



September 8	Panorama	8.00-18.00		Registration (Lobby)	
		9.00-9.30		Opening ceremony (Central Hall)	
		9.30-10.15		Plenary lecture (Central Hall)	
		10.15-10.35		Coffee break	
		10.35-11.20		Plenary lecture (Central Hall)	
		11.20-12.05		Plenary lecture (Central Hall)	
		12.05-12.20		Photographing	
		12.20-14.00		Lunch	
		14.00-16.10		Oral Session OS-1-1, Section 1 (Hall A)	Oral Session OS-2-1, Section 2 (Hall B)
		16.10-16.30		Coffee break	
		16.30-18.00		Oral Session OS-4-1, Section 4 (Hall A)	Oral Session OS-3-1, Section 3 (Hall B)
		18.00-21.00		Welcome party	

# Central Hall Plenary Session



September 8 (Monday)

Chairman: *Stanislav A. Chaikovsky*

9.00-9.30	<b>Opening ceremony</b>
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9.30-10.15	<p>Plenary lecture (Central Hall)</p> <p><b>High Voltage Setups for Runaway Electron Beam Generation in the Institute of Electrophysics UB RAS</b></p> <p><b><u>Sergey A. Shunailov</u></b></p> <p>Institute of Electrophysics UB RAS, Ekaterinburg, Russia</p>
10.15-10.35	<p>Coffee break</p>
10.35-11.20	<p>Plenary lecture (Central Hall)</p> <p><b>Pulsed Discharges in Aerospace Applications</b></p> <p><b><u>Andrey Starikovskiy</u></b></p> <p>Princeton University, Princeton, USA</p>
11.20-12.05	<p>Plenary lecture (Central Hall)</p> <p><b>Discharge-Emission Systems under Extreme Operating Conditions and their Application for Modification of Materials</b></p> <p><b><u>Efim M. Oks</u></b></p> <p>Tomsk State University of Control Systems and Radioelectronics, Tomsk, Russia Institute of High Current Electronics SB RAS, Tomsk, Russia</p>



## Hall A

## Section 1.

# Fundamental processes in low-temperature plasma: low and high pressure discharges, near-electrode phenomena, radiation, ultrafast processes, diagnostics.

14.00-16.10

Oral Session (OS-1-1).

Chairman: **Oleg F. Petrov**

1	Invited report	<p><b>Methods of triggering for pseudospark switch with the trigger unit based on an auxiliary glow discharge</b>  <i>Nikolay V. Landl, Y.D. Korolev, O.B. Frants, A.V. Bolotov, V.O. Nekhoroshev</i>            Institute of High Current Electronics SB RAS, Tomsk, Russia</p>
2	Invited report	<p><b>Generation and analysis of unipolar arcs on W fuzz initiated under helium ion bombardment from RF plasma</b>  <i>Andrey V. Kaziev, G.I. Dobrovolskiy, D.V. Kolodko, K.V. Smirnova A.V. Tumarkin, M.M. Kharkov, M.M. Tsventoukh</i>            National Research Nuclear University, Moscow, Russia</p>
3	Oral	<p><b>Avalanches of nanoplasmas formation via electrical explosions of helium-filled tungsten nanowires</b>  <i>Mikhail M. Tsventoukh</i>            Lebedev Physical Institute of Russian Academy of Sciences , Moscow, Russia</p>
4	Oral	<p><b>Dynamics and structures of an active coulomb particles in gas-discharge plasma</b>  <i>Mikhail M. Vasiliev, R.A. Syrovatka, E.A. Kononov, R.V. Senoshenko, O.F. Petrov</i>            Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia</p>
5	Oral	<p><b>Characterization of normal glow discharge at atmospheric pressure depending on different cathode shapes</b>  <i>Leavid V. Simonchik, A.V. Kazak, P.A. Ivanova, I. Rafatov, M.U. Tomkavich</i>            Institute of Physics of National Academy of Sciences of Belarus, Minsk, Belarus</p>
6	Oral	<p><b>Branching characteristics of 3m long air gap streamer discharge under positive lightning impulse voltage</b>  <i>Ding Yujian</i>            Beijing Jiaotong University, BEIJING, China</p>



## Hall A

### Section 4.

# Power supply for researches and applications: generators of continuous, pulse-periodic and pulsed action, gas switches, pulsed power machines and accelerators.

16.30-18.00

Oral Session (OS-4-1).

Chairman: *Michael I. Yalandin*

1	Invited report	<p><b>Acceleration of the picosecond runaway electron bunch in the cascade regime at atmospheric pressure air</b>  <i>Leonid N. Lobanov, G.A. Mesyats, A.G. Sadykova, K.A. Sharypov, V.G. Shpak, S.A. Shunailov, M.I. Yalandin, N.M. Zubarev</i>            Institute of Electrophysics UB RAS, Ekaterinburg, Russia</p>
2	Oral	<p><b>Development and tests 1-MA, 40-kV air insulated linear transformer driver stage</b>  <i>Andrey A. Zherlitsyn, E.V. Kumpyak, A.D. Lenskiy, A.V. Pavlenko, A.N. Grigoriev</i>            Institute of High Current Electronics SB RAS, Tomsk, Russia</p>
3	Oral	<p><b>Subnanosecond, megavolt-range vacuum diodes: the state of the art</b>  <i>Vitaly.E. Patrakov, L.N. Lobanov, M.S. Pedos, S.N. Rukin, K.A. Sharypov, S.A. Shunailov, S.P. Timoshenkov, M.I. Yalandin</i>            Institute of Electrophysics UB RAS, Ekaterinburg, Russia</p>
4	Oral	<p><b>Pulsed X-ray tubes in metal-ceramic design</b>  <i>Dmitry S. Makhanko, B.A. Kozlov</i>            JSC Research Institute of Gas- Discharge Devices Plasma, Ryazan, Russia</p>



## Hall B

## Section 2.

**Gas-discharge methods for surface modification and coating deposition:** surface modification, ion implantation, combined methods of surface treatment, neutron and synchrotron methods of diagnostics.

14.00-16.10

Oral Session (OS-2-1).

Chairman: **Nikolay V. Gavrilov**

1	Invited report	<p><b>Structure of high-entropy copper-alloyed TiNbZrTaHf alloy</b>  <u>Nikolay N. Koval</u>, N.A. Prokopenko, E.A. Petrikova, Yu.F. Ivanov, V.V. Shugurov, Yu.Kh. Akhmadev, O.S. Tolkachev            Institute of High Current Electronics SB RAS, Tomsk, Russia</p>
2	Invited report	<p><b>Modification of tungsten surface properties by exposure to high-energy compression plasma flow</b>  <u>Valiantsin M. Astashynski</u>, N.B. Bazylev, G.M. Dzagnidze, A.M. Kuzmitski, P.N. Shoronov            A.V. Luikov Heat and Mass Transfer Institute National Academy of Sciences of Belarus, Minsk, Belarus</p>
3	Oral	<p><b>Multiphase multilayered PVD coatings based on refractory elements</b>  <u>Olga V. Krysin</u>, Yu.F. Ivanov, N.A. Prokopenko, E.A. Petrikova, O.S. Tolkachev            Institute of High Current Electronics SB RAS, Tomsk, Russia</p>
4	Oral	<p><b>The effect of nanolayer thickness on physical and mechanical properties and structural phase composition of TiAl (N, C, O) coating</b>  <u>Almaz Yu. Nazarov</u>, A.A. Tulina, K.N. Ramazanov, V.R. Muhamadeev, E.R. Kasimova            Ufa University Of Science and Technology, Ufa, Russia</p>
5	Oral	<p><b>Identification and analysis of hypereutectic composition silumin physical plasticization regularities by the complex electron-ion-plasma method</b>  <u>Elizaveta A. Petrikova</u>, Yu.F. Ivanov, A.D. Teresov, N.A. Prokopenko, S.Yu. Doroshkevich            Institute of High Current Electronics SB RAS, Tomsk, Russia</p>
6	Oral	<p><b>Behaviour of high-entropy NbTaMoW alloy in low-temperature plasma</b>  <u>Nina I. Ilinykh</u>, S.A. Ilinykh, I.A. Malkova, B.R. Gelchinski, A.A. Rempel            Vatolin Institute of Metallurgy of the Ural Branch of the Russian Academy of Sciences, Ekaterinburg, Russia</p>

September 8 (Monday)



Hall B

Section 3.

# Plasma-chemical, electrophysical and laser technologies: environmental applications, production of nanopowders and functional materials.

16.30-18.00

Oral Session (OS-3-1).

Chairman: **Sergey Yu. Sokovnin**

1	Invited report	<b>Formal-kinetic modeling of air cleaning in a closed plasma-chemical reactor with a pulsed corona discharge</b> <i>Igor E. Filatov, D.L. Kuznetsov</i> Institute of Electrophysics UB RAS, Ekaterinburg, Russia
2	Oral	<b>Study of the antibacterial properties of zinc oxide nanopowder suspensions and composites based thereon to mycobacterium tuberculosis</b> <i>Margarita L.Kokorina, D.V.Belyaev, D.V.Vahrusheva, D.V.Dianov, S.Yu. Sokovnin</i> «Urals State Medical University» of the Ministry of Healthcare of the Russian Federation, Ekaterinburg, Russia
3	Oral	<b>Combined treatment with cold atmospheric plasma jet and gold nanoparticles with TYRP1 antibodies successfully suppress tumor growth in vivo</b> <i>Irina Schweigert, M. Biryukov, A. Polyakova, N. Krychkova, O. Koval, E. Gorbunova, D. Zakrevsky, E. Milakhina, P. Gugin</i> Khristianovich Institute of Theoretical and Applied Mechanics, Novosibirsk, Russia
4	Oral	<b>Antitumor, antibacterial and antiviral treatment methods using a low-temperature plasma source based on a piezotransformer</b> <i>Evgeny M. Konchekov, N.G. Gusein-Zade, L.V. Kolik, T.I. Pavlik, D.V. Malakhov, D.A. Serov, D.E. Burmistrov, V.V. Gudkova, E.I. Grudiev, N.N. Bogachev, S.V. Gudkov</i> Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow, Russia