



**Prokhorov General Physics Institute
of the Russian Academy of Sciences**



21th International Workshop
Complex Systems of Charged Particles and
Their Interactions with Electromagnetic Radiation



Moscow, Russia, April 7-11, 2025



УДК 533.9
ББК 22.333
Б77

ISBN 978-5-6048157-3-1

Book of abstracts of 21th International Workshop Complex Systems of Charged Particles and Their Interactions with Electromagnetic Radiation, April 7-11, 2025, Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow, Russia. – M: GPI RAS, 2025. – 132 p.

The book of abstracts includes materials from the 21th International Workshop Complex Systems of Charged Particles and Their Interactions with Electromagnetic Radiation (April 7-11, 2025). The workshop's reports present modern results in plasma physics, laser physics and the interaction of radiation with matter.

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ISBN 978-5-6048157-3-1



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**21th International Workshop
Complex Systems of Charged Particles and
Their Interactions with Electromagnetic Radiation**

Program

Moscow, Russia, April 7-11, 2025

21th International Workshop
Complex Systems of Charged Particles and
Their Interactions with Electromagnetic Radiation

Moscow, Russia, April 7-11, 2025

PROGRAM

April 7, (Monday) 2025

9:30-10:00 Gathering of the Workshop participants

10:00-10:15 Opening Ceremony of the CSCPIER-2025

SECTION 1. BASIC ASPECTS OF PLASMA SCIENCE. 7 April 2025 (Monday)

10:15-10:45

**SIMULATION OF LIGHTNING DISCHARGES ON THE SCALE OF A LABORATORY
EXPERIMENT AND RELATED ELECTROMAGNETIC PHENOMENA (Invited)**

E.V. Parkevich, K.V. Shpakov, A.I. Khirianova

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

10:45-11:00

**ON THE CHARACTERISTIC THRESHOLDS IN THE GENERATION OF HIGHLY
IONIZED PLASMA IN PULSED NANOSECOND GAS DISCHARGES**

E.V. Parkevich, K.V. Shpakov, A.I. Khirianova, S.Yu. Gavrilov

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

11:00-11:15

**SNAKE-LIKE AND STRAIGHT-LINE IONIZATION WAVES FORMATION IN PLASMA
JET OF A COAXIAL BARRIER DISCHARGE IN ARGON FLOW AT ATMOSPHERIC
PRESSURE**

Yu. Akishev^{1,2,3}, S. Ermolaeva³, M. Medvedev^{1,3}, A. Petryakov¹

¹*State Research Center of Russian Federation Troitsk Institute for Innovative and Fusion Research,
Moscow, Troitsk, Russia*

²*National Research Nuclear University MEPhI, Moscow, Russia*

³*The Gamaleya National Center of Epidemiology and Microbiology, Moscow, , Russia*

11:15-11:30

**SMOOTH DECREASE OF SPECTRAL SERIES LINES INTENSITY WHEN
APPROACHING THE IONIZATION THRESHOLD IN A DENSE EQUILIBRIUM
PLASMA**

R.V. Dobrovenskis^{1,2}

¹*Moscow Institute of Physics and Technology, Russia, Dolgoprudny address,
dobrovenskis.rv@phystech.edu*

²*Joint Institute for High Temperatures (JIHT), RAS, Russia, Moscow*

11:30-11:45 Coffee Break

11:45-12:15

NONLINEAR PROCESSES ACCOMPANYING INTERACTION OF RELATIVISTIC BEAM WITH MAGNETIZED PLASMA (*Invited*)

A.V. Arzhannikov^{1,2}

¹*Budker Institute of Nuclear Physics of Siberian Branch Russian Academy of Sciences (BINP SB RAS), Novosibirsk, Russia*

²*Novosibirsk state university, Novosibirsk, Russia, press@nsu.ru*

12:15-12:30

NONLINEAR ICR DYNAMICS OF SLOW IONS: A POSSIBILITY FOR OPTIMIZATION OF AN ELECTRODELESS ION THRUSTER

M.A. Tereshchenko¹, I.A. Abramov^{1,2}

¹*Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow, Russia*

²*National Research Center “Kurchatov Institute”, Moscow, Russia*

12:30-12:45

EFFECT OF MAGNETIC FIELD ON DECELERATION OF ION BEAM DUE TO CHERENKOV INTERACTION WITH ION-ACOUSTIC WAVES

A.A. Shelkovoy¹, S.A. Uryupin^{1,2}

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

²*National Research Nuclear University MEPhI, Moscow, Russia*

12:45-13:00

ON THE THIRD IONIZATION POTENTIAL OF TANTALUM ATOM

R.E. Boltnev^{1,2,3}, A.V. Karabulin^{1,2,3}, I.N. Krushinskaya^{2,3}, A.A. Pelmenev^{2,3}, V.I. Matyushenko^{2,3}

¹*Joint Institute for High Temperatures, Russian Academy of Sciences, Moscow, Russia*

²*Branch of Semenov Federal Research Center for Chemical Physics, Russian Academy of Sciences, Chernogolovka, Moscow region, Russia*

³*Federal Research Center for Problems of Chemical Physics and Medicinal Chemistry, Russian Academy of Sciences, Chernogolovka, Moscow region, Russia*

13:00-13:15

ION-ACOUSTIC SOLITONS IN A COLLISIONLESS NONISOTHERMAL PLASMA

S. V. Kuznetsov

Joint Institute for High Temperature of the Russian Academy of Sciences, Moscow, Russia

13:15-13:30

COMBINING A PLASMA DETECTOR AND CHROMATOGRAPH INTO A SINGLE ANALYTICAL CYCLE FOR DETERMINING THE COMPOSITION OF GASEOUS IMPURITIES

S.S. Sysoev¹, A.I. Saifutdinov²

¹*St. Petersburg State University, Saint-Petersburg, Russia*

²*Kazan National Research Technical University named after A. N. Tupolev - KAI, Kazan, Russia*

13:30-14:30 Lunch

14:30-15:00

FEATURES OF THE TRANSITION FROM A GLOW DISCHARGE TO AN ARC DISCHARGE WITH REFRACTORY AND NON-REFRACTORY ELECTRODES IN ATOMIC AND MOLECULAR GASES (Invited)

A.I. Saifutdinov

Kazan National Research Technical University named after A.N.Tupolev – KAI, Kazan, Russia

15:00-15:15

THE INFLUENCE OF ELECTRONEGATIVE GAS IMPURITIES ON THE FORMATION OF THE STRUCTURE OF A SHORT GLOW DISCHARGE IN HELIUM

A.I. Saifutdinov, A.A. Saifutdinova

Kazan National Research Technical University named after A.N. Tupolev – KAI, Kazan, Russia

15:15-15:30

THE PROPAGATION OF AN IONIZATION FRONT OF LOW-PRESSURE SURFACE-WAVE SUSTAINED DISCHARGE

V.I. Zhukov, D.M. Karfidov

Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow, Russia

15:30-15:45

PHYSICAL PROCESSES IN INDUCTIVELY COUPLED PLASMA AND THEIR IMPACT ON THE ACCURACY OF MASS SPECTROMETRY

N.Sh. Jafar¹, T.K. Nurubeyli^{1,2}

¹*Institute of Physics of the Ministry of Science and Education of Republic of Azerbaijan, Baku, Azerbaijan*

²*Azerbaijan State Oil and Industry University, Baku, Azerbaijan*

15:45-16:00

ON THE CHARACTERISTICS OF ELECTRON DIFFUSION AND DRIFT IN INERT GASES

S.A. Maiorov¹, R.I. Golyatina², S.K. Kodanova³, T.S. Ramazanov³

¹*Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia*

²*Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow, Russia*

³*Institute for Experimental and Theoretical*

16:00-16:15

EXPERIMENTAL DETERMINATION OF THE DEBYE LENGTH OF SCREENING AND ACCUMULATION OF ELECTRONS IN SEMICONDUCTOR NANOSTRUCTURES

R. Yafarov

Saratov branch of the Institute of Radio Engineering and Electronics named after V. A. Kotelnikov RAS, Saratov, Russia

16:15-16:30 Coffee Break

16:30-17:00

PROPERTIES OF NON-IDEAL PLASMA (Invited)

A.D. Rakhel, A.S. Shumikhin

Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia

17:00-17:15

AB INITIO RECOMBINATION IN ULTRACOLD PLASMAS

Yu.V. Dumin^{1,2}, L.M. Svirskaya^{3,4}

¹*Lomonosov Moscow State University, Moscow, Russia*

²*Space Research Institute of Russian Academy of Sciences, Moscow, Russia*

³*South Ural State University, Chelyabinsk, Russia*

⁴*South Ural State Humanitarian Pedagogical University, Chelyabinsk, Russia*

17:15-17:30

TO THE SPECTRUM OF COLLECTIVE EXCITATIONS IN STRONGLY COUPLED PLASMA-LIKE LIQUIDS

S.A. Trigger¹, S.A. Maslov^{1,2}

¹*Joint Institute for High Temperatures of Russian Academy of Sciences, Moscow, Russian Federation*

²*Lomonosov Moscow State University, Moscow, Russian Federation*

17:30-17:45

ATTRACTIVE - REPULSIVE GRAVITY: MASS DEFECT AND BINDING ENERGY

S.A. Trigger

Joint Institute for High Temperatures of Russian Academy of Sciences, Moscow, Russian Federation

17:45-18:00

ON R.L. STRATONOVICH'S FORMULA FOR TRANSITION FROM DYNAMIC TO PROBABILISTIC MEASUREMENTS AND ITS CONNECTION WITH OPERATIONS ON DISTRIBUTION FUNCTIONS OF RANDOM VARIABLES

M.Yu. Romanovsky^{1,2,3}

¹*PE Science and Innovation, Moscow, Russian Federation*

²*ANO National Center for Physics and Mathematics, ul. Parkovaya 1, str. 3, 607182 Sarov, Nizhny Novgorod region, Russian Federation*

³*Pirogov Russian National Research Medical University, ul. Ostrovityanova 1, 117997 Moscow, Russian Federation*

SECTION 2 COMPLEX PLASMAS. 8 April 2025 (Tuesday)

10:00-10:30

ENERGY TRANSFER IN PLASMA CRYSTAL (Invited)

A.M. Ignatov

Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow, Russia

10:30-10:45

EQUATIONS OF STATE FOR LIMITED ONE-COMPONENT PLASMA

D.I. Zhukhovitskii

Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia

10:45-11:00

NON-HERMITIAN SKIN EFFECT IN DUSTY PLASMA CHAIN STRUCTURES

D. A. Kolotinskii^{1,2}, A.V. Timofeev^{1,2,3}

¹*Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia*

²*Moscow Institute of Physics and Technology, Dolgoprudny, Moscow Region, Russia*

³*National Research University Higher School of Economics, Moscow, Russia*

11:00-11:15

EXCESS ENTROPY OF YUKAWA FLUID (COMPLEX PLASMA)

S.A. Khrapak

Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia

11:15-11:30 Coffee Break

11:30-12:00

DYNAMICS OF DUSTY PLASMA IN A GLOW DISCHARGE IN HELIUM IN MAGNETIC FIELDS UP TO 1.5 T (*Invited*)

L.G. Dyachkov¹, E.S. Dzlueva², L.A. Novikov², S.I. Pavlov², V.Yu. Karasev²

¹*Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia*

²*Saint-Petersburg State University, Saint-Peterburg, Russia*

12:00-12:15

CHANGES IN THE ARRANGEMENT OF DUST PARTICLES AND THE GEOMETRY OF DUST STRUCTURES UNDER THE INFLUENCE OF A MAGNETIC FIELD IN DIFFERENT TYPES OF DISCHARGES

V.Yu. Karasev, E.S. Dzlueva, D.V. Yanisin, M.A. Gasilov, A. Novikov, S.I. Pavlov

Saint Petersburg State University, Saint Peterburg, Russia

12:15-12:30

ANALYSIS OF DUSTY PLASMA CHARACTERISTICS IN NOBLE GASES AT THE SAME CURRENT AND PRESSURE IN A GAS DISCHARGE TUBE

S.A. Maiorov¹, R.I. Golyatina², E.S. Dzlueva³, V.Yu. Karasev³

¹*Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia*

²*Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow, Russia*

³*Saint Petersburg State University, Saint Petersburg, Russia*

12:30-12:45

EXPERIMENTAL STUDY OF DUSTY PLASMA FORMATION IN A LOW-PRESSURE CAPACITIVE RF DISCHARGE

M.E. Viktorov, S.V. Sintsov, D.A. Sergeev, I.M. Kraev, E.I. Preobrazhensky, A.V. Vodopyanov

Federal Research Center A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences, Nizhny Novgorod, Russia

12:45-13:00

CHANGES IN THE STRUCTURE OF BIFEO₃ NANOPARTICLES UNDER THE INFLUENCE OF MICROWAVE RADIATION FROM A POWERFUL GIROTRON

Z.G. Ragimkhanova¹, G.B. Ragimkhanov², S.Kh. Gadzimagomedov², Gusein-zade^{1,3},

A.S. Sokolov³, Z.A. Zakletskii³, E.V. Voronova³, N.N. Skvortsova³

¹*MIREA – Russian Technological University, Moscow, Russia*

²*Dagestan State University, Makhachkala, Russia*

³*Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow, Russia*

13:00-14:00 Lunch

14:00-14:30

ACTIVE BROWNIAN MOTORS IN COULOMB SYSTEMS IN PLASMA, LIQUID AND SUPERFLUID HELIUM (*Invited*)

O.F. Petrov

Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia

14:30 -14:45

STRUCTURES OF AN ACTIVE COULOMB PARTICLES IN GAS-DISCHARGE PLASMA

Vasiliev M.M., Syrovatka R.A., Kononov E.A., Senoshenko R.V., Petrov O.F.

Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia

14:45 -15:00

MOTION OF AN ACTIVE BROWNIAN PARTICLE IN RF DISCHARGE PLASMA IN DIFFERENT DAMPING REGIMES

X.G. Koss^{1,2}, K.A. Mizeva^{1,2}, A.V. Erilin^{1,2}, R.A. Syrovatka¹, D.A. Zamorin^{1,2}, M.M. Vasiliev¹, O.F. Petrov^{1,2}

¹*Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia*

²*Moscow Institute of Physics and Technology, Dolgoprudny, Russia*

15:00-15:15

DYNAMICS IN THE SYSTEM OF ACTIVE BROWNIAN PARTICLES IN GAS-DISCHARGE PLASMA UNDER EXTERNAL INFLUENCE

R.V. Senoshenko^{1,2}, E.A. Kononov^{1,2}, M.M. Vasiliev¹, O.F. Petrov¹

¹*Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia*

²*Moscow Institute of Physics and Technology, Dolgoprudny, Russia*

15:15-15:30

EXPERIMENTAL SIMULATION OF DUST PLASMA NEAR AN ATMOSPHERELESS SPACE BODY

I.A. Shashkova, I.A. Kuznetsov, A.A. Kartasheva, S.I. Popel, G.G. Dol'nikov, A.N. Lyash, M.E. Abdelaal, A.V. Zakharov

Space Research Institute of the Russian Academy of Sciences(IKI), Moscow, Russia

15:30-15:45

ELECTROMAGNETIC SIGNATURES OF DUST-INDUCED DISCHARGES IN SIMULATED PLANETARY CONDITIONS

M.E. Abdelaal^{1,2}, M.A. Zaitsev², I.V. Dokuchaev², I.A. Kuznetsov², A.N. Lyash², I.A. Shashkova², A.E. Dubov², A.A. Kartasheva², G.G. Dolnikov², A.V. Zakharov²

¹*Moscow Institute of Physics and Technology, Dolgoprudny, Moscow Region, Russia*

²*Space Research Institute of the Russian Academy of Sciences(IKI), Moscow, Russia*

15:45 — 16:00

LUNAR DUSTY PLASMA EXOSPHERE: DYNAMICS, LABORATORY SIMULATION AND MEANS OF PROTECTION

I.A. Kuznetsov, I.A. Shashkova, A.A. Kartasheva, S.I. Popel, T.I. Morozova, G.G. Dol'nikov, A.N. Lyash, A.V. Zakharov, L.M. Zelenyi

Space Research Institute of the Russian Academy of Sciences(IKI), Moscow, Russia

16:00-16:15 Coffee Break

16:15-16:45

DUSTY PLASMA IN THE SOLAR SYSTEM: ATMOSPHERES OF PLANETS (*Invited*)

S.I. Popel, Yu.S. Reznichenko, S.I. Kopnin, Yu.N. Izvekova, A.Yu. Dubinskii, L.M. Zelenyi

Space Research Institute of the Russian Academy of Sciences(IKI), Moscow, Russia

16:45-17:00

DUSTY PLASMA CONDITIONS IN SATURN'S MAGNETOSPHERE

S.I. Kopnin¹, D.V. Shokhrin², S.I. Popel¹

¹*Space Research Institute of the Russian Academy of Sciences (IKI), Moscow, Russia*

²*National Research University Higher School of Economics, Moscow, Russia*

17:00-17:15

ON THE INFLUENCE OF MAGNETIC FIELD ON THE PROPAGATION OF LOW-FREQUENCY NONLINEAR DUST ACOUSTIC WAVES IN THE PLASMA OF SATURN'S MAGNETOSPHERE

S.I. Kopnin¹, D.V. Shokhrin², S.I. Popel¹

¹*Space Research Institute of the Russian Academy of Sciences (IKI), Moscow, Russia*

²*National Research University Higher School of Economics, Moscow, Russia*

17:15-17:30

NONLINEAR DUST ACOUSTIC WAVES NEAR THE SURFACES OF PHOBOS AND DEIMOS

Yu.N. Izvekova, S.I. Kopnin, S.I. Popel

Space Research Institute of the Russian Academy of Sciences (IKI), Moscow, Russia

17:30-17:45

DUSTY PLASMAS AT ACTIVE ASTEROIDS

A.Yu. Dubinsky, Yu.S. Reznichenko, S.I. Popel

Space Research Institute of the Russian Academy of Sciences (IKI), Moscow, Russia

SECTION 3 LASER PLASMAS. 9 April 2025 (Wednesday)

10:00-10:30

LASER SOURCES OF HIGH ENERGY PARTICLES AND RADIATION (Invited)

N.E. Andreev^{1,2}

¹*Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia*

²*Moscow Institute of Physics and Technology, Dolgoprudny, Russia*

10:30-10:45

HIGH CURRENT RELATIVISTIC ELECTRON BEAMS FOR BRIGHT X-RAY AND GAMMA-RAY SOURCES

M.E. Veysman¹, N.E. Andreev^{1,2}, I.R. Umarov¹, V.S. Popov^{1,2}

¹*Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia*

²*Moscow Institute of Physics and Technology (State University), Dolgoprudny, Russia*

10:45-11:00

GENERATION OF ELLIPTICALLY POLARIZED RADIATION BY GAS MEDIA IN TWO-COLOR LASER FIELDS

S.Yu. Stremoukhov

¹*Moscow State University, Moscow, Russia,*

²*National Research Center "Kurchatov Institute", Moscow, Russia*

11:00-11:15

NONLINEAR RESPONSE OF ATOMIC GASES: ANALYTICAL TREATMENT IN THE FRAME OF THE NON-PERTURBATIVE APPROACH

K.V. Lvov^{1,2}, S.Yu. Stremoukhov^{1,2}

¹*Lomonosov Moscow State University, Moscow, Russia*

²*National Research Center "Kurchatov Institute", Moscow, Russia*

11:15-11:30

FEATURES OF THE FORMATION OF PERIODIC SUBWAVELENGTH MICROSTRUCTURES IN THE PROCESS OF FEMTOSECOND LASER WRITING IN THE VOLUME OF SOLID DIELECTRICS

A.V. Bogatskaya^{1,2}, E.A. Volkova³, A.M. Popov^{1,2}

¹*Lebedev Physical Institute, Russian Academy of Sciences, Moscow Russia*

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

³*Skobeltsyn Institute of Nuclear Physics, Lomonosov Moscow State University, Moscow, Russia*

11:30-11:45

CONTROLLED LASER MICROSTRUCTURING IN THE VOLUME OF TRANSPARENT SOLID DIELECTRICS

P.M. Nikiforova^{1,2,3}, A.V. Bogatskaya^{1,2}, A.M. Popov^{1,2}

¹*Lomonosov Moscow State University, Moscow, Russia*

²*Lebedev Physical Institute, Russian Academy of Sciences, Moscow Russia*

³*Moscow Technical University of Communications and Informatics, Moscow, Russia*

11:45-12:00 Coffee Break

12:00-12:30

COUPLING OF WEIBEL MODE AND PLASMA WAVE IN RELATIVISTIC LASER PLASMA INTERACTION (*Invited*)

M. Ghorbanalilu

Department of physics, Shahid Beheshti University, Tehran, Iran

12:30-12:45

ADVANCED LASER MODE STRATEGIES FOR ENHANCED ELECTRON ACCELERATION IN NONLINEAR PLASMA

M. Sedaghat, A. Amouye Foumani, A. Niknam

Laser and Plasma Research Institute, Shahid Beheshti University, Tehran, Iran.

12:45-13:00

RESONANT INTERACTION OF HIGH-POWER LASER RADIATION WITH PLASMA AT A DOUBLED UPPER HYBRID FREQUENCY

V.A. Turikov

RUDN University, Moscow, Russian Federation

13:00-13:15

NONLINEAR SCATTERING OF A FEMTOSECOND LASER PULSE ON A DENSE, SMALL-SCALE PLASMA

M.V. Sedov^{1,2}, A.A. Andreev³, K.Yu. Platonov⁴, L.A.

¹*Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia*

²*National Research Nuclear University MEPhI, Moscow, Russia*

³*Saint-Petersburg State University, St. Petersburg, Russia*

⁴*Saint-Petersburg State Polytechnic University, St. Petersburg, Russia*

13:15-13:30

MODELING OF ELECTRON ACCELERATION PROCESSES IN DENSE PLASMA UNDER THE ACTION OF A RELATIVISTIC LASER PULSE WITH AN INTENSITY OF 10^{22} W/CM²

D. I. Gimaletdinova^{1,2}, M.V. Sedov^{1,2}

¹*Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia*

²*National Research Nuclear University MEPhI, Moscow, Russia*

13:30 -13:45

SPATIOTEMPORAL GOOS-HÄNCHEN EFFECT AT A LASER PULSE REFLECTION FROM BOUNDARY OF SUPERCRITICAL PLASMA

A.A. Frolov

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

13:45-14:30 Lunch

14:30-15:00

INVESTIGATION OF EXTREME MATTER STATE WITH ENERGY DENSITY ~ 1 GJ/CM³ GENERATED BY ULTRA-RELATIVISTIC LASER PULSES (Invited)

M.A. Alkhimova¹, I.Yu. Skobelev¹, T.A. Pikuz²

¹*Joint Institute for High Temperature, RAS, Moscow, Russia*

²*Transdisciplinary Research Initiatives, Osaka University, Osaka, Japan*

15:00-15:15

GENERATION OF X-RAY ATTO-PULSES IN LASER PLASMA AND ITS AMPLIFICATION BY XFEL

A.A. Andreev^{1,3}, K.Yu. Platonov²

¹*Saint Petersburg State University, Saint Petersburg, Russia*

²*Peter the Great St. Petersburg Polytechnic University, Saint Petersburg, Russia*

³*Ioffe Physico-Technical Institute, Saint Petersburg, Russia*

15:15-15:30

FORMATION OF HIGH-ASPECT-RATIO NANOCAVITY IN LIF CRYSTAL USING A FEMTOSECOND OF X-RAY FEL PULSE

S.S. Makarov¹, V.V. Zhakhovsky¹, S.A. Grigoryev¹, P. Chuprov², T.A. Pikuz³, N.A. Inogamov^{1,4}, V.V. Khokhlov^{1,4}, Y.V. Petrov⁴, E. Perov¹, V. Shepelev², T. Shobu⁵, A. Tominaga⁵, L. Rapp⁶, S. Juodkazis^{7,8}, M. Makita⁹, M. Nakatsutsumi⁹, T.R. Preston⁹, K. Appel⁹, Z. Konopkova⁹, V. Cerantola^{9,10}, E. Brambrink⁹, J. Schwinkendorf⁹, I. Mohacsi⁹, V. Vozda¹¹, V. Hajkova¹¹, T. Burian¹¹, J. Chalupsky¹¹, L. Juha¹¹, N. Ozaki¹², R. Kodama^{12,13}, U. Zastrau⁹, A.V. Rode⁶, S.A. Pikuz¹⁴

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⁶*Laser Physics Centre, Department of Quantum Science and Technology, Research School of Physics, Australian National University, Canberra ACT 2600, Australia.*

⁷*Optical Sciences Centre and ARC Training Centre in Surface Engineering for Advanced Materials (SEAM), School of Science, Swinburne University of Technology, Hawthorn, Australia*

⁸*Tokyo Tech World Research Hub Initiative (WRHI), School of Materials and Chemical Technology, Tokyo Institute of Technology, Tokyo, Japan*

⁹*European XFEL, Hamburg, Germany.*

¹⁰*Università degli Studi di Milano Bicocca, Milano, Italy*

¹¹*Department of Radiation and Chemical Physics, Institute of Physics, Czech Academy of Sciences, Prague, Czech Republic.*

¹²*Graduate School of Engineering, Osaka University, Osaka, Japan*

¹³*Institute of Laser Engineering, Osaka University, Osaka, Japan*

¹⁴*HB11 Energy Holdings, Freshwater, Australia*

15:30-15:45

FANO RESONANCE IN HIGH-ORDER HARMONIC GENERATION AND ITS CLASSICAL ANALOGY

V.V. Strelkov^{1,2}, S.A. Bondarenko^{2,3}

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²*A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences, Nizhny Novgorod, Russia*

³*National Research Nuclear University MEPhI, Moscow, Russia*

15:45-16:00

EFFECT OF SHORT WAVELENGTH PUMPING IN HIGH HARMONIC GENERATION BY GALLIUM IONS IN LASER FIELD

S.N. Yudin¹, A.I. Magunov^{2,3}, M.M. Popova^{1,3}

¹*Skobeltsyn Institute of Nuclear Physics, Lomonosov Moscow State University, Moscow, Russia*

²*Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow, Russia*

³*Gaponov-Grekhov Institute of Applied Physics of the RAS, Nizhny Novgorod, Russia*

16:00-16:15

THE EFFECT OF LASER PULSE DURATION ON THE DYNAMICS OF WATER MOLECULE COULOMB EXPLOSION

S.N. Yudin, A.V. Bibikov, M.M. Popova, E.V. Gryzlova, A.N. Grum-Grzhimailo

Skobeltsyn Institute of Nuclear Physics, Lomonosov Moscow State University, Moscow, Russia

16:15-16:30

ON SPATIAL LOCALIZATION OF COLD CESIUM ATOM ENSEMBLE IN BICHROMATIC LASER FIELD

A.I. Magunov^{1,2}, V.G. Palchikov²

¹*Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow, Russia*

²*All-Russian Scientific Research Institute of Physical-Technical and Radiotechnical Measurements", Mendeleevo, Moscow region, Russia*

16:30-16: 45 Coffee Break

16:45-17:15

CRYSTALLITE MOBILITY AND CORRESPONDING CHANGES IN SURFACE STRUCTURE UNDER WEAK (BELOW THE MELTING THRESHOLD) NANOSECOND IMPACT (*Invited*)

N.A. Inogamov^{1,2,3}

¹*L.D/ Landau Institute for Theoretical Physics, RAS, Chernogolovka, Russia*

²*Joint Institute for High Temperatures, RAS*

³*Centre for Fundamental and Applied Research, N.L. Dukhov All-Russian Research Institute of Automatics, Moscow, Russian Federation*

17:15-17:30

TREATMENT OF P- AND HIGHER ORDER ELECTRONIC SUBSHELLS IN STRONG-FIELD IONIZATION IN PARTICLE IN-CELL-SIMULATIONS

A. A. Mironov¹, E. G. Gelfer², S. V. Popruzhenko^{3,4}

¹*Center for Theoretical Physics (CPHT), CNRS, Ecole Polytechnique, Institut Polytechnique de Paris, Palaiseau, France*

²*ELI Beamlines Facility, The Extreme Light Infrastructure ERIC, Dolni Brezany, Czech Republic*

³*National Research Nuclear University MEPhI, Moscow, Russia*

⁴*Prokhorov General Physics Institute RAS, Moscow, Russia*

17:30-17:45

QUANTUM-QUASICLASSICAL METHOD FOR ATOMIC PROCESSES IN STRONG LASER FIELDS

V.S. Melezhik

Joint Institute for Nuclear Research (JINR), Dubna Moscow Region, Russia

17:45-18:00

THE RABBITT SETUP IN THE LIGHT OF DIVERSE POLARIZATIONS

M.M. Popova^{1,2}, S.N. Yudin¹, A.N. Grum-Grzhimailo¹, E.V. Gryzlova^{1,2}

¹*Skobeltsyn Institute of Nuclear Physics, Lomonosov Moscow State University, Moscow, Russia*

²*A.V. Gaponov-Grekhov Institute of Applied Physics, Russian Academy of Sciences, Nizhny Novgorod, Russia*

18:00-18:15

COMPTON IONIZATION OF POSITRONIUM BY TWISTED PHOTONS

Popov Yu.V.^{1,2}, Volobuev I.P.¹, Bornikov K.A.³

¹*Skobeltsyn Institute of Nuclear Physics, Lomonosov Moscow State University, Moscow, Russia*

²*Bogoliubov Laboratory of Theoretical Physics, Joint Institute for Nuclear Research, Dubna, Russia*

³*Physics Faculty, Lomonosov Moscow State University, Moscow, Russia*

18:15-18:30

ABRAHAM'S RADIATION FRICTION THRESHOLD FOR AN ELECTRON COLLIDING WITH A LASER PULSE

A.V. Borovskiy¹, A.L. Galkin²

¹*Baikal State University, Irkutsk, Russia*

²*Prokhorov General Physics Institute, Russian Academy of Sciences, Moscow, Russia*

SECTION-3 LASER PLASMAS. 10 April 2025 (Thursday)

10:00-10:30

RELATIVISTIC LASER-DRIVEN PARTICLES BEAM ACCELERATION WITH THIN LIQUID TARGETS (*Invited*)

K.A. Ivanov^{1,2}, S.A. Shulyapov¹, M.P. Filimonchuk^{1,3}, I.N. Tsymbalov^{1,4}, D.A. Gorlova¹, I.P. Tsygvintsev⁵, M.S. Krivokorytov⁶, R.V. Volkov¹, A.B. Savel'ev^{1,2}

¹*Physics faculty, M.V. Lomonosov Moscow State University, Moscow, Russia*

²*Lebedev Physical Institute of RAS, Moscow, Russia*

³*Joint Institute of High Temperatures of RAS, Moscow, Russia*

⁴*Institute for Nuclear Research of RAS, Moscow, Russia*

⁵*Keldysh Institute of applied mathematics of RAS, Moscow, Russia*

⁶*Institute of Spectroscopy of RAS, Troitsk, Russia*

10:30-10:45

ENERGY-TUNABLE QUASI-MONOENERGETIC ELECTRON BEAM OBTAINING WITH LWFA

E.M. Starodubtseva¹, I.N. Tsymbalov^{1,2}, D.A. Gorlova², K.A. Ivanov^{1,3}, A.B. Savel'ev^{1,3}

¹*Faculty of Physics, M.V. Lomonosov Moscow State University, Moscow, Russia*

²*Institute for Nuclear Research of the Russian Academy of Sciences, Moscow, Russia*

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

10:45-11:00

INVESTIGATION OF BEAM-LOADING EFFECT IN LASER-WAKEFIELD ACCELERATION OF ELECTRON BUNCH AND ITS INFLUENCE ON ELECTRON BUNCH ENERGY SPREAD

I.R. Umarov^{1,2}, N.E. Andreev^{1,2}

¹*Joint Institute for High Temperatures of the Russian Academy of Sciences (JIHT RAS), Moscow, Russia*

²*Moscow Institute of Physics and Technology, Dolgoprudny, Russia*

11:00-11:15

INHOMOGENEITIES EFFECT ON AUTORESONANT LASER ACCELERATION OF COLD ELECTRONS

Iu.K. Gagarin¹, Ph.A. Korneev^{1,2}

¹*National Research Nuclear University "MEPhI", Moscow, Russia*

²*Lebedev Physical Institute of RAS, Moscow, Russia*

11:15-11:30

INVESTIGATION OF THE PREPLASM OF A SOLID-STATE TARGET FOR PROBLEMS OF LASER ACCELERATION OF ELECTRONS AND IONS

M.A. Rakitina¹, A.V. Brantov^{1,2}, S.I. Glazyrin^{1,2}

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

²*Center for Fundamental and Applied Research, Dukhov Research Institute of Automatics (VNIIA), Moscow, Russia*

11:30-11:45 Coffee Break

SECTION 5. SOLID STATE PLASMAS. 10April 2025 (Thursday)

11:45-12:15

FLUID-FLUID DECOMPOSITION IN BINARY DIPOLAR SYSTEM UNDER EXTERNAL FIELDS (*Invited*)

E. Allahyarov^{1,2,3}

¹*Theoretical Department, Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia*

²*Department of Physics, Case Western Reserve University, Cleveland OH, USA*

³*Theoretische Physik II: Weiche Materie, HHU Düsseldorf, Germany*

12:15-12:30

INTERLAYER BOUNDARIES OF FERROELECTRIC SUPERLATTICES AS A SOURCE OF SOLID-STATE PLASMA FORMATION

D.V. Kuzenko

Scientific Research Institute "Reaktivelectron", Donetsk, Russia

12:30-12:45

POSSIBLE MECHANISM OF THE HIGHLY CONDUCTIVE STATE IN LOW-DIMENSIONAL SYSTEMS

L.M. Svirskaya^{1,2}

¹*South Ural State Humanitarian and Pedagogical University, Chelyabinsk, Russia*

²*South Ural State University (National Research University), Chelyabinsk, Russia*

12:45-13:00

MODELLING OF EDDY CURRENT EXCITATION DURING FEMTOSECOND LASER ABLATION OF METALS

I.V. Oladyshkin, D.A. Fadeev

A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences, Nizhny Novgorod, Russia

13:00-13:15

PRODUCTION OF ULTRA-THIN NI NANONETWORK BY LASER ABLATION IN SUPERFLUID HELIUM

E.V. Dvoretzkaya, R.B. Morgunov

Federal Research Center of Problems of Chemical Physics and Medicinal Chemistry RAS, Chernogolovka, Moscow region, Russia

13:15-13:30

ARC DISCHARGE PLASMA FOR THE SYNTHESIS OF NANOCARBIDES AND NANOCARBIDE-BASED COMPOSITES

D.S. Nikitin, A. Nassyrbayev, I.I. Shanenkov, A.A. Sivkov

National Research Tomsk Polytechnic University, Tomsk, Russia

13:30-14:30 Lunch

SECTION 4. GENERAL PLASMAS. April 11 2025(Thursday)

14:30-15:00

GAS DISCHARGE PLASMA ANTENNAS, ARRAYS AND METASURFACES (Invited)

N.N. Bogachev^{1,2}, M.S. Usachonak³, V.P. Stepin¹, V.I. Zhukov¹, S.E. Andreev^{1,2}, I.L. Bogdankevich^{1,2}, L.V. Simonchik³, N.G. Gusein-zade^{1,2}

¹*Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow, Russia*

²*MIREA - Russian Technological University, Moscow, Russia*

³*B.I. Stepanov Institute of Physics of the National Academy of Sciences of Belarus, Minsk, Belarus*

15:00-15:15

EFFECTS OF AXIAL PLASMA DENSITY DISTRIBUTION ON THE CHARACTERISTICS OF A PLASMA ANTENNA

V.P. Stepin¹, N.N. Bogachev¹, S.E. Andreev¹, I.L. Bogdankevich¹, V.I. Zhukov¹, D.M. Karfidov¹, M.S. Usachonak², N.G. Gusein-zade¹

¹*Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow, Russia*

²*B.I. Stepanov Institute of Physics of the National Academy of Sciences of Belarus, Minsk, Belarus*

15:15-15:30

BROADBAND PLASMA ANTENNA

I.M. Minaev, O.V. Tikhonovich

Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow, Russia

15:30-15:45

DYNAMICS OF THE RADIATION SPECTRUM UNDER THE COLLECTIVE STIMULATED CHERENKOV EFFECT IN DIELECTRIC AND PLASMA WAVEGUIDES

A.V. Ershov, M.V. Kuzelev

Faculty of Physics, Lomonosov Moscow State University, Moscow, Russia

15:45-16:00

BEAM INSTABILITY IN A PLASMA MICROWAVE AMPLIFIER WITH COAXIAL GEOMETRY IN THE PRESENCE OF AN ABSORBER

I.N. Kartashov, M.V. Kuzelev, A.V. Tumanov

Moscow State University, Moscow, Russia,

16:00-16:15

NOISE AMPLIFICATION BY A RELATIVISTIC ELECTRON BEAM IN A DOUBLE COAXIAL PLASMA-METAL WAVEGUIDE

A.E. Donets, V.I. Rogozhin, A.B. Buleyko, V.P. Bakhtin, A.G. Bykov, O.T. Loza, A.A. Ravaev

JSC "SSC RF TRINITY", Troitsk, Moscow, Russia

16:15-16:30

DEPENDENCE OF PLASMA MASER EMISSION SPECTRA ON AZIMUTHAL PLASMA CONCENTRATION INHOMOGENEITY

V.I. Rogozhin, A.E. Donets, A.B. Buleyko, V.P. Bakhtin, A.G. Bykov, O.T. Loza, A.A. Ravaev

JSC "SSC RF TRINITY", Troitsk, Moscow, Russia

16:30-16:45 Coffee Break

16:45-17:15

OPTIMIZATION OF PLASMA ETCHING PROCESSES IN MICROELECTRONICS: APPLICATIONS OF PLASMA DIAGNOSTICS (*Invited*)

A.V. Miakonkikh

NRC "Kurchatov Institute" – Valiev IPT, Moscow, Russia

17:15-17:30

MICROWAVE DISCHARGE IN WAVE FIELDS ON THE SURFACE OF SOLIDS

Z.A. Zakletskii, S.E. Andreev, D.V. Malakhov

Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow, Russia

17:30-17:45

STUDY OF DIODE PLASMA ON THE FORMATION AND PROPAGATION OF SHOCK WAVES DUE TO HIGH-CURRENT ELECTRON BEAM EXPOSURE

L.M. Iusupova^{1,2}, E.D. Kazakov^{2,3,4}, S.I. Tkachenko^{2,3}

¹*National Research University "MPEI", Moscow, Russian Federation*

²*NRC "Kurchatov Institute", Moscow, Russian Federation*

³*Moscow Institute of Physics and Technology, Dolgoprudny, Russian Federation*

⁴*KIAM RAS, Moscow, Russian Federation*

17:45-18:00

SHORTWAVELENGTH EMISSION FROM A HOT DENSE PLASMA

V.P. Krainov¹, B.M. Smirnov²

¹*Moscow Institute of Physics and Technology, Dolgoprudnyi, Moscow region, Russia*

²*Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia*

10:00-10:30

QUASI-STATIONARY MAGNET-INDUCED CONFINEMENT OF HIGH-ENERGY PLASMA FORMATION AT COLLISION OF CURRENT-CARRYING COMPRESSION PLASMA FLOWS (*Invited*)

V.M. Astashynski, O.G. Penyazkov, P.N. Shoronov

The A.V. Luikov Heat and Mass Transfer Institute of the National Academy of Sciences of Belarus, Minsk, Belarus

10:30-10:45

EXPERIMENTAL INVESTIGATION OF AN ABSORPTION OF THE ORDINARY POLARIZATION MICROWAVES IN A PLASMA FILAMENT

E.Z. Gusakov², A.Yu. Popov², L.V. Simonchik¹, M.S. Usachonak¹

¹*Institute of Physics of NAS of Belarus, Minsk, Belarus*

²*Ioffe Institute, St-Petersburg, Russia*

10:45-11:00

FEATURES OF ELECTRODYNAMICS OF HIGH-FREQUENCY DISCHARGE IN A MAGNETIC FIELD

S.A. Dvinin^{1,2}, M.A. Korneeva³, Z.A. Qodirzoda⁴, O.A. Sinkevich⁵, D.K. Solihzoda⁴

¹*Lomonosov Moscow state university, Moscow, Russia*

²*RUDN university, Moscow, Russia*

³*National Research Centre "Kurchatov Institute" - NIISI, Moscow, Russia*

⁴*Tajik National University, Dushanbe, Tajikistan*

⁵*National Research University «Moscow Power Engineering Institute», Moscow, Russia*

11:00-11:15

GENERATION OF RUNAWAY ELECTRONS IN LOW PRESSURE AIR FROM CAPACITIVE DISCHARGE PLASMA

V.F. Tarasenko¹, E.Kh. Baksht², N.P. Vinogradov²

¹*Institute of High Current Electronics SB RAS, Tomsk, RF, VFT@loi.hcei.tsc.ru*

²*Institute of High Current Electronics SB RAS, Tomsk, RF*

11:15-11:30

TRICHEL PULSES IN NEGATIVE CORONA DISCHARGE: INSTABILITY AND BEHAVIOR NEAR THE GENERATION THRESHOLD

E.Kh. Baksht, V.F. Tarasenko

Institute of High Current Electronics SB RAS, Tomsk, Russia

11:30-11:45 Coffee Break

11:45-12:15

ON THE PROGRESS IN THE STUDY OF ANEUTRONIC PROTON – BORON FUSION IN A NANOSECOND VACUUM DISCHARGE (*Invited*)

Yu. K. Kurilenkov^{1,2}, A.V. Oginov², S.N. Andreev³, S.Yu. Gus'kov², I.S. Samoylov¹

¹*Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia*

²*P.N. Lebedev Physical Institute of the Russian Academy of Sciences, Moscow, Russia*

³*Moscow Institute of Physics and Technology National Research University, Dolgoprudny, Russia*

12:15-12:30

ANEUTRONIC PROTON-BORON-11 REACTION IN QUASI-STATIONARY HIGH-DENSITY PLASMA

E.G. Vovkivsky, A.Yu. Chirkov

Thermal Physics Department, Bauman Moscow State Technical University, Moscow, Russia,

12:30-12:45

EVIDENCE OF PLASMA PHASE TRANSITION IN WARM DENSE CESIUM

A.A. Filatkin^{1,2}, G.E. Norman^{1,2,3}, I.M. Saitov^{1,4}

¹*Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia*

²*Moscow Institute of Physics and Technology, Dolgoprudny, Russia*

³*Higher School of Economics, Moscow, Russia*

⁴*University of L'Aquila, L'Aquila, Italy*

12:45-13:00

ABOUT THE EFFECT OF CATHODE DISPERSION ON THE CHARACTERISTICS OF DIRECT CURRENT DISCHARGE

M.M. Vasiliev, S.A. Maiorov, A. S. Svetlov, O.F. Petrov

Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia

13:00-13:15

OBTAINING AND REGULARIZATION OF A HEXAGONAL IRREGULAR COMPUTATIONAL GRID FOR PLASMA CALCULATIONS

S.V. Ryzhkov, V.V. Kuzenov

Bauman Moscow State Technical University, Moscow, Russia

13:15-14:30 Lunch

14:30-15:00

PROSPECTIVE SCHEMES OF RADIO-FREQUENCY PLASMA THRUSTERS (*Invited*)

I.I. Zadiriev, E.A. Kralkina, K.V. Vavilin, G.V. Shvydkiy, A.M. Nikonov, V.S. Dudin

Lomonosov Moscow State University, Moscow, Russia

15:00-15:15

OPTIMIZATION OF RADIO-FREQUENCY ION THRUSTER PROTOTYPE FOR OPERATION AS PART OF AN AIR-BREATHING ELECTRIC PROPULSION ENGINE IN ULTRA-LOW EARTH ORBITS

V.S. Dudin, E.A. Kralkina, K.V. Vavilin, I.I. Zadiriev, A.M. Nikonov, G.V. Shvydkiy

Lomonosov Moscow State University, Moscow, Russia

15:15-15:30

PLASMA OF THE EARTH'S LOWER IONOSPHERE IN THE YEAR OF MAXIMUM SOLAR ACTIVITY

N.V. Bakhmetieva, G.I. Grigoriev, I.N. Zhemyakov, E.E. Kalinina, A.A. Lisov

Radiophysical Research Institute Nizhny Novgorod State University, , Nizhny Novgorod, Russia

15:30-15:45

**INVESTIGATIONS OF THE IONOSPHERIC DISTURBANCES DURING THE
MAGNETIC STORM IN MARCH 2015 BY USING FORMOSAT-3/COSMIC SATELLITE
RADIO OCCULTATION MEASUREMENTS**

V.N. Gubenko, I.A. Kirillovich, V.E. Andreev

Kotelnikov Institute of Radio Engineering and Electronics RAS, Fryazino, Moscow region, Russia

15:45-16:00 Coffee Break

16:00-16:30

**PLASMA-ACTIVATED WATER: A MULTIFUNCTIONAL MEDIUM FOR
BIOMEDICAL AND NANOTECHNOLOGICAL APPLICATIONS (*Invited*)**

R.S. Pessoa¹, J. Karnopp¹, K.G. Kostov², C.Y. Koga-Ito³

¹*Plasmas and Processes Laboratory (LPP), Aeronautics Institute of Technology (ITA), São José dos Campos, Brazil.*

²*Department of Physics, Guaratinguetá Faculty of Engineering, São Paulo State University (UNESP), Guaratinguetá, Brazil.*

³*Department of Environment Engineering, Institute of Science and Technology, São Paulo State University (UNESP), São José dos Campos, Brazil.*

16:30-16:45

**ENERGETIC PLASMA BUNCHES GENERATED UNDER AUTORESONANT
INTERACTION IN A LONG MIRROR TRAP**

V.V. Andreev, A.A. Novitsky, A. Niamanesh

RUDN University, Moscow, Russia

16:45-17:00

ECR HEATING IN A COAXIAL PLASMA SOURCE CERA-RX(C)

A.V. Kalashnikov, A. Niamanesh

RUDN University, Moscow, Russia

17:00-17:15

**MODELING OF DIFFRACTION OF A PLANE ELECTROMAGNETIC WAVE ON A
MICROSTRUCTURED PLASMA OF A HIGHLY IONIZED PULSED NANOSECOND
GAS DISCHARGE**

S.Yu. Gavrilov, E.V. Parkevich, A.I. Khiryanova

The Lebedev Physical Institute of the Russian Academy of Sciences, Moscow, Russia

17:15-17:30

**FORMATION OF ALUMINUM OXYNITRIDE CONTAINING MATERIALS IN THE
PRESENCE OF MONO- AND POLYVALENT CATIONS UNDER A MICROWAVE
DISCHARGE**

N.S. Akhmadullina^{1,2}, V.D. Borzosekov², T.E. Gayanova², V.V. Gudkova², N.G. Gusein-zade²,
A.V. Knyazev², A.A. Letunov², D.V. Malakhov², E.D. Obratsova³, O.N. Shishilov^{2,4}, N.N.
Skvortsova², A.S. Sokolov², V.D. Stepakhin²

¹*A.A. Baikov Institute of Metallurgy and Material Science of Russian Academy of Sciences, Moscow, Russia*

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³*Moscow Institute of Physics and Technology, Dolgoprudny, Moscow Region, Russia*

⁴*MIREA – Russian Technological University, Institute of Fine Chemical Technology, Moscow, Russia*

17:30-17:45

PREPARATION OF BIMETALLIC SUPPORTED CATALYSTS USING A MICROWAVE DISCHARGE

O.N. Shishilov^{1,2}, N.S. Akhmadullina³, V.D. Borzosekov², I.Yu. Vafin², E.V. Voronova², T.E. Gayanova², N.G. Gusein-zade², V.P. Logvinenko², D.V. Malakhov², E.D. Obraztsova⁴, N.N. Skvortsova², A.S. Sokolov², V.D. Stepakhin²

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⁴*Moscow Institute of Physics and Technology, Dolgoprudny, Moscow Region, Russia*

17:45-18:00 Closing Ceremony of the CSCPIER-2025