



Preliminary scientific program

September 6 (Monday)

Panorama, Big Hall

Plenary Session

Plenary Lecture 09:25-10:10	Time characteristics of a nanosecond diffuse-channel discharge <i>G.A. Mesyats</i> P.N. Lebedev Physical Institute RAS, Moscow, Russia
Plenary Lecture 10:30-11:15	Pulsed power generation for gas discharge and plasma applications <i>Weihua Jiang</i> Extreme Energy-Density Research Institute Nagaoka University of Technology, Nagaoka, Niigata, Japan
Invited Lecture 11:15-11:50	Different modes of runaway electron beams in high-pressure gases <i>V.F. Tarasenko</i> Institute of High Current Electronics SB RAS, Tomsk, Russia

Panorama, Hall A

Section 1. Oral Session 1 (OS-1-1)
 13.30-15.35

1	Invited report	Runaway electron flows in magnetized coaxial gas diodes <i>M.I. Yalandin, G.A. Mesyats, N.M. Zubarev, S.A. Shunaylov, V.G. Shpak, K.A. Sharypov</i> Institute of Electrophysics UB RAS, Ekaterinburg, Russia
2	Oral	Subnanosecond breakdown of air-insulated coaxial line initiated by runaway electrons in the presence of strong axial magnetic field <i>S.A. Shunaylov, G.A. Mesyats, N.M. Zubarev, E.A. Osipenko, K.A. Sharypov, V.G. Shpak, M.I. Yalandin</i> Institute of Electrophysics UB RAS, Ekaterinburg, Russia
3	Oral	Preliminary experimental study on high repetitive and short nanosecond pulsed discharge in air at atmospheric pressure <i>Y. Li, H. Li, Z. Liu, Y. Fu, X. Zou, X. Wang</i> Tsinghua University, Beijing, China
4	Oral	Study of the generation of runaway electrons with reference to the formation of a streamer in a sharply inhomogeneous electric field <i>D. Beloplotov, V.F. Tarasenko, V. Shklyayev, D.A. Sorokin</i> Institute of High Current Electronics SB RAS, Tomsk, Russia
5	Oral	Features of the ionization wave development preceding the breakdown in a long capillary tube surrounded by a continuous or sectioned electrode <i>Yu.S Akishev, V.B. Karalnik, A.V. Petryakov</i> State Research Center of Russian Federation Troitsk Institute for Innovation and Fusion Research, Moscow, Russia
6	Oral	Simulation of negative corona discharge in atmospheric air: from mode of trichel pulses to stationary discharge <i>A.O Kokovin, A.V. Kozyrev, V.Y. Kozhevnikov</i> Institute of High Current Electronics SB RAS, Tomsk, Russia

Panorama, Hall A

Section 4. Oral Session 1 (OS-4-1)
15.55-18.00

1	Invited report	Generation of ion and electron beams and plasma flows in special conditions with "extreme" parameters and some examples of its applications <u>E.M. Oks</u> High Current Electronics Institute, Russian Academy of Science
2	Oral	Cathodic arc discharge system with lanthanum hexaboride cathode for boron-containing plasma generation <u>A.S. Bugaev, V.I. Gushenets, E.M. Oks, V.P. Frolova</u> Institute of High Current Electronics SB RAS, Tomsk, Russia
3	Oral	Efficiency of electron beam extraction to the ambient atmosphere in an electron accelerator based on ion-electron emission <u>S.Yu. Doroshkevich, M.S. Vorobyov, M.S. Torba, N.N. Koval, S.A. Sulakshin, V.A. Levanisov</u> Institute of High Current Electronics, SB, RAS, Tomsk, Russia
4	Oral	Suppression of the generation of heavy ions in vacuum diode with passive anode <u>A.I. Pushkarev, A.I. Prim, X.P. Zhu, C.C. Zhang, Y. Li, Yu. Egorova, M.K. Lei</u> Tomsk Polytechnic University, Tomsk, Russia
5	Oral	Simulation of charged particle beam dynamics extracted from a plasma source <u>I.A. Kanshin</u> Dukhov Automatics Research Institute (VNIIA), Moscow, Russia

Panorama, Hall B

Section 2. Oral Session 1 (OS-2-1)
13.30-15.35

1	Invited report	The surface modification of magnesium alloys by LEHCEB treatment <u>M. Bestetti</u> Politecnico di Milano, Milano, Italy
2	Oral	Ti-W surface alloys synthesized by PVD-LEHCEB and oxidized by PEO <u>F. Morini, A. Palmeri, S. Franz, A. Vincenzo, M. Bestetti</u> Politecnico di Milano, Milano, Italy
3	Oral	Formation of a Cr-Zr surface alloy using a low-energy high-current electron beam <u>A.B. Markov, E.V. Yakovlev, A.V. Solovev, E.A. Pesterev, M.S. Slobodyan, V.I. Petrov</u> Tomsk Scientific Centre SB RAS, Tomsk, Russia
4	Oral	Computer simulation of temperature fields in the Cr (film) – Zn (substrate) system during pulsed electron beam irradiation <u>A.B. Markov, A.V. Solovev, E.V. Yakovlev, E.A. Pesterev</u> Tomsk Scientific Centre SB RAS, Tomsk, Russia
5	Oral	Processing of the titanium alloy by high-speed steel tools with combine surface treatment <u>S.V. Fedorov, Tet Oo, E. S. Mustafaev</u> Department of High-Efficiency Processing Technologies, Moscow State University of Technology «STANKIN»

Panorama, Hall BSection 3. Oral Session 1 (OS-3-1)
15.55-18.00

1	Invited report	Plasma systems for formation of electrohydrodynamic flows <i>V.A. Yamshchikov, V.Yu. Khomich</i> Institute for Electrophysics and Electric Power RAS, Moscow, Russia
2	Oral	Creating nanoscale luminescence centres in silver halides suitable for infrared application <i>E.A. Korsakova, V.V. Lisenkov, L.V. Zhukova, A.N. Orlov, A.S. Korsakov, V.V. Osipov, V.V. Platonov, D.D. Salimgareev</i> Ural Federal University, Ekaterinburg, Russia
3	Invited report	Plasma-solution synthesis of transition metal oxides <i>K.V. Smirnova, V.V. Rybkin, D.A. Shutov, A.N. Ivanov</i> Ivanovo State University of Chemistry and Technology, Ivanovo, Russia
4	Oral	The possible chemical pathways in NRP plasma-assisted ammonia synthesis and nitrogen fixation <i>Shuai Zhang, Xin Zeng, Lijun Zong, Xiucui Hu, Tao Sha</i> The Institute of Electrical Engineering of Chinese Academy of Sciences, Beijing, China
5	Oral	The discharge characteristics and CO₂ reduction in a packed bed plasma reactor <i>M. Zhu, F.F. Wu, H. Ma, S.Y. Xie, C.H. Zhang</i> Nanjing University of Aeronautics and Astronautics, Nanjing, China

September 7 (Tuesday)

Panorama, Big Hall

Plenary Session

Plenary Lecture 09:00-09:45	Surface ionization waves preceding a volume breakdown in low-pressure gas discharge tubes <i>Y.S. Akishev</i> Troitsk Institute of Innovative and Thermonuclear Research (TRINITI), Moscow, Troitsk, Russia
Plenary Lecture 09:45-10:30	TBA <i>E.E. Son</i> Joint Institute for High Temperature RAS, Moscow, Russia
Invited Lecture 10:50-11:25	The 40 years to RADAN - compact multi-purposed sources for various pulse power investigations <i>V.G. Shpak</i> Institute of Electrophysics UB RAS, Ekaterinburg, Russia
Invited Lecture 11:25-12:00	Intriguing phenomena accompanied sub-nanosecond duration powerful microwave pulse interaction with neutral gas and plasma <i>Y.E. Krasik</i> The Max Knoll Chair in Electronics and Opto-Electronics Physics Department, Technion - Israel Institute of Technology, Haifa, Israel

Panorama, Hall A

Section 1. Oral Session 2 (OS-1-2) 13.30-15.35

1	Invited report	Initiation mechanisms and dynamics of development at the prebreakdown stage of a self-sustained subnanosecond discharge in high-pressure nitrogen <i>S.N Ivanov, V.V. Lisenkov, Yu.I Mamontov</i> Institute of Electrophysics UB RAS, Ekaterinburg, Russia
2	Oral	Features of plasma sustaining in a large-volume hollow anode <i>N. Landl, Y. Korolev, I.V. Lopatin, S.S. Kovalsky, V. Nekhoroshev, V. Kasyanov</i> Institute of High Current Electronics SB RAS, Tomsk, Russia
3	Oral	Plasma generation in a high-current glow discharge with a hollow cathode in an axially symmetrical system using two electron sources <i>E.V. Ostroverkhov, V.V. Denisov</i> Institute of High Current Electronics SB RAS, Tomsk, Russia
4	Oral	Average ion-charge state and explosive emission plasma momentum derivation from critical temperature of metal <i>M.M. Tsventoukh</i> Lebedev Physical Institute of Russian Academy of Sciences, Moscow, Russia
5	Oral	Electric explosion of flat copper conductors in asymmetric and symmetric configurations in the current skinning mode <i>N.A. Labetskaya, I.M. Datsko, S.A. Chaikovsky, V.A. Van'kevich, E. Oreshkin, V.I. Oreshkin</i> Institute of High Current Electronics SB RAS, Tomsk, Russia
6	Oral	Study of anode and cathode plasmas formation in an electron diode with an explosive emission cathode <i>A.I. Pushkarev, A.I. Prima</i> Tomsk Polytechnic University, Tomsk, Russia

Panorama, Hall A

Section 4. Oral Session 2 (OS-4-2)

15.55-18.00

1	Invited report	Operating parameters of high pulse repetition frequency capillary gas discharge switch and its application for ion self-terminating lasers pumping <i>P.A. Bokhan, P.P. Gugin, M.A. Lavrukhin, D.E. Zakrevsky</i> A. V. Rzhanov Institute of Semiconductor Physics SB RAS, Novosibirsk, Russia
2	Oral	Investigation of cold atmospheric plasma jet generation excited by square-wave pulse <i>P.P. Gugin, D.E. Zakrevsky, E.V. Milakhina</i> A.V. Rzhanov Institute of Semiconductor Physics SB RAS, Novosibirsk, Russia
3	Oral	Subnanosecond switching of standard thyristors triggered in impact-ionization wave mode by a high-voltage PCSS driver <i>A. Gusev, I. Prudaev, I. Lavrinovich, A. De Ferron, B. Novac, L. Pecastaing</i> Universite de Pau et des Pays de l'Adour, E2S UPPA, SIAME, Pau, France
4	Oral	Formation of the voltage pulses up to 400 kilovolts with front pulse less than 10 nanoseconds <i>B.A. Kozlov, D.S. Makhanko</i> PLASMA, JSC Research Institute of Gas-Discharge Devices, Ryazan, Russia
5	Oral	Increasing the operation stability of the electron accelerator based on ion-electron emission <i>M.S. Torba, S.Yu. Doroshkevich, M.S. Vorobyov, N.N. Koval, S.A. Sulakshin, V.A. Levanisov</i> Institute of High Current Electronics, SB, RAS, Tomsk, Russia

Panorama, Hall B

Section 2. Oral Session 2 (OS-2-2)

13.30-15.35

1	Invited report	Modeling of ion-plasma synthesis of linear-chained carbon <i>E.A. Buntov, A.F. Zatsepin, A.I. Matitsev, V.A. Dutov, K.P. Arslanov</i> Ural Federal University, Ekaterinburg, Russia
2	Oral	Structure and mechanical properties of stainless-steel specimens, made by additive method, after pulsed electron beam treatment <i>A.D. Teresov, Yu.H. Akhmadeev, E.A. Petrikova, O.V. Krygina, Yu.F. Ivanov, G.V.Semenov</i> Institute of High Current Electronics SB RAS, Tomsk, Russia
3	Oral	Balanced control of thermal impact on metal materials in electron source with a plasma cathode <i>K.T. Ashurova, T.V. Koval, M.S. Vorobyov, My Kim An Tran, V.I. Shin, P.V. Moskvin, N.N. Koval</i> Institute of High Current Electronics SB RAS, Tomsk, Russia
4	Oral	Energy density distribution of a modulated electron beam in a source with a plasma cathode based on a low pressure arc <i>V.I. Shin, P.V. Moskvin, M.S. Vorobyov, V.N. Devyatkov, N.N. Koval</i> Institute of High Current Electronics, SB, RAS, Tomsk, Russia
5	Oral	Improvement of vacuum surface flashover voltage for polymer by atmospheric pressure plasma jet <i>Chengyan Ren, Chuansheng Zhang, Kun Xie1, Cheng Zhang, Tao Shao</i> University of Chinese Academy of Sciences, Beijing, China

Panorama, Hall B

Section 3. Oral Session 2 (OS-3-2)

15.55-18.00

1	Invited report	The DC pulse current pattern influence during spark plasma sintering <i>Thet Naing Soe, I.M.Makhadilov, N.W.Solis Pinargote</i> Moscow State Technological University(Stankin), Moscow, Russia
2	Oral	Carbon nanoparticles (CNP) coated with copper oxide (CuO) by electrophoretic synthesis <i>Nay Win</i> Southwest State University, Kursk, Russia
3	Oral	Investigation of photocatalytic activity of bismuth nanopowder oxide doped with silver obtained by pulsed electron beam evaporation in vacuum <i>O.A.Svetlova, V.G. Ilves, S.Yu. Sokovnin</i> Institute of Electrophysics UB RAS, Ekaterinburg, Russia
4	Oral	Influence of the supplied energy on the phase content of crystalline dispersed titanium dioxide obtained by the plasma dynamic method <i>A.A. Sivkov, Y.N. Vympina, I.A. Rakhmatullin, A.S. Ivasutenko, Y.L. Shanenkova</i> School of Energy & Power Engineering, Tomsk, Russia
5	Oral	Synthesis of metastable cubic tungsten carbide with a high purity in dispersed and bulk forms by the plasma dynamic method <i>A.A. Sivkov, I.I. Shanenkov, D.S. Nikitin, A. Nassurbayev</i> Tomsk Polytechnic University, Tomsk, Russia

September 8 (Wednesday)

Panorama, Hall A

Section 1. Oral Session 3 (OS-1-3)

09.00-10.25

1	Invited report	Investigation of discharges with the emission of electrons from cold cathodes in pure gases features <i>P. Bokhan, E.V. Belskaya, P.P. Gugin, D.E. Zakrevsky, V.A. Kim., G.V. Shevchenko</i> Institute of Semiconductor Physics SB RAS, Novosibirsk, Russia
2	Oral	Nanosecond breakdown in a pulsed open discharge <i>P.P. Gugin, P. Bokhan, D.E. Zakrevsky, N.A. Glubokov</i> Institute of Semiconductor Physics SB RAS, Novosibirsk, Russia
3	Oral	Method of triggering a cold cathode thyatron with nanosecond stability <i>G. Argunov, N. Landl, Y. Korolev, O. Frants, V. Geyman, V. Nekhoroshev</i> Institute of High Current Electronics SB RAS, Tomsk, Russia
4	Oral	A source of powerful subnanosecond VUV-UV radiation pulses based on a high-pressure gas discharge <i>V.I. Baryshnikov, V.L. Paperny</i> Irkutsk State University, Irkutsk, Russia

Panorama, Hall A

Section 4. Oral Session 3 (OS-4-3)

10.40-12.00/05

1	Invited report	Cold plasma source based on the apokampic discharge in atmospheric-pressure air <i>D.A. Sorokin, V.A. Panarin, E.A. Sosnin, V.S. Kuznetsov, V.S. Skakun</i> Institute of High Current Electronics SB RAS, Tomsk, Russia
2	Oral	Wide radiation bands of sub-nanosecond discharge in xenon and inaccuracies in their measurements <i>V.F. Tarasenko, A.N. Panchenko, D.V. Beloplotov, D.A. Sorokin, M.I. Lomaev, V.V. Kozevnikov</i> Institute of High-Current Electronics SB RAS, Tomsk, Russia
3	Oral	Methods for increasing the electrical breakdown strength of the accelerating gap in an electron source with a plasma cathode <i>P.V. Moskvin, V.N. Devyatkov, I.V. Lopatin, V.I. Shin</i> Institute of High Current Electronics, SB RAS, Tomsk, Russia
4	Oral	Features of plasma generation in a pulsed mode of a non-self-sustained arc discharge <i>S.S. Kovalsky, V.V. Denisov, E.V. Ostroverkhov, V.E. Prokop'ev</i> Institute of High Current Electronics, SB, RAS, Tomsk, Russia

Panorama, Hall BSection 2. Oral Session 3 (OS-2-3)
09.00-10.25

1	Invited report	Application of composite SHS-cathodes in recent PVD technologies for manufacturing of protective UHTC-based coatings <i>Ph. Kiryukhantsev-Korneev, E. Levashov</i> National University of Science and Technology "MISIS", Russia
2	Oral	The deposition of Al₂O₃ coatings in the Ar-O₂ low-pressure discharge plasma under high dissociation degree of O₂ <i>P.V. Tretnikov, N.V. Gavrilov, A.S. Kamenetskikh, S.V. Krivoshapko, A.V. Chukin</i> Institute of Electrophysics, UB, RAS, Yekaterinburg, Russia
3	Oral	Effect of plasma assistance on the properties of coatings based on aluminum oxide <i>A.Yu.Nazarov, E.L.Vardanyan, R.Sh.Nagimov, A.A.Maslov</i> Scientific and Production Association «Technopark of aviation technologies», Ufa, Russia
4	Oral	Structural and phase dependencies of coatings formation based on intermetallides Ti-Al systems for increasing the durability of cutting tools <i>E.L. Vardanyan, K.N. Ramazanov, A.Yu. Nazaraov, R.Sh. Nagimov, A.A. Maslov</i> Ufa State Aviation Technical University, Ufa, Russia

Panorama, Hall BSection 3. Oral Session 3 (OS-3-3)
10.40-12.00/05

1	Oral	Features of the gas-phase synthesis of oxide nanopowders using high-power lasers <i>V.V. Osipov, V.V. Lisenkov, V.V. Platonov, E.V. Tikhonov</i> Institute of Electrophysics, UB, RAS, Ekaterinburg, Russia
2	Oral	Impulse laser application for surface modification of tool steel with B₄C-Al powders <i>U.L. Mishigdorzhijn, N.S. Ulakhanov, A.V. Nomoev</i> Institute of Physical Materials Science SB RAS, Ulan-Ude, Russia
3	Oral	Droplets generation conducting during laser-plasma treating of metals in electric field <i>A.Yu. Ivanov, A.L. Sitkevich, S.V. Vasiliev</i> Grodno State University named after Yanka Kupala, Grodno, Belarus

Institute of ElectrophysicsSections 1-4. Poster Session
14.00-17.00

Information is located at the bottom of the program.

September 9 (Thursday)

Panorama, Hall A

Section 1. Oral Session 4 (OS-1-4)

09.00-10.25

1	Invited report	On the scaling laws for low-temperature plasmas at macro and micro scales <i>Y. Fu, X. Wang, B. Zheng, P. Zhang, Q. Fan, J. Verboncoeur</i> Tsinghua University, Beijing, China
2	Oral	Influence of molecular oxygen on energy characteristics of a gas discharge of atmospheric pressure in air with addition of carbon oxide <i>A.N. Orlov, V.V. Osipov, V.V. Lisenkov, S.M. Arminin</i> Institute of Electrophysics UB RAS, Ekaterinburg, Russia
3	Oral	Dynamics of the formation and contraction of a microwave discharge and fast gas heating in nitrogen <i>A. Saifutdinov, E.V. Kustova</i> Kazan National Research Technical University, Kazan, Russia
4	Oral	Interrelation forms the channel the high frequency torch discharge to the characteristics of its elements to the electromagnetic field <i>A.E. Myusova, Y.Y. Lutsenko</i> National Research Tomsk Polytechnic University, Tomsk, Russia

Panorama, Hall A

Section 4. Oral Session 4 (OS-4-4)

10.40-12.00

1	Oral	The measurements of plasma expansion processes of high current vacuum arc <i>I.L. Muzyukin, P.S. Mikhailov, S.A. Chaikovsky, I.V. Uimanov, D.L. Shmelev, Yu.A. Zemskov</i> Institute of Electrophysics, UB, RAS, Ekaterinburg, Russia
2	Oral	Experimental study of micro pulsed plasma thruster <i>I.L. Muzyukin, P.S. Mikhailov</i> Institute of Electrophysics, UB, RAS, Ekaterinburg, Russia
3	Oral	Thrust characteristics of compact high-voltage pulsed plasma thruster utilizing liquid propellant <i>S.A. Buldashev, R.V. Emlin, P.A. Morozov, I.F. Punanov, Y.N. Shcherbakov, L.Y. Yashnov</i> Institute of Electrophysics, Ekaterinburg, Russia
4	Oral	Properties of pulsed magnetron discharge plasma in helium <i>A.V. Kaziev, D.V. Kolodko, G.I. Rykunov, N.S. Sergeev</i> National Research Nuclear University MEPhI (Moscow Engineering Physics Institute), Moscow, Russia

Panorama, Hall BSection 2. Oral Session 4 (OS-2-4)
09.00-10.25

1	Invited report	PVD gradient and multilayer coatings deposited by vacuum-arc plasma-assisted method <i>O.V. Krygina, N.N. Koval, Yu.F. Ivanov, N.A. Prokopenko, V.V. Shugurov</i> Institute of High Current Electronics, SB, RAS, Tomsk, Russia
2	Oral	Nb/NbN multilayer coatings deposited by the vacuum-arc plasma-assisted method: synthesis, properties, structure <i>O.V. Krygina, N.A. Prokopenko, Yu.F. Ivanov, V.V. Shugurov, E.A. Petrikova, O.S. Tolkachev, M.E. Rygina</i> Institute of High Current Electronics SB RAS, Tomsk, Russia
3	Oral	Influence of pulse-periodic low-pressure arc discharge mode on coating properties <i>M.V. Savchuk, V.V. Yakovlev, V.V. Denisov, A.A. Leonov, A.O. Egorov</i> Institute of High Current Electronics SB RAS, Tomsk, Russia
4	Oral	Ti₂AlC max phase coatings made by reactive cathodic arc deposition (arc-PVD) <i>A.A. Maslov, A.Yu. Nazarov, E.L. Vardanyan</i> Ufa State Aviation Technical University, Ufa, Russia

Panorama, Hall BSection 2. Oral Session 5 (OS-2-5)
10.40-12.00

1	Oral	Effect of the annealing temperature on the structural properties of hafnium nanofilms by magnetron sputtering <i>Thant Sin Win, A P Kuzmenko, V.V. Rodionov, Myo Min Than</i> Southwest State University, Kursk, Russia
2	Oral	Study of the TiN-Cu films deposited on alloy T15K6 by plasma of low pressure vacuum-arc and magnetron discharges <i>D.B-D. Tsyrenov, A.P. Semenov, E.O. Nikolaev, N.S. Ulakhanov</i> Institute of Physical Materials Science, SB, RAS, Ulan-Ude, Russia
3	Oral	Effect of bias voltage on the performance of magnetron deposited MoS₂ coatings <i>M.M. Kharkov, G.I. Rykunov, A.V. Kaziev, M.S. Kukushkina, D.V. Kolodko, M.V. Prozhega, E.O. Reschikov, I.S. Babinets, P.P. Beschapov, A.M. Stasenko, S.V. Chernyshov</i> National Research Nuclear University MEPHI, Moscow, Russia
4	Oral	TiCrN vacuum arc coating to increase wear resistance of die steels <i>A.A. Leonov, Yu.A. Denisova, V.V. Denisov, M.V. Savchuk, V.N. Tishchenko</i> Institute of High Current Electronics SB RAS, Tomsk, Russia

September 10 (Friday)

Panorama, Hall A

Section 1. Oral Session 5 (OS-1-5)
09.00-10.25

1	Invited report	OES of nitrogen atoms concentration during plasma processing <i>S.V. Avtaeva</i> Institute of Laser Physics SB RAS, Berdsk, Russia
2	Oral	Spatial spectroscopy of magnetron discharge argon plasma using a radiative-collisional model <i>S. Serushkin</i> Bauman Moscow State Technical University, Moscow, Russia
3	Oral	OES investigation of a low-pressure non-self-sustained glow discharge plasma in Ar:N₂ gas mixture <i>S.S. Kovalsky, V.V. Denisov, E.V. Ostroverkhov, V.E. Prokop'ev</i> Institute of High Current Electronics SB RAS, Tomsk, Russia
4	Oral	Magnetic field influence on the penning discharge characteristics <i>N.V. Mamedov, A.S. Rohmanenkov, A.A. Solodovnikov</i> Dukhov Automatics Research Institute, Moscow, Russia

Panorama, Hall A

Section 1. Oral Session 6 (OS-1-6)
10.40-12.00

1	Oral	Methods for introducing negative feedback for beam current control in sources with a plasma cathode based on a low pressure arc <i>M. Vorobyov, P. Moskvina, V. Devyatkov, N. Koval, V. Shin</i> Institute of High Current Electronics SB RAS, Tomsk, Russia
2	Oral	The problem of "anomalous" ion transport in high-current vacuum discharges <i>V.Y. Kozhevnikov, A. Kokovin, A.V. Kozyrev</i> Institute of High Current Electronics SB RAS, Tomsk, Russia
3	Oral	The measurements of vacuum arc behavior at threshold currents <i>I.L. Muzyukin, P.S. Mikhailov</i> Institute of Electrophysics UB RAS, Ekaterinburg, Russia
4	Oral	Research of the life characteristics of thermocathodes in arc plasma torch <i>P.V. Domarov</i> Kutateladze Institute of Thermophysics SB RAS, Novosibirsk, Russia

Panorama, Hall BSection 2. Oral Session 6 (OS-2-6)
09.00-10.25

1	Invited report	Aerosol assisted atmospheric pressure plasma deposition for silver-containing antibacterial coatings <i>L. Wang, C. Lo Porto, F. Palumbo, M. Modic, U. Cvelbar, C. Leys, A. Nikiforov</i> National University of Defense Technology, Changsha, China
2	Oral	Effect of ultraviolet irradiation or plasma of diffuse discharge on the surface properties of MAO calcium phosphate coatings <i>E.G. Komarova, E.A. Kazantseva, V.S. Ripenko, A. Zharin, Y.P. Sharkeev</i> Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia
3	Oral	Effect of power of ultrasound during micro-arc oxidation on phase composition and morphology of calcium phosphate coatings <i>E.A. Kazantseva, E.G. Komarova, Y.p. shaRkeev</i> Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia
4	Oral	Plasma modification of the surface of a steel product using the MAK-10 installation <i>S.A. Il'inyh, S.A. Ahmetshin, V.A. Krashaninin, B.R. Gelchinski, A.A. Rempel</i> Institute of Metallurgy of the Ural Branch of the Russian Academy of Sciences, Ekaterinburg, Russia

Panorama, Hall BSection 2. Oral Session 7 (OS-2-7)
10.40-12.00

1	Oral	Development of the computer model of the plasma installation <i>R.A. Okulov, E.V. Popov, B.R. Gelchinski, A.A. Rempel</i> Institute of Metallurgy of the Ural Branch of the Russian Academy of Sciences, Ekaterinburg, Russia
2	Oral	Effect of irradiation with ions of different atomic masses (Ar^+ and Xe^+) on the properties of $\text{Co}_{90}\text{Fe}_{10}/\text{Cu}$ magnetic superlattices <i>N.V. Gushchina, V.V. Ovchinnikov, K.V. Shalomov, N.S. Bannikova, R.S. Zavornitsyn, M.A. Milyaev</i> Institute of Electrophysics, UB RAS, Ekaterinburg, Russia
3	Oral	Formation of austenite particles enriched in manganese up to 20 at. % and more, in volume of Fe-6.35 at. % mn alloy in temperature range of 300-450 °C during irradiation with Ar^+ 20 keV ions <i>E.V. Makarov, V.V. Ovchinnikov</i> Institute of Electrophysics UB RAS, Ekaterinburg, Russia

Institute of Electrophysics (08.09.2021)

Sections 1-4. Poster Session

14.00-17.00

Code	Title	Authors	Affiliation	City	Country
1-01-P	Features of the low-pressure hollow-cathode glow discharge sustaining for the conditions of enhanced emissivity of the cathode surface	N.V. Landl, Y.D. Korolev, O.B. Frants, G.A. Argunov, V.G. Geyman, V.O. Nekhoroshev	Institute of High Current Electronics SB RAS	Tomsk	Russia
1-03-P	Investigation of the charge state variation of the cathode material ions in the low current vacuum arc plasma	Yu.A. Zemskov, I.V. Uimanov	Institute of Electrophysics UB RAS	Ekaterinburg	Russia
1-05-P	Electrical properties of he-induced w "fuzz" within the pre-breakdown and breakdown regimes	Yu.A. Zemskov, Yu.I. Mamontov, I.V. Uimanov	Institute of Electrophysics UB RAS	Ekaterinburg	Russia
1-06-P	Measurement of the expansion velocity of the plasma high-current vacuum arc discharge	A. S. Zhigalin, A.G. Rousskikh, V.I. Oreshkin, A.P. Artyomov	Institute of High Current Electronics SB RAS	Tomsk	Russia
1-13-P	Dynamics and features of streamer formation in a sharply inhomogeneous electric field	D.V. Beloplotov, M.I. Lomaev, D.A. Sorokin, V.F. Tarasenko	Institute of High Current Electronics SB RAS	Tomsk	Russia
1-15-P	Investigation of the radial density distribution of the near-surface matter in the cylindrical conductors skin explosion	I.M. Datsko, N.A. Labetskaya, V.A. Van'kevich	Institute of High Current Electronics SB RAS	Tomsk	Russia
1-16-P	The initial stage of the plasma formation at the skin explosion of cylindrical conductors	I.M. Datsko, N.A. Labetskaya, S.A. Chaikovsky, V.A. Van'kevich And V.I. Oreshkin	Institute of High Current Electronics SB RAS	Tomsk	Russia
1-17-P	Formation of the spatial structure of a diffuse discharge in excimer lasers	Yu.N. Panchenko, A.V. Puchikin, M.V. Andreev, E.V. Gorlov, V.I. Zharkov	Institute of High Current Electronics SB RAS	Tomsk	Russia
1-18-P	Plasma channel dynamics in sub- and microsecond discharges in water	N.S. Semeniuk, A.V. Kozyrev, A.A. Zherlitsyn, S.S. Kondratiev, V.M. Alexeenko	Institute of High Current Electronics SB RAS	Tomsk	Russia
1-19-P	The dynamics of the formation of initial stages of a transverse nanosecond discharge with an extended slot cathode in argon	N.A. Ashurbekov, K.O. Iminov, M.Z. Zakaryaeva, G.S. Shakhshinov, K.M. Rabadanov	Dagestan State University	Makhachkala	Russia
1-23-P	Investigation of the aluminum electrodes erosion of a plasma gun during the operation of a high-current vacuum arc discharge	A.P. Artyomov, A.G. Rousskikh, A.S. Zhigalin, I.A. Rousskikh, A.G. Tyukavkin, V.I. Oreshkin	Institute of High Current Electronics SB RAS	Tomsk	Russia
1-24-P	Determination of the conductor resistance during their explosion in vacuum under conditions of skinning the current	A.G. Rousskikh, A.S. Zhigalin, V.I. Oreshkin	Institute of High Current Electronics SB RAS	Tomsk	Russia
1-27-P	The development of hydrodynamic and thermal instabilities in a liquid metal jets in the cathode spot of a vacuum arc	I.V. Uimanov, G.A. Mesyats	Institute of Electrophysics UB RAS	Ekaterinburg	Russia

1-28-P	Surface discharge during electrical explosion of conductors in strong magnetic fields	V.I. Oreshkin, S.A. Chaikovsky, E.V. Oreshkin	Institute of High Current Electronics SB RAS	Tomsk	Russia
1-30-P	Determination of the voltage drop on a high-current vacuum arc discharge under conditions of a limited cross-section of the plasma flow	A.G. Rousskikh, A.S. Zhigalin, V.I. Oreshkin, A.P. Artyomov	Institute of High Current Electronics SB RAS	Tomsk	Russia
1-31-P	Comparative characteristics of a glowing anomalous, an open and a hollow cathode discharges	P.A. Bokhan, E.V. Belskaya, P.P. Gugin, A.A. Kvashnina, D.E. Zakrevsky	Institute of Semiconductor Physics SB RAS	Novosibirsk	Russia
1-32-P	Features of the electron avalanche formation process in a strongly inhomogeneous electric field under high overvoltages	Y.I. Mamontov, V.V. Lisenkov	Institute of Electrophysics UB RAS	Ekaterinburg	Russia
1-33-P	Electron emission from an expanding plasma front within the forevacuum pressure range in spherical geometry	Y.I. Mamontov, I.V. Uimanov	Institute of Electrophysics UB RAS	Ekaterinburg	Russia
1-34-P	Numerical investigation of a high-pressure gas medium pre-ionization by runaway electrons	V.V. Lisenkov, Y.I. Mamontov	Institute of Electrophysics UB RAS	Ekaterinburg	Russia
1-35-P	Some issues of the operation of plasma opening switches	S.V. Loginov,	Institute of High Current Electronics SB RAS	Tomsk	Russia
1-40-P	Generation of a plasma of a non-self-sustaining glow discharge at low pressure inside long cavities	D.Y. Ignatov, S. Kovalsky, I. Lopatin	Institute of High Current Electronics SB RAS	Tomsk	Russia
1-44-P	“Electrical wind” in co ₂ -laser mixtures at superatmospheric pressures	B.A. Kozlov, D.S. Makhanko	Ryazan State Radio Engineering University named after V.F. Utkin	Ryazan	Russia
1-45-P	Formation of volume discharges in dense gases at pulse repetition rates up to 10 khz	B.A. Kozlov,	Ryazan State Radio Engineering University named after V.F. Utkin	Ryazan	Russia
1-47-P	Arc discharges operation in "elion" mode	I.V. Lopatin, Yu.H. Akhmadeev, S.V. Kovalsky, D.Yu. Ignatov	Institute of High Current Electronics SB RAS	Tomsk	Russia
1-48-P	Trapped runaway mode of electrons acceleration and ionization processes in pulsed discharge	M.M. Tsventoukh,	Lebedev Physical Institute of Russian Academy of Sciences	Moscow	Russia
1-50-P	Modeling dc discharges: from townsend to arc mode in atomic and molecular gases	A.I. Saifutdinov, B.A. Timerkaev, A.R. Sorokina, A.A. Saifutdinova	Kazan National Research Technical University	Kazan	Russia
1-52-P	Numerical studies of the dynamics of a surface barrier discharge in molecular gases and gas heating in the region of the discharge formation	A.I. Saifutdinov, A.A. Saifutdinova, B.A. Timerkaev	Kazan National Research Technical University	Kazan	Russia
1-53-P	On hybrid type of cathode attachment in high current vacuum arcs	D.L. Shmelev, S.A. Chaikovsky, I.V. Uimanov	Institute of Electrophysics UB RAS	Ekaterinburg	Russia
1-54-P	2d kinetic simulation of cathode spot plasma expansion	D.L. Shmelev, S.A. Barengolts, M.M. Tsventoukh, I.V. Uimanov	Institute of Electrophysics UB RAS	Ekaterinburg	Russia
1-55-P	Mechanism of additional self-focusing of an electron beam generated during a high-voltage nanosecond discharge in a gas-filled diode	D.A. Sorokin, M.I. Lomaev, A.V. Dyatlov, V.F. Tarasenko	Institute of High Current Electronics SB RAS	Tomsk	Russia
1-56-P	Splitting of the ionization wave during the development of gas breakdown in a multichannel discharge system	A.I. Shishpanov, P.S. Bazhin, A.V. Meschanov	Saint Petersburg State University	Saint-Petersburg	Russia

1-57-P	Hole size effect on microhollow cathode discharge in air	K.I. Romanov, S.I. Moshkunov, S.V. Nebogatkin, E.A. Shershunova	Institute for Electrophysics and Electric Power RAS	Moscow	Russia
1-58-P	Formation of plasma jets by a high-current discharge in metal vapor	V.A. Kokshenev, N.E. Kurmaev	Institute of High Current Electronics SB RAS	Tomsk	Russia
1-59-P	Dense plasma formation on the surface of a stainless steel conductor in ultrahigh magnetic fields	V.A. Kokshenev, N.E. Kurmaev	Institute of High Current Electronics SB RAS	Tomsk	Russia
1-60-P	Mechanisms for increasing the diffuse channels density in pump discharges of excimer lasers	S.A. Yampolskaya, A.G. Yastremskii	Institute of High Current Electronics SB RAS	Tomsk	Russia
1-61-P	Runaway of electrons and initiation of explosive electron emission during pulse breakdown of dense gases	N.M. Zubarev, G.A. Mesyats	Institute of Electrophysics UB RAS	Ekaterinburg	Russia
1-62-P	Experimental installation for studying cathode plasma processes in vacuum gap of pulsed electron accelerator with gas or liquide injection	I.S. Egorov, A.V. Klimkin, A.V. Poloskov, M.A. Serebrennikov, M.V.Trigub	Tomsk polytechnic university	Tomsk	Russia
1-65-P	Current and voltage in planar diode with a moving conducting channel	V.A. Shklyaev, S.Ya.Belomyttsev, A.A. Grishkov	Institute of High Current Electronics SB RAS	Tomsk	Russia
1-68-P	Study of radiative characteristics of a completed partial discharge	V.O. Bezrukov, E.A. Yakovlev, V.V. Yugay, L.A. Zinovyev, A.R. Kashlev	Karaganda Technical University	Karaganda	Kazakhstan
1-72-P	Generation of plasma in low-pressure discharge	S.P. Nikulin,	Institute of Electrophysics UB RAS	Ekaterinburg	Russia
1-73-P	Effect of bremsstrahlung on the characteristic growth length of an avalanche of runaway electrons	E.V. Oreshkin,	P.N. Lebedev Physical Institute of the Russian Academy of Sciences	Moscow	Russia
2-01-P	Multi-cycle modification of 40cr steel by irradiating the "film (Si (0.2 μm) + Nb (0.2 μm)) / substrate(40cr steel)"system by an intensive pulsed electron beam	N.N. Koval, Yu.F. Ivanov, V.V. Shugurov, A.D. Teresov, E.A. Petrikova	Institute of High Current Electronics SB RAS	Tomsk	Russia
2-02-P	Charge and elemental composition of plasma generated by sputtering of powder target from amorphous boron	Yu.F. Ivanov, V.V. Shugurov, O.V. Krysina, V.E. Prokopiev	Institute of High Current Electronics SB RAS	Tomsk	Russia
2-03-P	Structure and properties of high-chromium steel irradiated with a pulsed electron beam and nitrided in a low-pressure gas discharge plasma	Yu.F. Ivanov, E.A. Petrikova, A.D. Teresov, S.V. Lykov, M.E. Rygina	Institute of High Current Electronics SB RAS	Tomsk	Russia
2-04-P	Numerical estimation of the sputtering coefficient of copper anode of a planar magnetron by a beam of accelerated argon ions with energy of 1-10 keV	D.B-D. Tsyrenov, A.P. Semenov, I.A. Semenova, E.O. Nikolaev	Institute of Physical Materials Science SB RAS	Ulan-Ude	Russia
2-06-P	Features of the discharge and deposition of the crnx coatings when using magnetron with a hot target	G.A. Bleykher, V.A. Grudinin, D.V. Sidelev, V.P. Krivobokov	Tomsk Polytechnic University	Tomsk	Russia
2-10-P	Deposition of tiscn coatings by decomposition of hexamethyldisilazane and anodic evaporation of titanium in a low-pressure arc discharge	A.I. Men'shakov, Yu.A. Bryuhanova, Yu.S. Surkov, A.V. Chukin	Institute of Electrophysics UB RAS	Ekaterinburg	Russia
2-12-P	Effect of 3d ions implantation on electronic structure of v2o5 based cathode for lithium-ion batteries	I.S. Zhidkov, A.I. Kukharenko, D.A. Erzunov, S.O. Cholakh, N.V. Gavrilov, E.Z. Kurmaev	Ural Federal University	Ekaterinburg	Russia

2-13-P	Method of a structural steels complex treatment combining electron-ion-plasma alitizing and nitriding in a single vacuum cycle	Yu.H. Akhmadeev, I.V. Lopatin, Yu.F. Ivanov, O.V. Krysina, E.A. Petrikova, M.E. Rygina	Institute of High Current Electronics SB RAS	Tomsk	Russia
2-17-P	The effect of o2 dissociation degree on the rate of anodic evaporation of al in low-pressure arc	S.V. Krivoshapko, N.V. Gavrilov, A.S. Kamenetskikh, P.V. Tretnikov, A.V. Chukin	Institute of Electrophysics UB RAS	Ekaterinburg	Russia
2-19-P	Influence of electron-beam heating modes on the structure of composite zro2-al2o3 ceramics	A.S. Klimov, I.Yu. Bakeev, A.A. Zenin	Tomsk State University of Control Systems and Radioelectronics	Tomsk	Russia
2-20-P	Electron beam sintering of mn-zn ferrites using a forevacuum plasma electron source	A.S. Klimov, I.Yu. Bakeev, A.A. Zenin	Tomsk State University of Control Systems and Radioelectronics	Tomsk	Russia
2-22-P	Features of boriding die steel d5 by electron beams	A.S. Milonov, D.E. Dasheev, N.N. Smirnyagina, A.E. Lapina	Institute of Physical Materials Science SB RAS	Ulan-Ude	Russia
2-27-P	Effect of ion nitriding by glow discharge on the physicomechanical properties of the plastically deformed tool steel r6m5	R.K. Vafin, A.V. Asylbaev, D.V. Mamontov, I.D. Sklizkov, G.I. Raab, E.F. Khairtdinov, R.S. Esipov	Institute of Aviation Technologies and Materials	Ufa	Russia
2-29-P	Advantages of using of plasma of pulse-periodic low-pressure discharges for surface treatment	V.V. Denisov, Yu.A. Denisova, S.S. Kovalsky, A.A. Leonov, E.V. Ostroverkhov, V.N. Tishchenko, V.V. Yakovlev	Institute of High Current Electronics SB RAS	Tomsk	Russia
2-30-P	Investigation of tungsten surface carbidization under plasma irradiation	A. Zh. Miniyazov, T.R. Tulenbergenov, I.A. Sokolov, G.K. Zhanbolatova, O.S. Bukina, Ye.A. Kozhahmetov, M.K. Skakov	Branch "Institute of Atomic Energy" National Nuclear Center of the Republic of Kazakhstan	Kurchatov	Kazakhstan
2-32-P	Formation of catalytic and corrosion protective layers with use of ion beam assisted deposition of metals from vacuum arc discharge plasma	V.V. Poplavsky,	Belarusian State Technological University	Minsk	Belarus
2-34-P	Effect of temperature on the formation of tungsten carbide in a beam-plasma discharge	G.K. Zhanbolatova, V.V. Baklanov, M.K. Skakov, O.S. Bukina, Ye.A. Kozhahmetov, N.A. Orazgaliev	Branch "Institute of Atomic Energy" National Nuclear Center of the Republic of Kazakhstan	Kurchatov	Kazakhstan
2-36-P	Comparative study on high-voltage nanosecond pulses and dielectric barrier discharge effects on surface morphology and physico-chemical properties of natural pyrrhotite	I.Zh. Bunin, I.A. Khabarova	The N.V. Melnikov Institute of Comprehensive Exploitation of Mineral Resources RAS	Moscow	Russia
2-39-P	Surface engineering of titanium: influence of icp etching and calcium-phosphate-based coating deposition	M.M. Kharkov, A.V. Kaziev, G.I. Rykunov, M.S. Kukushkina, K.A. Prosolov, M.A. Khimich, Yu.P. Sharkeev	National Research Nuclear University MEPhI	Moscow	Russia
2-42-P	Field electron emission from nanostructured tungsten surface	P.S. Mikhailov, I.L. Muzyukin	Institute of Electrophysics UB RAS	Ekaterinburg	Russia

2-43-P	Effect of ion irradiation on the structural state and mechanical properties of naturally-aged hot-pressed d16 (al-cu-mg) alloy profiles	N.V. Gushchina, V.V. Ovchinnikov, L.I. Kaigorodova, D.Y. Rasposienko, D.I. Vichuzhanin	Institute of Electrophysics UB RAS	Ekaterinburg	Russia
2-44-P	Possibility of annealing of a deformed ni–13.9 wt. % w alloy with a beam of accelerated argon ions	N.V. Gushchina, V.V. Ovchinnikov, V.I. Bobrovskii, V.I. Voronin	Institute of Electrophysics UB RAS	Ekaterinburg	Russia
2-45-P	Ion current optimization in a magnetron with tunable magnetic field	A.V. Kaziev, D.G. Ageychenkov, A.V. Tumarkin, D.V. Kolodko, N.S. Sergeev, M.M. Kharkov	National Research Nuclear University MEPhI	Moscow	Russia
2-47-P	Investigation of the structure of craters on the surface of steel 12x18h10t after its treatment with a high pulsepower beam of carbon ions	A. E. Ligachev, M. V. Zhidkov, G. V. Potemkin, G. E. Remnev	Prokhorov General Physics Institute	Moscow	Russia
2-49-P	Modification of stainless steel based on synergistic of low-energy high-intensity ion implantation and high-current electron beam impact on the surface layer	O.S. Korneva, A.I. Ryabchikov, O.S. Korneva, D.O. Sivin, A.I. Ivanova, I.V. Lopatin, I.A. Bozhko	National Research Tomsk Polytechnic University	Tomsk	Russia
2-51-P	Influence of ion nitriding on the properties of duplex surface treatment of high-speed steel	R.Sh. Nagimov, E.L. Vardanyan, A.A. Nikolaev, A.V. Oleinik, A.Yu. Nazarov	Ufa State Aviation Technical University	Ufa	Russia
2-52-P	Formation of wear-resistance near surface layers in al-si alloys with an electron-beam treatment	E.A. Petrikova, Yu.F. Ivanov, N.A.Prokopenko, A.D. Teresov	Institute of High Current Electronics SB RAS	Tomsk	Russia
2-55-P	Formation of a silicon-niobium-based surface alloy using electron-ion-plasma surface engineering	V.V. Shugurov, N.N. Koval, Yu.F. Ivanov, A.D. Teresov, E.A. Petrikova	Institute of High Current Electronics SB RAS	Tomsk	Russia
2-56-P	Deposition of boron films by discharge system with hot anode from boron powder	V.V. Shugurov, Yu.F. Ivanov	Institute of High Current Electronics SB RAS	Tomsk	Russia
2-57-P	Modification and optical degradation of thin multilayers under vuv/vu radiation from compressed plasma flows	A.S. Skriabin, V.D. Telekh, A.V. Pavlov, D.A. Chesnokov, V.G. Zhupanov, P.A. Novikov	Bauman Moscow State Technical University	Moscow	Russia
2-59-P	Interaction of plasma with beryllium	I.A. Sokolov, M.K. Skakov, A.Z. Miniyazov, T.R. Tulenbergenov, G.K. Zhanbolatova	Institute of Atomic Energy of the National Nuclear Center of the Republic of Kazakhstan	Kurchatov	Kazakhstan
2-60-P	Hysteresis of the magnetron deposition process with aluminum and zinc targets in a reactive mixture of gases	D.G. Ageychenkov, A.V. Kaziev, D.V. Kolodko, N.S. Sergeev, A.S. Isakova, A.V. Tumarkin	National Research Nuclear University MEPhI	Moscow	Russia
2-62-P	Electron-beam deposition of thermoconducting ceramic coatings for microelectronic devices	Yu.G. Yushkov, E.M. Oks, A.V. Tyunkov, D.B. Zolotukhin	Tomsk State University of Control Systems and Radioelectronics	Tomsk	Russia
2-63-P	Evaluation of effective magnetization of thin magneto-dielectric films deposited from beam plasma in medium vacuum	A.V. Tyunkov, Yu.G. Yushkov, D.B. Zolotukhin	Tomsk State University of Control Systems and Radioelectronics	Tomsk	Russia

2-64-P	Two-stage pvd method for protective coatings formation	Yu.G. Yushkov, V.A. Burdovitsin, A.V. Tyunkov, D.B. Zolotukhin	Tomsk State University of Control Systems and Radioelectronics	Tomsk	Russia
2-65-P	Plasma nitriding in complex post-processing of stainless steel parts obtained by additive laser technology	V.A. Sirosh, A.V. Makarov, V.P. Kuznetsov, P.A. Skorynina, A.B. Vladimirov, N.V. Lezhnin	M.N. Mikheev Institute of Metal Physics UB RAS	Ekaterinburg	Russia
2-68-P	Formation of alloyed layers on the surface of ma-2 magnesium alloy by methods of combined electron-ion-plasma treatment	A.D. Teresov, Yu.A. Denisova, V.V. Denisov, A.A. Leonov, S.S. Kovalsky	Institute of High Current Electronics SB RAS	Tomsk	Russia
2-71-P	Lead evaporation by vuv radiation of various spectral ranges	V.D. Telekh, A.V. Pavlov, Y.Y. Protasov, T.S. Shchepanuk	Bauman Moscow State Technical University	Moscow	Russia
2-72-P	Gas-discharge plasma application for ion-beam treatment of the holes' inner surfaces	O.S. Korneva, D.O. Sivin, A.I. Ivanova, D.O. Vakhrushev	National Research Tomsk Polytechnic University	Tomsk	Russia
2-73-P	High-entropy zrticnicu coating	V.M. Yurov, V.I Goncharenko, V.S. Oleshko	NAO Karaganda University named after Academician E.A. Buketov	Karaganda	Kazakhstan
2-75-P	Investigation of the effect of ion irradiation on the process of nanocrystallization of an fe72.5cu1nb2mo1.5si14b9 alloy using the in situ resistivity measurement method	K.V. Shalomov, V.V. Ovchinnikov	Institute of Electrophysics UB RAS	Ekaterinburg	Russia
2-77-P	Electronic-ion-plasma modification of the structure and properties of silumin	Yu.F. Ivanov, A.A. Klopotov, A.M. Ustinov, D.V. Zaguliaev, A.D. Teresov, Yu.A. Abzaev, O.M. Loskutov	Siberian State Industrial University	Novokuznetsk	Russia
2-78-P	Adhesion strength of ti1-xcx – dlc multilayer nanocomposite thin films coated by ion-plasma deposition on martensitic stainless steel produced by selective laser melting followed by plasma-nitriding and diamond burnishing	N.V. Lezhnin, A.V. Makarov, V.P. Kuznetsov, A.B. Vladimirov, P.A. Skorynina, V.A. Sirosh	M.N. Mikheev Institute of Metal Physics UB RAS	Ekaterinburg	Russia
3-01-P	Analysis of the size and morphological composition of ablated cerium dioxide nanoparticles after ultrasonic dispersion and centrifugation in aquatic medium	V.A. Mamontov, M.A. Pugachevskii, A.Yu. Ryzhenkova	Southwest State University	Kursk	Russia
3-02-P	Investigation of effectiveness of antimicrobial treatment of poultry products by electrophysical methods	R.A. Vazirov, S.Yu. Sokovnin, A.S. Krivonogova, A.G. Isaeva	Ural Federal University	Ekaterinburg	Russia
3-03-P	Preparation of cerium (iii) fluoride nanopowders by pulsed electron beam evaporation in vacuum	V.G. Ilves, S.Yu.Sokovnin, M.A. Uimin	Institute of Electrophysics UB RAS	Ekaterinburg	Russia
3-04-P	Production of iron oxide nanopowders by radiation-chemical method	M.E. Balezin, S.Yu. Sokovnin, M.A. Uimin	Institute of Electrophysics UB RAS	Ekaterinburg	Russia
3-05-P	Investigation of biological activity of bismuth nanopowder oxide doped with silver	O.A. Svetlova, V.G. Ilves, M.V. Ulitko, S.Yu. Sokovnin, T.R. Sultanova	Institute of Electrophysics UB RAS	Ekaterinburg	Russia
3-06-P	Morphology highly dispersed sio2 obtained in thermal plasma environment	R.Yu. Bakshanskiy, V.V. Shekhovtsov, O.G. Volokitin,	Tomsk State University of Architecture and Building	Tomsk	Russia

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3-07-P	Application of a nanosecond corona discharge generator for electrical separation of ores	O.D. Krasniy, S.R. Korzhenevskiy, A.A. Komarskiy, A.V. Ponomarev, A.S. Chepusov	Institute of Electrophysics UB RAS	Ekaterinburg	Russia
3-08-P	Mechanical properties and composition of tiscn coatings obtained by decomposition of hexamethyldisilazane and anodic evaporation of titanium in a low pressure arc discharge	A.I. Men'shakov, Yu.A. Bryuhanova, I.S. Zhidkov, P.A. Skorynina	Institute of Electrophysics UB RAS	Ekaterinburg	Russia
3-11-P	Sialon synthesized by dc arc plasma	K.A. Bezukhov, V.A. Vlasov, A.A. Klopotov, Yu.A. Abzaev, N.N. Golobokov, G.G. Volokitin, V.V. Shekhovtsov, N.A. Tsvetkov	Tomsk State University of Architecture and Building	Tomsk	Russia
3-12-P	Effect of pulsed soft x-ray radiation on the surface topography of some metals	A.E. Ligachev, M.V. Zhidkov, S.A. Sorokin, G.V. Potemkin, Yu.R. Kolobov	Prokhorov General Physics Institute	Moscow	Russia
3-13-P	Study of methane steam reforming in the plasma of a nanosecond surface gas discharge	I.E. Filatov, D.L. Kuznetsov, V.V. Uvarin	Institute of Electrophysics UB RAS	Ekaterinburg	Russia
3-14-P	Investigation of the relative reactivity of volatile organic compounds in the air plasma of a pulsed corona discharge by the method of competing reactions	I.E. Filatov, V.V. Uvarin, D.L. Kuznetsov	Institute of Electrophysics UB RAS	Ekaterinburg	Russia
3-15-P	Synthesis of mullite from aluminosilicate raw materials in a thermal plasma flow	R.E. Gafarov, V.V. Shekhovtsov, O.G. Volokitin	Tomsk State University of Architecture and Building	Tomsk	Russia
3-16-P	Synthesis of max-phases, structure and phase composition of modified layers on titanium alloy vt-1 as a result of electron-beam treatment	A.E. Lapina, N.N. Smirnyagina, V. M. Khaltanova	Institute of Physical Materials Science SB RAS	Ulan-Ude	Russia
3-20-P	The study of an instabilities role of plasma in the high-voltage discharge formation initiated by optical radiation at high pressures in high-voltage optically triggered switches	A.I. Lipchak, S.V. Barakhvostov, N.B. Volkov, E.A. Chingina, I.S. Turmyshev	Institute of Electrophysics UB RAS	Ekaterinburg	Russia
3-23-P	Investigation of the effect of water vapor and condensed phase on the energy conditions for the initiation of the plasma-chemical process of flue gas purification by a pulsed electron beam	G. Kholodnaya, R. Sazonov, D. Ponomarev, I. Egorov, A. Poloskov, M. Serebrenikov	Tomsk Polytechnic University	Tomsk	Russia
3-25-P	Evaluation of the effect of pre-sowing electron irradiation of barley seeds on plant development and disease incidence	N. N. Loy, N.I. Sanzharova, S.N. Gulina, O.V. Suslova, T.V. Chizh, M.S. Vorobyov, S.Yu. Doroshkevich	Federal State Scientific Institution «Russian Institute of Radiology and agroecology»	Obninsk	Russia
3-26-P	Investigation of hydroxyl group radicals generation at interaction of a cold atmospheric plasma jet with an environmen	E.V. Milakhina, P.P. Gugin, D.E. Zakrevsky	Novosibirsk State Technical University/Institute of Semiconductor Physics A.V. Rzhanov of the Siberian Branch of	Novosibirsk	Russia

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3-28-P	The study of radiation damage assessment on fuel clad of mnsr using computational tools	A. Samiru, V. N. Nesterov	Tomsk Polytechnic University	Tomsk	Russia
3-29-P	Effect of plasma on proliferation rate of human cells	E.A. Shershunova, S.I. Moshkunov, S.V. Nebogatkin, O.S. Rogovaya	Institute for Electrophysics and Electric Power RAS	Saint-Petersburg	Russia
3-35-P	Production of nanopowders of bismuth oxide doped with silver by pulsed electron beam evaporation in vacuum	V.G. Ilves, S.Yu.Sokovnin, M.A. Uimin	Institute of Electrophysics UB RAS	Ekaterinburg	Russia
3-36-P	Influence of residual gas on the field electron emission characteristics of grained structural graphite	A.S. Chepusov, A.A. Komarskiy, S.R. Korzhenevskiy	Institute of Electrophysics UB RAS	Ekaterinburg	Russia
3-37-P	Photochemical conversion processes in petroleum	U.J. Yolchueva, R.A. Jafarova, S.Y.Rashidova, Z.F.Hashimzade Seyid, S.A.Suleymanova	Institute of Petrochemical Processes, Azerbaijan National Academy of Sciences	Baku	Azerbaijan
3-38-P	Investigation of the role of chemically active radicals in the antibacterial properties of a low-temperature plasma jet at ambient pressure mixed with argon and air	N.A. Ashurbekov, Z.M. Isaeva, G.S. Shakhshinov, K.M. Rabadanov, A.A. Murtazaeva, E.Kh. Israpov	Dagestan State University	Makhachkala	Russia
3-39-P	Electric arc in plasma flow of gas discharge with a liquid electrolyte cathode	G.K. Tazmeev, A.K. Tazmeev, B.K. Tazmeev	Kazan Federal University, Naberezhnye Chelny Institute	Naberezhnye Chelny	Russia
3-40-P	Peculiarities of electrophoretic deposition of nanopowders of various morphologies used for optical ceramics fabrication	E.G. Kalinina, M.G. Ivanov, D.S. Rusakova	Institute of Electrophysics UB RAS	Ekaterinburg	Russia
3-41-P	One of the methods of numerical optimization in chemical kinetics problems	V.Yu. Chebakova, L.N. Kashapov, N.F.Kashapov	Kazan Federal University	Kazan	Russia
3-42-P	Laser plume glow on a surface of non-rotating and fast-rotating target	V.A. Shitov,	Institute of Electrophysics UB RAS	Ekaterinburg	Russia
3-43-P	Synthesis of cement clinker using plasma technology	R.Yu. Bakshanskiy, N.K. Skripnikova, V.V. Shekhovtsov, M.A. Semenovykh	Tomsk State University of Architecture and Building	Tomsk	Russia
3-44-P	Obtaining glass-crystalline materials using arc plasma	R.Yu. Bakshanskiy, G.G. Volokitin, N.K. Skripnikova, V.V. Shekhovtsov, M.A. Semenovykh	Tomsk State University of Architecture and Building	Tomsk	Russia
4-01-P	Combined electric discharge "arc + discharge with liquid electrolyte cathode"	G.K. Tazmeev, B.A. Timerkaev, K.K. Tazmeev	Kazan Federal University, Naberezhnye Chelny Institute	Naberezhnye Chelny	Russia
4-05-P	Measurement of the electron beam energy in a source with a plasma anode and the beam extraction into the atmosphere through a foil window	E.N. Abdullin, G.F. Basov	Institute of High Current Electronics SB RAS	Tomsk	Russia
4-11-P	Investigation of separate discharge processes in a high-voltage nanosecond combined switch	P.P Gugin, P.A. Bokhan, N.A. Glubokov, D.E. Zakrevsky	Rzhanov Institute of Semiconductor Physics SB RAS	Novosibirsk	Russia
4-15-P	Effect of extinction beam-plasma discharge while the	A.A Zenin, I.Yu. Bakeev, A.S.	Tomsk State University of Control	Tomsk	Russia

	injection thermoelectrons during transportation of the electron beam in the forevacuum pressure range	Klimov	Systems and Radioelectronics		
4-16-P	Features of glow discharge ignition through a small hole in the hollow cathode of a large volume	A.S. Klimov, I.Yu. Bakeev, V.T. Tran, E.M. Oks, A.A. Zenin	Tomsk State University of Control Systems and Radioelectronics	Tomsk	Russia
4-17-P	High voltage capacitor for power supply system	D.V.Molchanov, A.D.Lenskiy, D.V.Rybka	Institute of High Current Electronics SB RAS	Tomsk	Russia
4-20-P	High-power radio frequency generator for plasma applications	V.E. Patrakov, D.A. Lisovsky	Institute of Electrophysics UB RAS	Ekaterinburg	Russia
4-22-P	Influence of planar magnetron discharge parameters on spatial distribution of ion current density and substrate temperature	M.V. Shandrikov, E.M. Oks, A.V.Vizir , G.Yu.Yushkov	Institute of High Current Electronics SB RAS	Tomsk	Russia
4-23-P	Influence of working pressure on mass-to-charge ion state in a high-current pulsed planar magnetron discharge plasma	M.V. Shandrikov, E.M. Oks, A.V.Vizir , G.Yu.Yushkov	Institute of High Current Electronics SB RAS	Tomsk	Russia
4-25-P	Non-self-sustaining high-voltage discharge with hollow cathode and plasma anode	V.I. Gushenets, E.M. Oks, A.S. Bugaev	Institute of High Current Electronics SB RAS	Tomsk	Russia
4-26-P	Influence of accelerating gap configuration on parameters of a forevacuum plasma-cathode source of pulsed electron beam	A.V. Kazakov, A.V. Medovnik, E.M. Oks, N.A. Panchenko	Tomsk State University of Control Systems and Radioelectronics	Tomsk	Russia
4-27-P	Influence of electron emission on operation of a constricted arc discharge in a pulsed forevacuum plasma-cathode electron source	A.V. Kazakov, E.M. Oks, N.A. Panchenko	Tomsk State University of Control Systems and Radioelectronics	Tomsk	Russia
4-30-P	Influence of the cathode region preionization on the operating parameters of the eptron	M.A. Lavrukhin, P.A. Bokhan, P.P. Gugin, D.E. Zakrevsky	Rzhanov Institute of Semiconductor Physics SB RAS	Novosibirsk	Russia
4-33-P	Generation of a cold atmospheric plasma jet in a planar multichannel device	E.V. Milakhina, P.P. Gugin, D.E. Zakrevsky	Novosibirsk State Technical University/Institute of Semiconductor Physics A.V. Rzhanov of the Siberian Branch of the RAS	Novosibirsk	Russia
4-34-P	Picosecond semiconductor generator for capacitive sensors calibration	V.E. Patrakov, M.S. Pedos, S.N. Rukin	Institute of Electrophysics UB RAS	Ekaterinburg	Russia
4-35-P	Spatial distribution and time evolution of a metal-containing plasma of a low-current atmospheric pressure discharge	K.P. Savkin, D.A. Sorokin, G.Yu. Yushkov	Institute of High Current Electronics SB RAS	Tomsk	Russia
4-36-P	Minicp device for investigation of the plasma-surface interactions	N.S. Sergeev, A.V. Kaziev, M.M. Kharkov, Yu.M. Gasparyan, A.Yu. Khomyakov	National Research Nuclear University MEPhI	Moscow	Russia
4-38-P	Optimum transfer characteristics of the tesla transformer on the first and second half-waves of output voltage	V.V. Kladukhin, S.P. Khramtsov	Institute of Electrophysics UB RAS	Ekaterinburg	Russia
4-40-P	Dynamics of the target temperature change under direct impact of a cold atmospheric plasma jet	D.E. Zakrevsky, P.P. Gugin, E.V. Milakhina	Institute of Semiconductor Physics SB RAS	Novosibirsk	Russia

4-42-P	Atmospheric cold plasma jet generated by microwave electrode discharge: some diagnostic techniques	S.N. Antipov, V.M. Chepelev, M.A. Sargsyan, M.Kh. Gadzhiev	Joint Institute for High Temperatures of the Russian Academy of Sciences	Moscow	Russia
4-46-P	A new type of non-thermal atmospheric pressure plasma source based on a waveguide bridge	V.N. Tikhonov, S.A. Gorbatov, I.A. Ivanov, A.V. Tikhonov	Federal State Scientific Institution «Russian Institute of Radiology and agroecology»	Obninsk	Russia
4-47-P	«Overheating» instability for an hf arc discharge in air at elevated pressures	A.F. Kokorin	Ural Federal University	Ekaterinburg	Russia