Detectors <u>M.I. Vlasov</u> [*] , A.I. Surdo ^{*,***} , I.I. Milman ^{**} , E.V. Moiseikin ^{**} , R.M. Abashev [*] <i>*Institute of Industrial Ecology UD RAS, Ekaterinburg, Russia</i> <i>**Ural Federal University, Ekaterinburg, Russia</i>
12:20 - 12:40	R1-O-001381 Elastic Waves in Iron Crystallites Induced by Irradiation <u>A.V. Korchuganov</u> , D.S. Kryzhevich [*] , K.P. Zolnikov [*] <i>Institute of Strength Physics and Materials Science, SB RAS, Tomsk, Russia</i> <i>*National Research Tomsk State University, Tomsk, Russia</i>
12:40 – 14:00 Lunch	

14:00 - 14:40 Invited	<p>R1-O-905881 Nanodefekt Substructure in Crystal Phosphors</p> <p>V.M. Lisitsyn <i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
14:40 - 15:00	<p>R1-O-001651 Defect Properties of LBAF Single Crystals</p> <p><u>I.N. Ogorodnikov</u>, V.A. Pustovarov, S.I. Omelkov*, M. Kirm*, L.I. Isaenko** <i>Ural Federal University, Ekaterinburg, Russia</i> *Institute of Physics, University of Tartu, Tartu, Estonia **V.S. Sobolev Institute of Geology and Mineralogy SB RAS, Novosibirsk, Russia</p>
15:00 - 15:20	<p>R1-O-002331 The Effect of Temperature and Irradiation Dose on the Luminescence Properties of Eu³⁺+Doped Phosphate Glass</p> <p><u>V.M. Lysitsin</u>, E.F. Polisadova, H.A. Othman* <i>National Research Tomsk Polytechnic University, Tomsk, Russia</i> *Faculty of Science, Menoufiya University, Shebin, Egypt</p>
15:20 - 15:40	<p>R1-O-002771 P-D Exciton Annihilation in Solid State Solutions Ni_xZn_{1-x}O</p> <p><u>V.N. Churmanov</u>, V.I. Sokolov*, V.A. Pustovarov, V.Yu. Ivanov, N.B. Gruzdev*, P.S. Sokolov**, A.N. Baranov** <i>Ural Federal University, Ekaterinburg, Russia</i> **Institute of Metal Physics UD RAS, Ekaterinburg, Russia ***Lomonosov Moscow State University, Moscow, Russia</p>
15:40 – 17:00 Poster Session & Coffee Break	
17:00 - 17:20	<p>R1-O-002791 Radiative Relaxation of Soft X-Ray Photons in Complex Oxides</p> <p><u>V.Yu. Ivanov</u>, V.A. Pustovarov <i>Ural Federal University, Ekaterinburg, Russia</i></p>
17:20 - 17:40	<p>R1-O-002991 Pulsed Luminescence of LiF-Fe₂O₃ Crystals</p> <p><u>V. Korepanov</u>, P. Petikar, A. Kamrikova* <i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>

17:40 - 18:00	<p>R1-O-003731 Thermoluminescent and Photoluminescent Spectroscopy Of $\text{Li}_6\text{GdB}_3\text{O}_9\text{:Ce}$ Crystal-Fibers</p> <p><u>D.O. Vostrov</u>, I.N. Ogorodnikov, V.A. Pustovarov, I.N. Sedunova</p> <p><i>Ural Federal University, Ekaterinburg, Russia</i></p>
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Poster Session 1. Elementary processes

1	<p>R1-P-000562 Simulation of Sublinear Dose Dependence of Thermoluminescence as a Result of Competitive Interaction of Trapping Centers</p> <p>S.V. Nikiforov, V.S. Kortov <i>Ural Federal University, Ekaterinburg, Russia</i></p>
2	<p>R1-P-001071 Features of TL Properties of TLD-500 Detectors Irradiated in Pulsed Radiation Fields</p> <p>R.M. Abashev, A.I. Surdo, I.I. Milman*, E.V. Moiseykin*, M.I. Vlasov <i>Institute of Industrial Ecology UD RAS, Ekaterinburg, Russia</i> <i>*Ural Federal University, Ekaterinburg, Russia</i></p>
3	<p>R1-P-001191 Effect of Dislocation Density on Exciton Luminescence Intensity of GaN Epitaxial Layers</p> <p>S.G. Gorina, V.I. Oleshko, S.V. Lazarev*, V.V. Lopatin <i>National Research Tomsk Polytechnic University, Tomsk, Russia,</i> <i>*Karlsruhe Institute of Technology, Karlsruhe, Germany</i></p>
4	<p>R1-P-001281 Study of The D(p, γ)³He Reaction at Ultralow Energies Using a Zirconium and Titanium Deuteride Targets</p> <p>V.M. Bystritsky, A.R. Krylov, A.V. Philippov, G.N. Dudkin*, G.A. Mesyats**, B.A. Nechaev*, V.N. Padalko*, F.M. Pen'kov***, Yu.Zh. Tuleushev***, M. Filipowicz****, V.M. Bystritskij*****, S. Gazi*****, J. Huran*****</p> <p><i>Joint Institute for Nuclear Research, Dubna, Russia</i> <i>*National Research Tomsk Polytechnic University, Tomsk, Russia</i> <i>**P.N. Lebedev Physical Institute RAS, Moscow, Russia</i> <i>***Institute of Nuclear Physics, Almaty, Kazakhstan</i> <i>****AGH University of Science and Technology, Cracow, Poland</i> <i>*****Tri Alpha Energy, Inc., Foothill Ranch, USA</i> <i>*****Institute of Electrical Engineering SAS, Bratislava, Slovakia</i></p>

5	<p>R1-P-002261 Formation of Diamagnetic Products in Nitrate-Containing Matrices under the Action of Light Quanta with an Energy of 5.58 eV</p> <p><u>M.B. Miklin</u>, L.D. Kriger, V.A. Anan'ev Kemerovo State University, Kemerovo, Russia</p>
6	<p>R1-P-002262 Processes of Chemical Degradation of Electronically Excited States of Different Symmetry and Energy in Crystalline Nitrates</p> <p><u>M.B. Miklin</u>, L.D. Kriger, V.A. Anan'ev Kemerovo State University, Kemerovo, Russia</p>
7	<p>R1-P-002961 Luminescent Properties and Morphology of Composite Materials ZnWO₄</p> <p><u>D.T. Valiev</u>, E.F. Polissadova, I.A. Tupitsyna*, A.A. Zhorov National Research Tomsk Polytechnic University, Tomsk, Russia *Institute for Scintillation Materials NAS, Kharkov, Ukraine</p>
8	<p>R1-P-003081 Radiative-Optical Properties of Nonstoichiometric BEO Crystals</p> <p><u>M.D. Petrenko*</u>, I.I. Milman, I.N. Ogorodnikov, V.Yu. Ivanov Ural Federal University, Ekaterinburg, Russia</p>
9	<p>R1-P-003351 Photolysis of Crystalline Nitrates of Alkali and Alkaline Earth Metals with Light of Threshold and Subthreshold Energy Quanta</p> <p>A.O. Gavrilyk, V.H. Pak Kemerovo State University, Kemerovo, Russia</p>
10	<p>R1-P-003671 Crystalline Alkaline-Earth Nitrates Decomposition under Radiolysis</p> <p><u>V.A. Anan'ev</u>, L.D. Kriger, M.B. Miklin Kemerovo State University, Kemerovo, Russia</p>
11	<p>R1-P-004421 The Impurity Ion Influence on the Recombination Properties of Potassium Dihydrogen Phosphate Crystals</p> <p><u>B.S. Tagayeva</u>, T.A. Koketai, A.K. Tussupbekova, G.I. Mussina, B.A. Baizhigitova The Karaganda State University of the name of academician E.A. Buketov, Karaganda, Kazakhstan</p>

12	<p>R1-P-004461 Study of the Processes in Activated Ammonium Halide Crystals</p> <p><u>A. Ibrayeva</u>, T.A. Koketai, B.S. Tagayeva, <i>The Karaganda State University of the name of academician E.A. Buketov, Karaganda, Kazakhstan</i></p>
13	<p>R1-P-004581 The Formation of Dipole Defects in KCl Crystals at Lattice Symmetry Lowering by Cation-Homologs and Plastic Stress</p> <p><u>K.Sh. Shunkeyev</u>, D.M. Sergeyev*, Z.K. Aimaganbetova**, A.A. Barmina, G.D. Serikbayeva <i>K. Zhubanov Aktobe Regional State University, Aktobe, Kazakhstan</i> <i>*Military Institute of Air Defense Forces named after twice Hero of Soviet Union T.Y. Begeldinov, Aktobe, Kazakhstan</i> <i>**Al-Farabi Kazakh National University, Almaty, Kazakhstan</i></p>
14	<p>R1-P-004582 The Assembly Mechanisms of Electron-Hole Pairs in KCl Crystal at Lattice Symmetry Lowering by Cation-Homologs and Low Temperature Uniaxial Stress</p> <p><u>K.Sh. Shunkeyev</u>, N.N. Zhanturina*, Sh.Zh. Sagymbaeva, S.K. Shunkeyev <i>K. Zhubanov Aktobe Regional State University, Aktobe, Kazakhstan</i> <i>*Al-Farabi Kazakh National University, Almaty, Kazakhstan</i></p>
15	<p>R1-P-004583 Increase in the Umklapp Voltage in Superconducting Tunnel Junctions with Non-Monotone Josephson Current</p> <p><u>K.Sh. Shunkeyev</u>, D.M. Sergeyev*, Z.K. Aimaganbetova**, N.N. Zhanturina** <i>K. Zhubanov Aktobe Regional State University, Aktobe, Kazakhstan</i> <i>*Military Institute of Air Defense Forces named after twice Hero of Soviet Union T.Y. Begeldinov, Aktobe, Kazakhstan</i> <i>**Al-Farabi Kazakh National University, Almaty, Kazakhstan</i></p>
16	<p>R1-P-004831 Optical and Luminescence Properties of Lithium Gadolinium Orthoborate Crystal</p> <p><u>M.S. Kiseleva</u>, I.N. Ogorodnikov, I.N. Sedunova, D.O. Vostrov, V.Yu. Yakovlev* <i>Ural Federal University, Ekaterinburg, Russia</i> <i>*National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>

17	<p>R1-O-004683 Dynamical Defects in Irradiated Materials and Radiation Stability of Solids</p> <p><u>V.V. Uglov</u>, N.T. Kvasov, N.N. Dorozhkin, V.I. Shymanski, G.E. Remnev*</p> <p><i>Belarusian State University, Minsk, Belarus</i> <i>*Institute of High-Technology Physics of National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
18	<p>R1-P-005551 Numerical Simulation of THz Source Based on Coherent Smith-Purcell Radiation Generated by Femtosecond Multi-Bunch Electron Train</p> <p><u>K.P. Artyomov</u>***, L.G. Sukhikh*</p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>*National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
19	<p>R1-P-905701 The Influence of Oxygen on the Formation of Eu Centers in CsI:Eu Crystals</p> <p><u>N. Ovcharenko</u>, V. Yakovlev*, L. Trefilova, V. Alekseev, A. Grippa, E. Kisil**</p> <p><i>Institute for Scintillation Materials NAS, Kharkov, Ukraine</i> <i>*National Research Tomsk Polytechnic University, Tomsk, Russia</i> <i>**Institute for Single Crystals NAS, Kharkov, Ukraine</i></p>
20	<p>R1-P-905861 Optical Spectroscopy of Short-Lived Defects in Calcium Fluoride under the Action of a Pulsed Electron Beam</p> <p><u>V.F. Shtan'ko</u>, E.P. Chinkov, S.A. Stepanov</p> <p><i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
21	<p>R1-P-905871 Influence of the Form of the Fundamental Absorption Edge of Dielectrics and Semiconductors on Their Radiation Resistance</p> <p><u>E.P. Chinkov</u>, V.F. Shtan'ko, E.E. Obukhova, S.A. Stepanov</p> <p><i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
22	<p>R1-P-906021 Theoretical Approach to Modeling the Lowbarrier Chemical Reactions Initiated by Pulsed Electron Beam</p> <p><u>N. Aktaev</u>, I.I. Gontchar</p> <p><i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>

September 23, Tuesday

9:00 – 18:00

Oral Session 1.2. Elementary processes

<p>9:00 - 9:40 Invited</p>	<p>R1-O-003041 Creation of Reversible and Irreversible Radiation Defects in Wide-Gap Materials Doped with Different Impurities <u>A. Lushchik</u>, Ch. Lushchik, T. Kärner, A. Maaros, A.I. Popov*, E. Vasil'chenko <i>Institute of Physics, University of Tartu, Tartu, Estonia</i> <i>*Institute of Solid State Physics, University of Latvia, Riga, Latvia</i></p>
<p>9:40 - 10:00</p>	<p>R1-O-004081 A Defect Formation in Alkali Metal Sulfate <u>T.N. Nurakhmetov</u>, R.A. Kuterbekov, A.Zh. Kainarbai, A.M. Zhunusbekov, K.Zh. Bekmyrza, B.M. Sadykova, S. Pazylbek, D.H. Daurenbekov <i>L.N. Gumilyov Eurasian National University, Astana, Kazakhstan</i></p>
<p>10:00 - 10:20</p>	<p>R1-P-905721 The Influence of Oxygen-Containing Impurities on the Emission Decay Kinetics in CsI <u>L. Trefilova</u>, V. Yakovlev*, N. Ovcharenko, A. Grippa*, A. Mitichkin <i>Institute for Scintillation Materials NAS, Kharkov, Ukraine</i> <i>*National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
<p>10:20 - 10:40</p>	<p>R1-O-004791 Configuration of Self-Trapped Exciton in Al₂O₃ <u>M.A. Botov</u>, A.Y. Kuznetsov, A.S. Makarov, A.B. Sobolev <i>Ural Federal University, Ekaterinburg, Russia</i></p>

10:40 - 11:00	<p>R1-O-905731 Channeling of Relativistic Electrons in the Field of Crossed Laser Beams</p> <p><u>E.N. Frolov</u>^{*,**}, A.V. Dik[*], S.B. Dabagov^{*,****,*****}, K.P. Artyomov^{*,*****}</p> <p><i>*P.N. Lebedev Physical Institute RAS, Moscow, Russia</i> <i>**National Research Tomsk Polytechnic University, Tomsk, Russia</i> <i>***National Institute for Nuclear Physics, Frascati, Italy</i> <i>****National Research Nuclear University MEPhI (Moscow Engineering Physics Institute), Moscow, Russia</i> <i>*****Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
11:00 – 11:20 Coffee Break	

Oral Session 2.1. Nonlinear effects

11:20 - 12:00 Invited	<p>R2-O-004272 Kinetics and Mechanisms of Solid Phase Branched Chain Reactions in the Energy Materials</p> <p><u>V.G. Kriger</u>, A.V. Kalenskii, D.V. Balykov, P.G. Zhuravlev, M.V. Anan'eva, A.P. Borovikova <i>Kemerovo State University, Kemerovo, Russia</i></p>
12:00 - 12:20	<p>R2-O-001441 Influence of the Thickness and Absorption Coefficient of Film on Ignition Threshold of PETN by Laser Pulse</p> <p><u>A.V. Khanef</u>^{*,**}, A.V. Dolgachev[*], A.S. Zverev[*], A.Yu. Mitrofanov[*]</p> <p><i>*Kemerovo State University, Kemerovo, Russia</i> <i>**National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
12:20 - 12:40	<p>R2-O-002051 Photochemical and Thermochemical Regimes of Laser Initiation of PETN</p> <p><u>A.S. Zverev</u>, A.G. Krechetov, A.Y. Mitrofanov, V.N. Moroz, N.V. Poleeva <i>Kemerovo State University, Kemerovo, Russia</i></p>
12:40 – 14:00 Lunch	

14:00 - 14:20	<p>R1-O-002642 Numerical Comparison of Two Models for Lead Azide Initiation</p> <p><u>A. Aoufi</u>, G. Damamme* <i>École Nationale Supérieure des Mines de Saint-Étienne, Saint-Étienne, France</i> *CEA-GRAMAT, Gramat, France</p>
14:20 - 14:40	<p>R1-O-004161 Comparison of Two Models for Laser Initiation of Heavy Metal Azide</p> <p><u>G. Damamme</u>, A.Aoufi* CEA-GRAMAT, Gramat, France *École Nationale Supérieure des Mines de Saint-Étienne, Saint-Étienne, France</p>
14:40 - 15:00	<p>R2-O-002101 Fluctuation Model of Pulse Photoinitiation of Energetic Materials</p> <p><u>A.Y. Mitrofanov</u>, N.N. Ilyakova, A.G. Krechetov, A.O. Terentyeva, A.S. Zverev <i>Kemerovo State University, Kemerovo, Russia</i></p>
15:00 - 15:20	<p>R2-O-002111 Model of the Photostimulated Fragmentation of Molecules of PETN ND:Glass Pulse Laser Initiation</p> <p><u>A.G. Krechetov</u>, A.S. Pashpekin, Y.P. Sakharchuk, V.N. Shvayko, A.V. Tupitsyn <i>Kemerovo State University, Kemerovo, Russia</i></p>
15:20 - 15:40	<p>R2-O-002131 The Formation of Fractal Clusters in Disordered Media</p> <p><u>K. Baktybekov</u>, A. Baratova* <i>U.M. Sultangazin Research Space Institute, Astana, Kazakhstan</i> *L.N. Gumilyov Eurasian National University, Astana, Kazakhstan</p>
15:40 – 17:00 Poster Session & Coffee Break	
17:00 - 17:20	<p>R2-O-002291 The Modern Variant of the Microcenter Heat Explosion Model</p> <p><u>A.V. Kalenskii</u>, V.G. Kriger, I.Yu. Zykov, M.V. Ananyeva <i>Kemerovo State University, Kemerovo, Russia</i></p>

<p>17:20 - 17:40</p>	<p>R2-O-002311 Cyclonite -Aluminum Compounds' Sensivity to the Lazer Pulse</p> <p><u>A.P. Nikitin*</u>, A.V. Kalenskii, A.A. Zvecov*, I.Yu. Zykov, B.P. Aduiev*</p> <p><i>Kemerovo State University, Kemerovo, Russia</i> <i>*Institute of Coal Chemistry and Material Science SB RAS, Kemerovo, Russia</i></p>
<p>17:40 - 18:00</p>	<p>R2-O-002401 The Critical Density of Initiation Energy for Petn-Nikel and RDX-Nikel Composites</p> <p><u>I.Yu. Zykov</u>, A.V. Kalenskii, A.P. Borovikova, A.P. Nikitin*</p> <p><i>Kemerovo State University, Kemerovo, Russia</i> <i>*Institute of Coal Chemistry and Material Science SB RAS, Kemerovo, Russia</i></p>

Poster Session 2. Nonlinear effects

1	<p>R2-P-000271 Electrothermal Treeing Application for Joule Heating of Oil Shale</p> <p><u>S.M. Martemyanov</u>, V.V. Lopatin, A.A. Bukharkin, I.A. Koryashov, A.A. Ivanov</p> <p><i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
2	<p>R2-P-001431 The Modeling of Organic Explosive Initiation by a Short Laser Pulse</p> <p><u>V.A. Dolgachev</u>*, A.V. Khaneft***</p> <p><i>*Kemerovo State University, Kemerovo, Russia</i> <i>**National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
3	<p>R2-P-002572 The Initiation of the Explosion in the Composite Based on RDX and Aluminium Nanoparticles in a Laser Action</p> <p><u>B.P. Aduyev</u>, D.R. Nurmukhametov, I.Y. Liskov, A.P. Nikitin, N.V. Nelubina, G.M. Belokurov</p> <p><i>Institute of Coal Chemistry and Material Science SB RAS, Kemerovo, Russia</i></p>
4	<p>R2-P-002591 A Study of Optoacoustic Effects in Strongly Absorbing Medium under the Influence of Neodymium Laser Pulse</p> <p><u>B.P. Aduyev</u>, D.R. Nurmukhametov, A.P. Nikitin, I.Y. Liskov, R.I. Kovalev</p> <p><i>Institute of Coal Chemistry and Material Science SB RAS, Kemerovo, Russia</i></p>
5	<p>R2-P-002831 Simulation of Stressed-State of the Plate Invoked by Changing Regime of External Heating and Solid-Phase Chemical Conversion</p> <p><u>Y.A. Chumakov</u>, A.G. Knyazeva*</p> <p><i>Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia</i> <i>*National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>

6	<p>R2-P-003201 The Electron-Hole Liquid Excitation in the Diamond under the Action of Pulsed UV Laser Radiation</p> <p><u>E.I. Lipatov</u>*, D.E. Genin*, D.V. Grigor'ev**, V.F. Tarasenko*^{***}, S.M. Avdeev*, A.G. Burachenko*</p> <p><i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>**National Research Tomsk State University, Tomsk, Russia</i></p>
7	<p>R2-P-003231 Mechanism of Non-Linear Self-Addition Frequencies of Laser Lines at Powerful Electron-Beam Pumping of 2 8 Er : BaY F Crystals</p> <p><u>V.I. Baryshnikov</u>*^{***,***}, A.V. Ivanov*, I.V. Shipaev*, S.N. Vesnina*</p> <p><i>*Irkutsk State Railway University, Irkutsk, Russia</i> <i>**Irkutsk Branch of Institute of Laser Physics SB RAS, Irkutsk, Russia</i> <i>**Applied Physics Institute of Irkutsk State University, Irkutsk, Russia</i></p>
8	<p>R2-P-003981 The Propagation of Explosive Decomposition Front in Theardlike Samples of Heavy Metal Azides Initiated by Laser Pulse in Different Spectral Areas</p> <p><u>A. Razin</u>, R. Akhmetshin, V. Tsipilev</p> <p><i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
9	<p>R2-P-004151 Laser Initiation of Crystals of Silver Azide Grown in Electric Field</p> <p><u>A.O. Terentyeva</u>, E.G. Gazenaur, A.Y. Mitrofanov, A.S. Zverev, E.E. Safonova, K.S. Tueva</p> <p><i>Kemerovo State University, Kemerovo, Russia</i></p>
10	<p>R2-P-004181 Effect of Laser Radiation Wavelength on Energy Thresholds of Initiation of Explosives</p> <p><u>R. Akhmetshin</u>, A. Razin, A. Skripin, V. Tsipilev, V. Oleshko, V. Zarko</p> <p><i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
11	<p>R2-P-004182 Beam Size Effect at Laser Initiation of FTDO and Its Mixtures</p> <p><u>R. Akhmetshin</u>, A. Razin, V. Zarko, V. Tsipilev, P. Kalmykov</p> <p><i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>

12	<p>R2-P-004341 Study of the Laser Spectrum Broadening due to a Self-Phase Modulation</p> <p><u>S.V. Alekseev</u>*, M.V. Ivanov*, V.F. Losev*^{**,**}</p> <p><i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p> <p><i>**National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
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Oral Session 2.2. Nonlinear effects

<p>9:00 - 9:40 Invited</p>	<p>R2-O-003071 Creation of Defects in Ceramics Lithium Fluoride by Femtosecond Laser Pulses V.P. Dresvyanskiy, S.V. Alekseev*, V.F. Losev*, M.A. Moiseeva, <u>E.F. Martynovich</u> <i>Irkutsk Branch of Institute of Laser Physics SB RAS, Irkutsk, Russia</i> <i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
<p>9:40 - 10:00</p>	<p>R2-O-002641 Numerical Investigation of Partial Ignition and Propagation during TiC Combustion Synthesis in 2D Polar Coordinates <u>A. Aoufi</u>, G. Damamme* <i>École Nationale Supérieure des Mines de Saint-Étienne, Saint-Étienne, France</i> <i>*CEA-GRAMAT, Gramat, France</i></p>
<p>10:00 - 10:20</p>	<p>R2-O-002721 Solid-State Electron-Hole Plasma in Silver Azide <u>V.I. Krashenin</u>, E.G. Gazenaur, A.P. Rodzevich*, L.V. Kuzmina <i>Kemerovo State University, Kemerovo, Russia</i> <i>*Yurga Institute of Technology of National Research Tomsk Polytechnic University, Yurga, Russia</i></p>
<p>10:20 - 10:40</p>	<p>R2-O-002981 Initiation of Furazanotetrazinedioxide and Mixes on Its Basis by High-Current Electron Beam <u>V.I. Oleshko</u>, V.E. Zarko*, V.V. Lysyk, V.P. Tsipiley, P. Kalmykoy* <i>National Research Tomsk Polytechnic University, Tomsk, Russia</i> <i>*Voevodsky Institute of Chemical Kinetics and Combustion SB RAS, Novosibirsk, Russia</i> <i>**Federal Research & Production Center ALTAI, Biysk, Russia</i></p>
<p>10:40 – 11:00 Coffee Break</p>	

<p>11:00 - 11:40 Invited</p>	<p>R2-O-905891 Laser Initiation of Explosive Decomposition of Differently Compressed PETN at the Wavelengths of 1064 nm and 532 nm <u>V. Tsipilev</u>, R. Akhmetshin, V. Ovchinnikov, A. Razin, A. Skripin <i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
<p>11:40 - 12:00</p>	<p>R2-O-003073 Periodic Structures of Luminescent Channel Induced Femtosecond Laser Radiation in Crystals S.A. Zilov*, <u>V.P. Dresvyanskiy</u>*, E.F. Martynovich*,** <i>*Irkutsk Branch of Institute of Laser Physics SB RAS, Irkutsk,, Russia</i> <i>**Applied Physics Institute of Irkutsk State University, Irkutsk, Russia</i></p>
<p>12:00 - 12:20</p>	<p>R2-O-002561 Influence of the Size of the Nanoparticles of Aluminum and Nickel on the Threshold of the Laser Initiating Blast Petn <u>B.P. Aduiev</u>, D.R. Nurmukhametov, A.A. Zvekov, A.P. Nikitin, R.I. Kovalev <i>Institute of Coal Chemistry and Material Science SB RAS, Kemerovo, Russia</i></p>
<p>12:20 - 12:40</p>	<p>R2-O-001421 The Modeling of Organic Explosive Initiation by a Short Electron Pulse <u>G.A. Ivanov</u>*, A.V. Khanef't*** <i>*Kemerovo State University, Kemerovo, Russia</i> <i>**National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
<p>12:40 – 14:00 Lunch</p>	
<p>14:00 - 14:20</p>	<p>R2-O-004411 A Method of Intrinsic Optical Nonlinearity Measurement <u>D.M. Lubenko</u>*, Yu.M. Andreev**,**, G.V. Lanskiy**,***, V.F. Losev*,****, V.A. Svetlichnyi*** <i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>**Institute of Monitoring of Climatic and Ecological Systems SB RAS, Tomsk, Russia</i> <i>**Siberian Physical-Technical Institute of National Research Tomsk State University, Tomsk, Russia</i> <i>****National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>

14:20 - 14:40	<p>R2-O-004412 Optical Quality Control out of the Maximal Transparency Range</p> <p><u>D.M. Lubenko</u>[*], Yu.M. Andreev^{**},^{***}, K.A. Kokh^{****},^{*****}, G.V. Lanskiy^{**},^{***}, V.F. Losev[*],^{*****}, V.A. Svetlichnyy^{****}</p> <p><i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>**Institute of Monitoring of Climatic and Ecological Systems SB RAS, Tomsk, Russia</i> <i>***Siberian Physical-Technical Institute of National Research Tomsk State University, Tomsk, Russia</i> <i>****V.S. Sobolev Institute of Geology and Mineralogy SB RAS, Novosibirsk, Russia</i> <i>*****National Research Novosibirsk State University, Novosibirsk, Russia</i> <i>*****National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
14:40 - 15:00	<p>R2-O-004891 Reaction Initiation by Laser Impulse in the Energetic Materials Mixture</p> <p><u>A.G. Knyazeva</u>, V.E. Zarko[*]</p> <p><i>National Research Tomsk Polytechnic University, Tomsk, Russia</i> <i>*Voevodsky Institute of Chemical Kinetics and Combustion SB RAS, Novosibirsk, Russia</i></p>
15:00 - 15:20	<p>R2-O-004271 A Solid-Chain Reaction Focus Offset in a Noncontact Electric Field</p> <p><u>V.G. Kriger</u>, A.V. Kalenskii, D.V. Balykov, P.G. Zhuravlev, M.V. Anan'eva, A.P. Borovikova</p> <p><i>Kemerovo State University, Kemerovo, Russia</i></p>
15:20 - 15:40	<p>R2-O-002571 Study Light Scattering and Absorption in Aluminum Nanoparticles in Petn</p> <p><u>B.P. Aduiev</u>, D.R. Nurmukhametov, A.A. Zvekov, A.P. Nikitin</p> <p><i>Institute of Coal Chemistry and Material Science SB RAS, Kemerovo, Russia</i></p>
<p>15:40 – 17:00 Poster Session & Coffee Break</p>	

Poster Session 3.1. Physical basis of radiation-related technologies

1	<p>R4-P-000141 Effect of Hydrogen on the Corrosion of Titanium as They are Processed by Ionizing Radiation <u>A.M. Lider</u>, A.V. Panin*, V.V. Larionov, G.V. Garanin <i>National Research Tomsk Polytechnic University, Tomsk, Russia</i> <i>*Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia</i></p>
2	<p>R4-P-000331 Femtosecond Laser Modifications of Sodium Fluoride <u>L.I. Bryukvina</u>, A.A. Popov, A.V. Kuznetsov, E.F. Martynovich <i>Irkutsk Branch of Institute of Laser Physics of SB RAS, Irkutsk, Russia</i></p>
3	<p>R4-P-000332 Role of HF Molecule in Radiation Modification of LiF Crystal with Hydroxyl Impurity <u>L.I. Bryukvina</u>, E.F. Martynovich <i>Irkutsk Branch of Institute of Laser Physics of SB RAS, Irkutsk, Russia</i></p>
4	<p>R4-P-000341 Electrical and Photoelectric Properties of Polycrystalline Diamond Films, Deposited by Abnormal Glow Discharge <u>A.V. Kabyshev</u>, A.V. Gaydaychuk, F.V. Konusov, S.A. Linnik, G.E. Remnev <i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
5	<p>R4-P-000701 The Defects in LiF Crystals, Obtained by Modification of F3 - Center <u>I.G. Primak</u>, L.I. Shchepina <i>Applied Physics Institute of Irkutsk State University, Irkutsk, Russia</i></p>
6	<p>R4-P-001082 Substitutional Impurities Influence on Hydrogen Sorption Properties of Titanium and Zirconium <u>E.V. Tuch</u>, T.I. Spiridonova*, A.V. Bakulin, S.E. Kulkova <i>Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia</i> <i>*National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>

7	<p>R4-P-001141 Optical and Thermoluminescence Properties of LiF: Mg, Cu Single Crystals</p> <p><u>A. Shalaev</u>, N. Bobina, A. Paklin, R. Shendrik, A. Nepomnyashchikh <i>A.P. Vinogradov Institute of Geochemistry SB RAS, Irkutsk, Russia</i> <i>Irkutsk State University, Irkutsk, Russia</i></p>
8	<p>R4-P-001161 Temperature Destruction of Radiation Defects in Calcium Fluorite, Strontium Fluorite and Barium Fluorite Doped with Trivalent Rare-Earths Ions</p> <p><u>T.Yu. Sizova</u>, E.A. Radzhabov <i>A.P. Vinogradov Institute of Geochemistry SB RAS, Irkutsk, Russia</i></p>
9	<p>R4-P-001502 Chemical Processes under Radiation Processing of Milk</p> <p><u>A.A. Baranov</u>, V.V. Emelyanov, E.A. Savateeva, N.E. Maksimova, N.N. Mochulskaya, A.V. Kruzhalov, V.A. Chereshev <i>Ural Federal University, Ekaterinburg, Russia</i></p>
10	<p>R4-P-001801 Radiation Optical Effects in Commercially SiO₂:Ge Fibers</p> <p><u>A.V. Ishchenko</u>, A.N. Tcherepanov, A.S. Vokhmintsev, I.A. Weinstein, B.V. Shulgin, L.N. Shalimov*, N.G. Manko*, A.N. Shtykov*, G.V. Shestakov*, E.K. Chistyakova, A.A. Shonokhova <i>Ural Federal University, Ekaterinburg, Russia</i> <i>*FSUE Scientific and Production Association of Automatics named after Academician N.A. Semikhatov, Ekaterinburg, Russia</i></p>
11	<p>R4-P-001861 Radiation Resistance of Light-Emitting Diodes Based on AlGaAs-Heterostructures to Fast Neutron and Electron Radiation</p> <p><u>P.V. Rubanov</u>, A.V. Gradoboev* <i>National Research Tomsk Polytechnic University, Tomsk, Russia</i> <i>*Yurga Institute of Technology of National Research Tomsk Polytechnic University, Yurga, Russia</i></p>
12	<p>R4-P-002772 Photoluminescence Spectroscopy of Charge-Transfer Processes in Oxide Compounds NI_xMG_{1-x}O¹</p> <p><u>V.N. Churmanov</u>, V.I. Sokolov*, V.A. Pustovarov, V.Yu. Ivanov, N.B. Gruzdev*, N. Mironova-Ulmane** <i>Ural Federal University, Ekaterinburg, Russia</i> <i>*Institute of Metal Physics UD RAS, Ekaterinburg, Russia</i> <i>**Institute of Solid State Physics, University of Latvia, Riga, Latvia</i></p>

13	<p>R4-P-002773 Photoluminescence of COO Excited by Synchrotron Radiation</p> <p><u>V.N. Churmanov</u>, V.I. Sokolov*, V.A. Pustovarov, V.Yu. Ivanov, N.B. Gruzdev*, P.S. Sokolov**, A.N. Baranov**</p> <p><i>Ural Federal University, Ekaterinburg, Russia</i> <i>*Institute of Metal Physics UD RAS, Ekaterinburg, Russia</i> <i>**Lomonosov Moscow State University, Moscow, Russia</i></p>
14	<p>R4-P-002971 Simulation of Radiation Effects on SiO₂/Si Structures</p> <p><u>G.M. Zavats</u>, A.F. Komarov*, F.F. Komarov*, S.A. Miskiewicz*, V.V. Michailov*</p> <p><i>Institute of Mathematics NAS, Minsk, Belarus</i> <i>*Institute of Applied Physics Problems NAS, Minsk, Belarus</i></p>
15	<p>R4-P-004761 Indirect Study of Optical Properties of Voluntary Init of PENT at Mixing It with Absorptive Additives (Soot and Aluminium)</p> <p>V.A. Ovchinnikov, V.P. Cipilev</p> <p><i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
16	<p>R4-P-004931 Probability of Transitions in Color Centers of Sapphire Crystals Irradiated by Fast Neutrons</p> <p><u>N.L. Lazareva</u>*.***, A.L. Rakevich*, E.F. Martynovich*.***</p> <p><i>*Irkutsk Branch of Institute of Laser Physics SB RAS, Irkutsk, Russia</i> <i>**Irkutsk State University, Irkutsk, Russia</i></p>
17	<p>R4-P-905671 Optically Stimulated Luminescence of Activated NaF Crystals</p> <p><u>G.S. Denisov</u>, M.M. Kidibaev, A.S. Bektashov</p> <p><i>Institute of Physical & Technical Problems and Materials Science NAS, Bishkek, Kyrgyzstan</i></p>
18	<p>R3-P-002391 Physical Properties of Ferroalloy Slags</p> <p><u>O.R. Sariyev</u>*, A.M. Akuov*, E.U. Zhumagaliyev*</p> <p><i>K. Zhubanov Aktobe Regional State University, Aktobe, Kazakhstan</i></p>

September 25, Thursday

9:00 – 17:40

Oral Session 3.1. Physical basis of radiation-related technologies

<p>9:00 - 9:40 Invited</p>	<p>R4-O-905901 Modification and Study of Defect Structure of Hg_{1-x}CdxTe Using Low-Energy Ion Treatment <u>I.I. Izhnin</u>*,** , A.V. Voitsekhovskiy**, O.I. Fitsych***, S.A. Dvoretzky****, N.N. Mikhailov****, V.S. Varavin****, K.D. Mynbaev***** <i>*R&D Institute for Materials SRC "Carat", Lvov, Ukraine</i> <i>**National Research Tomsk State University, Tomsk, Russia</i> <i>***P. Sahaydachnyi Army Academy, Lvov, Ukraine</i> <i>****Rzhanov Institute of Semiconductor Physics SB RAS, Novosibirsk, Russia</i> <i>*****Ioffe Physical Technical Institute RAS, Saint Petersburg, Russia</i></p>
<p>9:40 - 10:00</p>	<p>R4-O-000902 Controllable Microstructure Growth on Liquid Metal Surfaces under Pulsed Action <u>A.N. Panchenko</u>, D.E. Genin, D.V. Beloplotov, Yu.N. Panchenko <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
<p>10:00 - 10:20</p>	<p>R4-O-001131 Simulation of Charging and Cathodoluminescence Afterglow of Nanostructured Alumina under Irradiation by Nanosecond Electron Beam <u>T.V. Shtang</u>, V.S. Kortov, S.V. Zvonarev <i>Ural Federal University, Ekaterinburg, Russia</i></p>
<p>10:20 - 10:40</p>	<p>R4-O-001291 Radiation Defects in Lithium Fluoride Crystals Induced by Fast Ions <u>A. Akilbekov</u>, R. Zabels*, A. Dauletbekova, A. Russakova, M. Baizhumanov, R. Assylbayev, M. Zdorovets** <i>L.N. Gumilyov Eurasian National University, Astana, Kazakhstan</i> <i>*Institute of Solid State Physics, University of Latvia, Riga, Latvia</i> <i>**Institute of Nuclear Physics, Almaty, Kazakhstan</i></p>
<p>10:40 – 11:00 Coffee Break</p>	

11:00 - 11:20	<p>R4-O-001471 The Future of X-Ray Computed Tomography in the Dentistry</p> <p><u>M.B. Putrik</u>, J.E. Lavrentyeva*, V.Yu. Ivanov <i>Ural Federal University, Ekaterinburg, Russia</i> *Private Dental Clinic "Uraldent", Ekaterinburg, Russia</p>
11:20 - 11:40	<p>R4-O-001501 The Sensor Material and Device for Explosives Detection</p> <p><u>A.A. Baranova</u>, K.O. Khokhlov <i>Ural Federal University, Ekaterinburg, Russia</i></p>
11:40 - 12:00	<p>R4-O-001771 Single Crystal Growth of BaBrI:Eu High Light Yield Scintillators</p> <p><u>A.I. Rusakov</u>, A.O. Vasilkovskiy, A.A. Shalaev <i>A.P. Vinogradov Institute of Geochemistry SB RAS, Irkutsk, Russia</i></p>
12:00 - 12:20	<p>R4-O-001951 Some Aspects of Polymer Ion Beam Analysis</p> <p><u>S.S. Zyryanov</u>, O.V. Ryaboukhin, F.G. Neshov, A.V. Kruzhalov <i>Ural Federal University, Ekaterinburg, Russia</i></p>
12:20 - 12:40	<p>R4-O-002931 Photoluminescence of Nanosized Zn₂SiO₄:Mn Produced by Top-Down and Bottom-Up Methods</p> <p><u>K.A. Petrovykh</u>***, A.A. Rempel***, V.S. Kortov* *Ural Federal University, Ekaterinburg, Russia **Institute of Solid State Chemistry UD RAS, Ekaterinburg, Russia</p>
12:40 - 13:00	<p>R4-O-003072 Spectral and Temporal Characteristics of Radiation Defects in Thin Films of Lithium Fluoride</p> <p><u>V.P. Dresvyanskiy</u>*, V.L. Paperny**, E.V. Milyutina***, N.L. Lazareva***, A.L. Rakevich*, O.I. Shipilova**, E.F. Martinovich***, *<i>Irkutsk Branch of Institute of Laser Physics SB RAS, Irkutsk, Russia</i> **<i>Irkutsk State University, Irkutsk, Russia</i></p>
12:40 – 14:00 Lunch	

Oral Session 4.1. Surface phenomena

Oral Session 5.1. Methods of testing

14:00 - 14:20	<p>R5-O-905911 Kinetic of Relaxation Cathodoluminescence in Crystals with Nonstationary Defectiveness</p> <p><u>V.M. Lisitsyn</u>, Z.T. Karipbayev*, S.A. Stepanov, L.N. Trefilova, A.K. Dauletbekova, E.F. Polisadova, S.I. Omelkov <i>National Research Tomsk Polytechnic University, Tomsk, Russia</i> * L.N. Gumilyov Eurasian National University, Astana, Kazakhstan</p>
14:20 - 14:40	<p>R3-O-004943 High Power Ion Beam Treatment of Polymer Films Deposited on the Dielectric Substrates</p> <p><u>V.S. Kovivchak</u>***, Yu.G. Kryazhev**, E.S. Martynenko***, E.V. Knyazev** *Omsk F.M. Dostoevsky State University, Omsk, Russia **Omsk Scientific Center SB RAS, Omsk, Russia ***Institute of Hydrocarbon Processing SB RAS, Omsk, Russia</p>
14:40 - 15:00	<p>R3-O-005121 Mathematical Modeling of Conversion Processes Accompanying the Different Material Conjugation Using Solid-Phase Synthesis at the Reaction Initiation by Short Heat Impulse</p> <p><u>K.A. Aligozhina</u>, A.G. Knyazeva* <i>National Research Tomsk State University, Tomsk, Russia</i> *Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia</p>
15:00 - 15:20	<p>R5-O-004982 Application of the Emission IR Spectroscopy Method to Study the State of Oxide Films on the Ion-Modified Surface</p> <p><u>N.V. Volkov</u>, L.P. Nekrasova, R.A. Valikov, I.V. Oleinikov <i>National Research Nuclear University MEPhI (Moscow Engineering Physics Institute), Moscow, Russia</i></p>
15:20 – 17:00 Poster Session & Coffee Break	

17:00 - 17:20	<p>R5-O-905921 Calculation of the Spatial Distribution of Defects and Cascading Areas in Ionic Crystals</p> <p><u>K.B. Tlebaev*</u>, A.I. Kupchishin*, A.A. Kupchishin*, E.V. Shmygalev*, T.A. Shmygaleva</p> <p><i>Al-Farabi Kazakh National University, Almaty, Kazakhstan</i> <i>*Kazakh National Pedagogical University Abai, Almaty, Kazakhstan</i></p>
17:20 - 17:40	<p>R5-O-905931 Inhomogeneous Change of Temperature of Ionic Crystals under the Action of a Pulsed Electron Beam</p> <p><u>S.A. Stepanov</u>, V.F. Shtan'ko, E.P. Chinkov</p> <p><i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>

Poster Session 2.2. Surface phenomena

1	<p>R1-P-003781 Thermodynamical Analysis of Ordering in a Binary Alloy in Presence of Elastic Strains</p> <p><u>V.L. Orlov*</u>, A.V. Orlov, V.P. Krivobokov**, M.A. Gumirov*</p> <p><i>Yugra State University, Khanty-Mansiysk, Russia</i> <i>*I.I. Polzunov Altai State Technical University, Barnaul, Russia</i> <i>**National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
2	<p>R3-P-001321 Computer Modeling of Ag Interaction with the LMO [001] MnO₂- and LaO-Terminated Surfaces</p> <p><u>A.U. Abuova*</u>, E.A. Kotomin***, T.M. Inerbaev*, A.T. Akilbekov*, Yu.A. Mastrikov****, F.U. Abuova*</p> <p><i>*L.N. Gumilyov Eurasian National University, Astana, Kazakhstan</i> <i>**Institute of Solid State Physics, University of Latvia, Riga, Latvia</i> <i>***University of Maryland, College Park, USA</i> <i>****Max Planck Institute for Solid State Research, Stuttgart, Germany</i></p>
3	<p>R3-P-001341 Water Adsorption and Oxidation at Fluorine-Doped Co₃O₄ (100) Surface</p> <p><u>G. Kaptagaj*</u>, T.M. Inerbaev*, A.T. Akilbekov*, Yu.A. Mastrikov**, E.A. Kotomin****, F.U. Abuova*</p> <p><i>*L.N. Gumilyov Eurasian National University, Astana, Kazakhstan</i> <i>**Institute of Solid State Physics, University of Latvia, Riga, Latvia</i> <i>***Max Planck Institute for Solid State Research, Stuttgart, Germany</i></p>
4	<p>R3-P-002441 The Formation of Crystalline Structures in Thin Films of Titanium Dioxide</p> <p><u>A.Yu. Stepanov</u>, L.V. Sotnikova, A.A. Vladimirov</p> <p><i>Kemerovo State University, Kemerovo, Russia</i></p>
5	<p>R3-P-003161 Reaction of H-Atoms from Hydrogen Plasma with the Surface of α-Al₂O₃ Stimulated by UV Light</p> <p>D.V. Grankin</p> <p><i>Pryazovskyi State Technical University, Mariupol, Ukraine</i></p>

6	<p>R3-P-003181 Formation of Thermally Stable Layered System</p> <p><u>A.K. Zhubaev</u>, A.S. Nurtazina <i>K. Zhubanov Aktobe Regional State University, Aktobe, Kazakhstan</i></p>
7	<p>R3-P-003881 Effect of Ag Nanoparticles on the Characteristics of Color Centers Produced with a Microwave Radiation in LIF Films</p> <p><u>O.I. Shipilova</u>, A.A. Chernyh, A.A. Kolomyiltsev, A.O. Khoroshikh <i>*Irkutsk State University, Irkutsk, Russia</i></p>
8	<p>R3-P-005471 Equidistant Series of "Edge" Emission in CdS at High Excitation Intensity</p> <p><u>N.K. Morozova</u>, A.A. Kanakhin, V.G. Galstyan*, A.S. Shnitnikov <i>National Research University "Moscow Power Engineering Institute", Moscow, Russia *A.V. Shubnikov Institute of Crystallography RAS, Moscow, Russia</i></p>
9	<p>R3-P-905941 E-Beam Modification of Polyethersulfone Nanofiltration Membranes</p> <p><u>Yu.V. Savinykh</u>****, V.M. Orlovskii* <i>*Institute of High Current Electronics SB RAS, Tomsk, Russia **National Research Tomsk Polytechnic University, Tomsk, Russia ***Institute of Petroleum Chemistry SB RAS, Tomsk, Russia</i></p>
10	<p>R3-P-004881 Interrelation between the Reaction and Diffusion during Gradient Structure Formation of Surface Layer under Particle Beam Action</p> <p>Asfandyar Khan, A. Knyazeva <i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>

Poster Session 3.2. Methods of testing

1	<p>R5-P-001611 Research of the Anisotropy Relaxation Time of Rhodamine 6G Fluorescence in Samples of Cerebrospinal Fluid of Patients with Diseases of the Cardiovascular System</p> <p><u>A.V. Bartul</u>, S.A. Zilov, A.L. Rakevich, V.V. Kovalev <i>Irkutsk Branch of Institute of Laser Physics SB RAS, Irkutsk, Russia</i> <i>Irkutsk State Medical Academy of Continuing Education, Irkutsk, Russia</i></p>
2	<p>R5-P-002431 Space Radiation Charging Effects of Dielectric Materials: Testing Methods and Apparatus</p> <p>A.A. Chigorko <i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
3	<p>R1-O-005041 Investigation of Luminaire Temperature Conditions at Different Currents in Leds</p> <p><u>S.Y. Gurin*</u>, B.P. Gricenko*** <i>*National Research Tomsk Polytechnic University, Tomsk, Russia</i> <i>**Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia</i></p>
4	<p>R5-P-000481 The Laboratory Device for Measuring the Propagation Velocity of Ultrasonic Waves in Hydrogenated Metals</p> <p><u>A.M. Lider</u>, V.V. Larionov, G.V. Garanin <i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
5	<p>R5-P-905821 Advanced ⁶LiF-ZnS(Ag) Thermal Neutron Detector</p> <p><u>I. Dubtsov</u>, L. Andruschenko, V. Tarasov, O. Shpilinskaja*, L. Trefilova, V. Yakovlev**, V. Lisitsyn**, A. Dudnik*** <i>*Institute for Scintillation Materials NAS, Kharkov, Ukraine</i> <i>**Institute for Single Crystals NAS, Kharkov, Ukraine</i> <i>***National Research Tomsk Polytechnic University, Tomsk, Russia</i> <i>****V.N. Karazin Kharkiv National University, Kharkov, Ukraine</i></p>
6	<p>R5-P-905951 Study of Mechanical Properties of Polyimide and Polytetrafluoroethylene</p> <p><u>A.D. Muradov***</u>, A.I. Kupchishin***, A.A. Kupchishin**, K.B. Tlebaev**, B.G. Taipova** <i>*Al-Farabi Kazakh National University, Almaty, Kazakhstan</i> <i>**Kazakh National Pedagogical University Abai, Almaty, Kazakhstan</i></p>

September 26, Friday

13:00 – 13:30 Closing Ceremony (Rubin Hotel)