

Central Hall

Plenary Session



September 7 (Tuesday)

Chairman: *Nikolay M. Zubarev*

Plenary Lecture Online 09:00-09:45	Surface ionization waves preceding a volume breakdown in low-pressure gas discharge tubes <i>Yuri S. Akishev</i> Troitsk Institute of Innovative and Thermonuclear Research (TRINITI), Moscow, Troitsk, Russia
Invited Lecture 09:45-10:20	The 40 years to RADAN - compact multi-purposed sources for various pulse power investigations <i>Valery G. Shpak, M.I. Yalandin, S.A. Shunaylov</i> Institute of Electrophysics UB RAS, Ekaterinburg, Russia
10:20-10:30	Photographing
10:30-10:50	Coffee break
Invited Lecture 10:50-11:25	Application of an arc with a self-heated hollow cathode for coating deposition by reactive anodic evaporation <i>Nikolay V. Gavrilov</i> Institute of Electrophysics UB RAS, Ekaterinburg, Russia
Invited Lecture Online 11:25-12:00	Intriguing phenomena accompanied sub-nanosecond duration powerful microwave pulse interaction with neutral gas and plasma <i>Yakov E. Krasik</i> The Max Knoll Chair in Electronics and Opto-Electronics Physics Department, Technion - Israel Institute of Technology, Haifa, Israel

Hall A

Section 1.



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

13.30-15.35	Oral Session (OS-1-2).	Chairman: <i>Michael I. Yalandin</i>
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1	Invited report 13.30-14.05	<p>Initiation mechanisms and dynamics of development at the prebreakdown stage of a self-sustained subnanosecond discharge in high-pressure nitrogen</p> <p><i>Stepan N. Ivanov, V.V. Lisenkov, Yu.I Mamontov</i> Institute of Electrophysics UB RAS, Ekaterinburg, Russia</p>
2	Oral 14.05-14.25	<p>Plasma generation in a high-current glow discharge with a hollow cathode in an axially symmetrical system using two electron sources</p> <p><i>Evgeniy V. Ostroverkhov, V.V. Denisov</i> Institute of High Current Electronics SB RAS, Tomsk, Russia</p>
3	Oral 14.25-14.45	<p>Average ion-charge state and explosive emission plasma momentum derivation from critical temperature of metal</p> <p><i>Mikhail M. Tsvetoukh</i> Lebedev Physical Institute of Russian Academy of Sciences, Moscow, Russia</p>
4	Oral 14.45-15.05	<p>Electric explosion of flat copper conductors in asymmetric and symmetric configurations in the current skinning mode</p> <p><i>Natalia 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</p>
5	Oral Online 15.05-15.25	<p>Study of anode and cathode plasmas formation in an electron diode with an explosive emission cathode</p> <p><i>Alexandr I. Pushkarev, A.I. Prima</i> Tomsk Polytechnic University, Tomsk, Russia</p>



Hall A

Section 4.

Sources of low-temperature plasma: generators of continuous, pulse-periodic and pulsed action, gas switches, power supply.

15.55-18.00	Oral Session (OS-4-2).	Chairman: <i>Efim M. Oks</i>
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1	Invited report 15.55-16.30	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. Rzhhanov Institute of Semiconductor Physics SB RAS, Novosibirsk, Russia
2	Oral 16.30-16.50	Investigation of cold atmospheric plasma jet generation excited by square-wave pulse <i>P.P. Gugin, D.E. Zakrevsky, Elena V. Milakhina</i> A.V. Rzhhanov Institute of Semiconductor Physics SB RAS, Novosibirsk, Russia
3	Oral 16.50-17.10	Subnanosecond switching of standard thyristors triggered in impact-ionization wave mode by a high-voltage PCSS driver <i>Anton 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 17.10-17.30	Formation of the voltage pulses up to 400 kilovolts with front pulse less than 10 nanoseconds <i>B.A. Kozlov, Dmitry S. Makhanko</i> PLASMA, JSC Research Institute of Gas-Discharge Devices, Ryazan, Russia
5	Oral 17.30-17.50	Increasing the operation stability of the electron accelerator based on ion-electron emission <i>Maksim 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

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Hall B

Section 2.



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

13.30-15.35	Oral Session (OS-2-2).	Chairman: <i>Alexandr S.Kamenetskikh</i>
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1	Invited Report 13.30-14.05	Modeling of ion-plasma synthesis of linear-chained carbon <i>Evgeny A. Buntov, A.F. Zatsepin, A.I. Matitsev, V.A. Dutov, K.P. Arslanov</i> Ural Federal University, Ekaterinburg, Russia
2	Oral 14.05-14.25	Balanced control of thermal impact on metal materials in electron source with a plasma cathode <i>Kamilla T. Ashurova, T.V. Koval, M.S. Vorobyov, My Kim An Tran, V.I. Shin, P.V. Moskvina, N.N. Koval</i> Institute of High Current Electronics SB RAS, Tomsk, Russia
3	Oral 14.25-14.45	Energy density distribution of a modulated electron beam in a source with a plasma cathode based on a low pressure arc <i>Vladislav I. Shin, P.V. Moskvina, M.S. Vorobyov, V.N. Devyatkov, N.N. Koval</i> Institute of High Current Electronics SB RAS, Tomsk, Russia
4	Oral 14.45-15.05	Effect of irradiation with ions of different atomic masses (Ar⁺ and Xe⁺) on the properties of Co₉₀Fe₁₀/Cu magnetic superlattices <i>N.V. Gushchina, V.V. Ovchinnikov, Konstantin V. Shalomov, N.S. Bannikova, R.S. Zavoronitsyn, M.A. Milyaev</i> Institute of Electrophysics UB RAS, Ekaterinburg, Russia
5	Oral 15.05-15.25	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>Efrem V. Makarov, V.V. Ovchinnikov</i> Institute of Electrophysics UB RAS, Ekaterinburg, Russia

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Hall B

Section 3.

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

15.55-18.00

Oral Session (OS-3-2).

Chairman: *Sergey Yu. Sokovnin*

1	Oral 15.55- 16.20	Carbon nanoparticles (CNP) coated with copper oxide (CuO) by electrophoretic synthesis <i>Nay Win</i> Southwest State University, Kursk, Russia
2	Oral 16.20- 16.45	Investigation of photocatalytic activity of bismuth nanopowder oxide doped with silver obtained by pulsed electron beam evaporation in vacuum <i>Olga A.Svetlova, V.G. Ilves, S.Yu. Sokovnin</i> Institute of Electrophysics UB RAS, Ekaterinburg, Russia
3	Oral 16.45- 17.10	Influence of the supplied energy on the phase content of crystalline dispersed titanium dioxide obtained by the plasma dynamic method <i>A.A. Sivkov, Yuliya N. Vympina, I.A. Rakhmatullin, A.S. Ivasutenko, Y.L. Shanenkova</i> School of Energy & Power Engineering, Tomsk, Russia
4	Oral 17.10- 17.35	Synthesis of metastable cubic tungsten carbide with a high purity in dispersed and bulk forms by the plasma dynamic method <i>A.A. Sivkov, Ivan I. Shanenkoy, D.S. Nikitin, A. Nassurbayev</i> Tomsk Polytechnic University, Tomsk, Russia