

XXXI International Conference on Equations of State for Matter (ELBRUS 2016)

Journal of Physics: Conference Series Volume 774

Elbrus, Russia
1 – 6 March 2016

Part 1 of 2

Editors:

**V.E. Fortov
K.V. Khishchenko
B.S. Karamurzov**

**V.P. Efremov
V.G. Sultanov
M.A. Kadatskiy**

ISBN: 978-1-5108-3387-6
ISSN: 1742-6588

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2016) by the Institute of Physics
All rights reserved. The material featured in this book is subject to
IOP copyright protection, unless otherwise indicated.

Printed by Curran Associates, Inc. (2017)

For permission requests, please contact the Institute of Physics
at the address below.

Institute of Physics
Dirac House, Temple Back
Bristol BS1 6BE UK

Phone: 44 1 17 929 7481
Fax: 44 1 17 920 0979

techtracking@iop.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2633
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

PART 1

EQUATIONS OF STATE FOR MATTER

EQUATION OF STATE FOR TITANIUM AT HIGH ENERGY DENSITIES	1
<i>K V Khishchenko</i>	
ATOMIC NUMBER SCALING OF ELECTRON SPECTRA IN THE FREE ATOMS	9
<i>G V Shpatakovskaya, V Ya Karpov</i>	
COMPLEX STRUCTURES OF DENSE LITHIUM: ELECTRONIC ORIGIN	17
<i>V F Degtyareva</i>	
MECHANICAL STABILITY OF SOLIDS AT NEGATIVE PRESSURES	23
<i>V G Baidakov</i>	
SHOCK COMPRESSIBILITY OF IRON CALCULATED IN THE FRAMEWORK OF QUANTUM-STATISTICAL MODELS WITH DIFFERENT IONIC PARTS	29
<i>M A Kadatskiy, K V Khishchenko</i>	
REGION OF VALIDITY OF THE THOMAS–FERMI MODEL WITH QUANTUM, EXCHANGE AND SHELL CORRECTIONS	44
<i>S A Dyachkov, P R Levashov, D V Minakov</i>	
STATIC POLARIZABILITY IN A COMBINED MODEL	50
<i>A Kh Kyarov, A P Savintsev</i>	
HIGH-PRESSURE HIGH-TEMPERATURE EQUATIONS OF STATE OF SHOCKED BCC VANADIUM	54
<i>A M Molodets, A A Golyshev, D V Shakhray</i>	
A FEW-PARAMETER EQUATION OF STATE OF THE CONDENSED MATTER	60
<i>E I Kraus, I I Shabalin</i>	
THERMODYNAMIC PARAMETERS OF HETEROGENEOUS MATERIALS UNDER SHOCK-WAVE LOADING IN PRESENTATION OF EQUILIBRIUM MODEL	69
<i>K K Maevskii, S A Kinelovskii</i>	
STATIC AND SHOCK COMPRESSIBILITY OF TATB MOLECULAR CRYSTAL	76
<i>A A Degtyarev, E B Smirnov, O V Kostitsin, A V Stankevich, A K Muzrya, K A Ten, E R Prueel, A O Kashkarov, L H Batretdinova</i>	
STUDY OF COMPOSITION OF THE ULTRAFINE MATERIAL PRODUCED FROM GRAPHITE–CATALYST MIXTURE UNDER EXTREME ENERGY ACTION	79
<i>N V Melnikova, D O Alikin, Yu B Melnikov, I G Grigorov, S A Chaikovsky, N A Labetskaya, I M Datsko, V I Oreshkin, N A Ratakhin, K V Khishchenko</i>	
SHOCK LOADING OF GRAPHITE BETWEEN WATER LAYERS: NUMERICAL EXPERIMENTS	86
<i>L V Shurshalov, A A Charakhch'yan, K V Khishchenko</i>	
THE ANALYSIS OF THERMAL STABILITY OF DETONATION NANODIAMOND	95
<i>V P Efremov, E I Zakatilova</i>	
FLUID–FLUID–SOLID TRIPLE POINT ON MELTING CURVES AT HIGH TEMPERATURES	101
<i>G E Norman, I M Saïtov</i>	
MELTING OF ALUMINUM WITH IDEAL OR DEFECT LATTICE: MOLECULAR DYNAMICS SIMULATIONS WITH ACCOUNTING OF ELECTRONIC HEAT CONDUCTIVITY	109
<i>V S Krasnikov, A E Mayer</i>	
COMPARISON OF THE SCALING MODELS FOR SUBSTANCE DENSITIES ALONG SATURATION LINE	120
<i>V S Vorob'Yev, V A Rykov, E E Ustyuzhanin, V V Shishakov, P V Popov, S V Rykov</i>	
THERMAL ACCOMMODATION AT COLD AR ATOMS COLLISIONS WITH SMALL FE CLUSTERS AT DIFFERENT TEMPERATURES	129
<i>D Y Lenev, G E Norman</i>	
PSEUDO-CRITICAL POINT IN ANOMALOUS PHASE DIAGRAMS OF SIMPLE PLASMA MODELS	135
<i>A Yu Chigvintsev, I L Iosilevskiy, L Yu Noginova</i>	

EXPERIMENTAL INVESTIGATION OF THERMOPHYSICAL PROPERTIES OF EUTECTIC MO–C, GRAPHITE AND TANTALUM AT HIGH TEMPERATURES	141
<i>V N Senchenko, R S Belikov, V S Popov</i>	
ON TEMPERATURE DETERMINING BY MAXIMUM SPECTRAL RADIATION ISOTHERMAL SYSTEM OF OPAQUE BODIES	149
<i>S P Rusin</i>	
INVESTIGATIONS OF THERMAL CONDUCTIVITY OF METALS IN THE FIELD OF CENTRIFUGAL AND VIBRATION ACCELERATIONS	153
<i>A R Lepeshkin, P A Vaganov</i>	
THERMODYNAMIC PROPERTIES OF VANADIUM AND COBALT ARGIDE IONS, VAR+ AND COAR+	160
<i>M A Maltsev, A N Kulikov, I V Morozov</i>	
EFFECTS OF SMOOTH RANDOM SURFACE ON FLUID MONOLAYER THERMODYNAMICS	167
<i>A N Khlyupin</i>	
CALCULATION OF MULTICOMPONENT COMPOUND PROPERTIES USING GENERALIZATION OF THERMODYNAMICS IN DERIVATIVES OF FRACTIONAL ORDER	181
<i>R A Magomedov, R P Meilanov, E N Akhmedov, A A Aliverdiev</i>	
THE ORIGIN OF EXTENSIONAL FLOW IN A CHANNEL WITH SUDDEN CONTRACTION AND EXPANSION	187
<i>I V Kravchenko, S A Patlazhan, R Muller, V G Sultanov</i>	
HYDRODYNAMICS OF NEWTONIAN AND POWER-LAW FLUIDS IN MICROCHANNEL WITH SUPERHYDROPHOBIC WALL	194
<i>S A Vagner, S A Patlazhan</i>	
THREE-DIMENSIONAL NUMERICAL SIMULATION OF THE INSTABILITY OF THE INTERFACE BETWEEN TWO HIGH-SPEED COLLIDING METAL PLATES	203
<i>S V Fortova, V V Shepelev, A P Pronina, P S Utkin</i>	
MOLECULAR DYNAMIC SIMULATIONS OF THE HIGH-SPEED COPPER NANOPARTICLES COLLISION WITH THE ALUMINUM SURFACE	207
<i>V V Pogorelko, A E Mayer</i>	
NUCLEATION AND THE SPALL STRENGTH OF LIQUID METALS	214
<i>N Yu Lopanitsyna, A Yu Kuksin</i>	
VIBRATIONAL PROPERTIES OF BCC U AND MO AT DIFFERENT TEMPERATURES	224
<i>K S Fidanyan, V V Stegailov</i>	
STUDY OF VISCOSITY OF ALUMINUM MELT DURING GLASS TRANSITION BY MOLECULAR DYNAMICS AND GREEN–KUBO FORMULA	233
<i>E M Kirova, V V Pisarev</i>	
NUCLEATION OF CARBON NANOSTRUCTURES: MOLECULAR DYNAMICS WITH REACTIVE POTENTIALS	239
<i>G M Galiullina, N D Orekhov, V V Stegailov</i>	
TENSILE STRENGTH OF AL MATRIX WITH NANOSCALE CU, TI AND MG INCLUSIONS	245
<i>V V Pogorelko, A E Mayer</i>	
EFFECT OF SHARP MAXIMUM IN ION DIFFUSIVITY FOR LIQUID XENON	257
<i>A V Lankin, M A Orekhov</i>	
FEATURES OF STRUCTURE AND PHASE TRANSITIONS IN PURE URANIUM AND U–MO ALLOYS: ATOMISTIC SIMULATION	265
<i>L N Kolotova, A Yu Kuksin, D E Smirnova, S V Starikov, V I Tseplyaev</i>	
ATOMISTIC SIMULATION OF A SUPERIONIC TRANSITION IN FLUORITE TYPE STRUCTURES UO₂, UN₂, TIH₂	275
<i>M A Korneva, S V Starikov</i>	
VIRIAL BASED EQUATIONS OF STATE WITH ACCOUNT OF THREE-BODY INTERACTION FOR NOBLE GASES AND THEIR MIXTURES	284
<i>Z A Akhmatov, A Kh Khokonov, M Kh Khokonov</i>	
RHEOLOGY OF LIQUID N-TRIACONTANE: MOLECULAR DYNAMICS SIMULATION	291
<i>N D Kondratyuk, G E Norman, V V Stegailov</i>	
FEATURES OF NON-CONGRUENT PHASE TRANSITION IN MODIFIED COULOMB MODEL OF THE BINARY IONIC MIXTURE	300
<i>N E Stroev, I L Iosilevskiy</i>	
THEORETICAL MODEL OF THE EQUATION OF STATE FOR TERNARY FLUID MIXTURES WITH EXP-6 POTENTIAL	310
<i>Yu A Bogdanova, S A Gubin, A A Anikeev</i>	

EXPERIMENTAL STUDY OF TWO-PHASE FILTRATION REGIMES OF METHANE-N-PENTANE MIXTURE	315
<i>V M Zaichenko, D A Molchanov, V M Torchinskiy</i>	
MATHEMATICAL MODELING OF GAS-CONDENSATE MIXTURE FILTRATION IN POROUS MEDIA TAKING INTO ACCOUNT NON-EQUILIBRIUM OF PHASE TRANSITIONS	321
<i>V V Kachalov, D A Molchanov, V N Sokotushchenko, V M Zaichenko</i>	
ENERGY-TECHNOLOGICAL COMPLEX WITH REACTOR FOR TORREFACTION	327
<i>J S Kuzmina, L B Director, V M Zaichenko</i>	
GRAVITATIONALLY NEUTRAL DARK MATTER-DARK ANTIMATTER UNIVERSE CRYSTAL WITH EPOCHS OF DECELERATED AND ACCELERATED EXPANSION	336
<i>I A Gribov, S A Trigger</i>	
THE SOLUTION OF THE OPTIMIZATION PROBLEM OF SMALL ENERGY COMPLEXES USING LINEAR PROGRAMMING METHODS	346
<i>O A Ivanin, L B Director</i>	
INTERNET CALCULATIONS OF THERMODYNAMIC PROPERTIES OF SUBSTANCES: SOME PROBLEMS AND RESULTS	354
<i>E E Ustyuzhanin, V F Ochkov, V V Shishakov, S V Rykov</i>	

SHOCK WAVES, DETONATION AND COMBUSTION

PECULIARITIES OF EVOLUTIONS OF ELASTIC-PLASTIC SHOCK COMPRESSION WAVES IN DIFFERENT MATERIALS	361
<i>G I Kanel, A S Savinykh, G V Garkushin, S V Razorenov, S I Ashitkov, E B Zaretsky</i>	
IRREDUCIBLE SPECIFIC ENERGY OF NEW SURFACES CREATION IN MATERIALS WITH CRACK-TYPE MACRO DEFECTS UNDER PULSE ACTION	368
<i>S I Krivosheev, S G Magazinov</i>	
FEATURES OF BEHAVIOR OF THE CONTACT BOUNDARY OF METALS DURING EXPLOSION WELDING: NUMERICAL SIMULATION	376
<i>V G Sultanov, A V Shutov</i>	
EXPERIMENTAL STUDY OF MECHANICAL PROPERTIES OF LIQUIDS UNDER SHOCK WAVE LOADING	386
<i>I A Bannikova, S V Uvarov, A N Zubareva, A V Utkin, O B Naimark</i>	
THE BEHAVIOR LIMESTONE UNDER EXPLOSIVE LOAD	393
<i>M Yu Orlov, Yu N Orlova, G N Bogomolov</i>	
THE ROLE OF DECOMPRESSION AND MICRO-JETTING IN SHOCK WAVE SYNTHESIS EXPERIMENTS	400
<i>T Schlothauer, C Schimpf, M R Schwarz, G Heide, E Kroke</i>	
SUPERCONDUCTIVITY OF CU/CUO_x INTERFACE FORMED BY SHOCK-WAVE PRESSURE	424
<i>D V Shakhray, V V Avdonin, A V Palnichenko</i>	
EXPERIMENTAL STUDY OF DYNAMIC PROPERTIES OF POROUS MATERIALS UNDER SHOCK-WAVE LOADING	430
<i>A N Zubareva, V P Efremov, V M Mochalova, A V Utkin</i>	
TWO-STAGE LIGHT-GAS MAGNETOPLASMA ACCELERATOR FOR HYPERVELOCITY IMPACT SIMULATION	436
<i>P P Khramtsov, V A Vasetskij, A I Makhnach, V M Grishenko, M Yu Chernik, I A Shikh, M V Doroshko</i>	
LINE-IMAGING VISAR FOR LASER-DRIVEN EQUATIONS OF STATE EXPERIMENTS	444
<i>A V Mikhaylyuk, D S Koshkin, K L Gubskii, A P Kuznetsov</i>	
THE INFLUENCE OF THE INITIAL VELOCITY ON THE ANOMALOUS WAVE DYNAMICS IN EXPANDING FIREBALL	451
<i>A V Konyukhov, A P Likhachev</i>	
NUMERICAL INVESTIGATION OF OSCILLATORY MULTIPHASE FLOW IN POROUS MEDIUM WITH CHEMICALLY ACTIVE SKELETON	460
<i>A V Konyukhov, I N Zavialov</i>	
MOLECULAR DYNAMIC INVESTIGATIONS OF THE SHOCK PULSES INTERACTION WITH NANOSTRUCTURED FREE SURFACE OF A TARGET	470
<i>A A Ebel, A E Mayer</i>	
CONTINUUM MODEL OF TENSILE FRACTURE OF PURE ALUMINUM AND D16 ALLOY AND ITS APPLICATION TO THE SHOCK WAVE PROBLEMS	476
<i>A E Mayer</i>	

MOLECULAR DYNAMICS STUDY OF THE NUCLEATION RATE OF NANOPORES IN ALUMINUM AT A NEGATIVE PRESSURE	486
<i>D S Voronin, V S Krasnikov, A E Mayer</i>	
NUMERICAL SIMULATION OF DYNAMIC FAILURE AND MULTI SPALL FRACTURE IN METALS	492
<i>Yu V Bayandin, N V Saveleva, O B Naimark</i>	
RESEARCH OF FRACTURE OF MATERIALS AND STRUCTURES UNDER SHOCK-WAVE LOADINGS BY MEANS OF THE PROGRAM COMPLEX EFES	496
<i>P A Radchenko, A V Radchenko, S P Batuev, A M Tukaev</i>	
EXPERIMENTAL AND NUMERICAL INVESTIGATION OF CONCRETE STRUCTURES WITH METAL AND NON-METAL REINFORCEMENT AT IMPULSE LOADINGS	505
<i>P A Radchenko, S P Batuev, A V Radchenko, V S Plevkov, K L Kudiyakov</i>	
TWO-DIMENSIONAL MODELING OF HIGH-VELOCITY IMPINGEMENT OF POLYMETHYLMETHACRYLATE PLATES	512
<i>T V Popova, A E Mayer, K V Khishchenko</i>	
THE FABRICATION OF BORON CARBIDE COMPACTS BY EXPLOSIVE CONSOLIDATION	524
<i>A E Buzyurkin, E I Kraus, Ya L Lukyanov</i>	
DEFLAGRATION TO DETONATION TRANSITION IN MECHANOACTIVATED MIXTURES OF AMMONIUM PERCHLORATE WITH ALUMINUM	528
<i>A A Shevchenko, A Yu Dolgoborodov, V G Kirilenko, M A Brazhnikov</i>	
SHOCK INITIATION OF EXOTHERMIC REACTIONS IN MECHANICALLY ACTIVATED MIXTURES	532
<i>S Yu Ananev, A Yu Dolgoborodov, A A Shiray, B D Yankovsky</i>	
DETECTION OF MICROPARTICLES IN DYNAMIC PROCESSES	540
<i>K A Ten, E R Prueel, A O Kashkarov, I A Rubtsov, L I Shechtman, V V Zhulanov, B P Tolochko, G N Rykovanov, A K Muzrya, E B Smirnov, M Yu Stolbikov, K M Prosvirnin</i>	
STUDY OF THE DYNAMICS OF NANOPARTICLE SIZES IN TRINITROTOLUENE DETONATION USING THE VEPP-4M SYNCHROTRON RADIATION	548
<i>I A Rubtsov, K A Ten, E R Prueel, A O Kashkarov</i>	
TRANSMISSION ELECTRON MICROSCOPY AND X-RAY DIFFRACTION STUDIES OF THE DETONATION SOOT OF HIGH EXPLOSIVES	554
<i>A O Kashkarov, E R Prueel, K A Ten, I A Rubtsov, E Yu Gerasimov, P I Zubkov</i>	
INSTABILITY OF DETONATION WAVES IN FEFO-METHANOL MIXTURES	563
<i>A V Utkin, V M Mochalova, S I Torunov, S A Koldunov</i>	
EXPERIMENTAL INVESTIGATION OF CYLINDRICAL DETONATION WAVE	569
<i>S V Dudin, V A Sosikov, S I Torunov</i>	
MATHEMATICAL MODELING OF CONVERGING DETONATION WAVES AT MULTIPOINT INITIATION	574
<i>A V Shutov, V G Sultanov, S V Dudin</i>	
MODEL OF NON-IDEAL DETONATION OF CONDENSED HIGH EXPLOSIVES	579
<i>E B Smirnov, O V Kostitsin, A V Koval, I A Akhlyustin</i>	
DETONATION INITIATION IN A MODEL OF EXPLOSIVE: COMPARATIVE ATOMISTIC AND HYDRODYNAMICS SIMULATIONS	586
<i>S A Murzov, O V Sergeev, S A Dyachkov, M S Egorova, A N Parshikov, V V Zhakhovsky</i>	
A METHOD OF CALCULATING OF THE THERMODYNAMIC PROPERTIES AND THE COMPOSITION OF THE EXPLOSION PRODUCTS OF HYDROCARBONS AND AIR UNDER PARTIAL CHEMICAL EQUILIBRIUM	592
<i>V A Shargatov</i>	
USING OF EXPLOSIVE TECHNOLOGIES FOR DEVELOPMENT OF A COMPACT CURRENT-LIMITING DEVICE FOR OPERATION ON 110 KV CLASS SYSTEMS	605
<i>A V Shurupov, M A Shurupov, A A Kozlov, A V Kotov</i>	
EXPERIMENTAL STUDY OF THE EMISSION OF ELECTRONICALLY EXCITED CH*, C*₂, OH*, AND CO*₂ DURING IGNITION OF HYDROCARBONS BEHIND REFLECTED SHOCK WAVES	612
<i>A M Tereza, T S Demidenko, A A Garmash, V N Smirnov, V V Shumova, P A Vlasov</i>	
THE KINETIC CHARACTERISTIC FEATURES OF THE LOW TEMPERATURE HYDROGEN OXIDATION DURING THE INDUCTION PERIOD BEHIND REFLECTED SHOCK WAVES	621
<i>G L Agafonov, A A Garmash, S P Medvedev, A V Seletkova, V N Smirnov, V V Shumova, A M Tereza, P A Vlasov</i>	
THE FORMATION OF IGNITION CENTERS BEFORE THE FRONT OF SPHERICAL FLAME IN HYDROGEN-AIR MIXTURES UNDER INTENSE INITIATION	626
<i>V A Petukhov, N P Bublik, P A Gusev, L D Gutkin, O I Solntsev</i>	

NUMERICAL AND EXPERIMENTAL ANALYSIS OF PROPANE–HYDROGEN MIXTURE IGNITION IN AIR	633
<i>K L Sevrouk, P N Krivosheyyev, O G Penyazkov, S A Torohov, N S Titova, A M Starik</i>	
THE INFLUENCE OF COAL PARTICLES ON SELF-IGNITION OF METHANE–AIR MIXTURE AT TEMPERATURES 950–1200 K.....	640
<i>V V Leschevich, O G Penyazkov, S Yu Shimchenko, M L Yaumenchykau</i>	
IGNITION DELAYS IN METHANE–OXYGEN MIXTURE IN THE PRESENCE OF SMALL AMOUNT OF IRON OR CARBON NANOPARTICLES	646
<i>A V Eremin, E V Gurentsov</i>	
ATTENUATION OF THE DETONATION WAVE IN HYDROGEN–AIR MIXTURE.....	652
<i>G Yu Bivol, S V Golovastov, V V Golub</i>	
PREMIXED CONICAL FLAME STABILIZATION	658
<i>A I Krikunova, E E Son, A S Saveliev</i>	
ACOUSTIC CONTROL OF THE STRUCTURE OF THE GAS TORCH.....	664
<i>V V Golub, V V Volodin, M S Krivokorytov</i>	
FLAME FRONT PROPAGATION IN A CHANNEL WITH POROUS WALLS	672
<i>S V Golovastov, G Yu Bivol</i>	
INFLUENCE OF SOUND ABSORBING SURFACES ON ACOUSTIC OSCILLATIONS AND FLAME ACCELERATION IN HYDROGEN–AIR MIXTURE	676
<i>A E Korobov, V V Volodin, S V Golovastov</i>	
HYDROGEN–AIR TURBULENT FLAME PROPAGATION IN THE PRESENCE OF MICRODROPLETS.....	680
<i>S P Medvedev, S V Khomik, O G Maximova, G L Agafonov, V N Mikhalkin, A S Betev</i>	
TEMPERATURE PERTURBATIONS EVOLUTION AS A POSSIBLE MECHANISM OF EXOTHERMAL REACTION KERNELS FORMATION IN SHOCK TUBES	691
<i>A V Drakon, A D Kiverin, I S Yakovenko</i>	
ROLE OF NUMERICAL SCHEME CHOICE ON THE RESULTS OF MATHEMATICAL MODELING OF COMBUSTION AND DETONATION	703
<i>I S Yakovenko, A D Kiverin, S G Pinevich, M F Ivanov</i>	
THE CABARET METHOD FOR A WEAKLY COMPRESSIBLE FLUID FLOWS IN ONE- AND TWO-DIMENSIONAL IMPLEMENTATIONS	714
<i>Yu M Kulikov, E E Son</i>	
SIMULATING FLOW AROUND SCALED MODEL OF A HYPERSONIC VEHICLE IN WIND TUNNEL	730
<i>T V Markova, A A Aksenov, S V Zhlyukov, D V Savitsky, A D Gavrilov, E E Son, A N Prokhorov</i>	
TO THE DEVELOPMENT OF THE MECHANISM OF INTERACTION OF GALACTIC COMETS WITH THE TERRESTRIAL PLANETS.....	739
<i>A A Barenbaum, M I Shpekin</i>	

PART 2

POWER INTERACTION WITH MATTER

ABLATION OF GOLD IRRADIATED BY FEMTOSECOND LASER PULSE: EXPERIMENT AND MODELING	753
<i>S I Ashitkov, P S Komarov, V V Zhakhovskiy, Yu V Petrov, V A Khokhlov, A A Yurkevich, D K Ilitskiy, N A Inogamov, M B Agranat</i>	
STRENGTH OF IRON MELT AT HIGH EXTENSION RATE DURING FEMTOSECOND LASER ABLATION.....	813
<i>E V Struleva, S I Ashitkov, P S Komarov, K V Khishchenko, M B Agranat</i>	
REFLECTANCE OF THIN SILVER FILM ON THE GLASS SUBSTRATE AT THE INTERACTION WITH FEMTOSECOND LASER PULSES	819
<i>Yu V Petrov, V A Khokhlov, N A Inogamov, K V Khishchenko, S I Anisimov</i>	
METAL FILM ON A SUBSTRATE: DYNAMICS UNDER THE ACTION OF ULTRASHORT LASER PULSE	828
<i>V A Khokhlov, V V Zhakhovskiy, K V Khishchenko, N A Inogamov, S I Anisimov</i>	
DYNAMICS OF LASER ABLATION AT THE EARLY STAGE DURING AND AFTER ULTRASHORT PULSE	838
<i>D K Ilitskiy, V A Khokhlov, V V Zhakhovskiy, Yu V Petrov, K P Migdal, N A Inogamov</i>	

BLISTERING OF FILM FROM SUBSTRATE AFTER ACTION OF ULTRASHORT LASER PULSE	868
<i>N A Inogamov, V V Zhakhovskiy, V A Khokhlov, A A Kuchmizhak, S I Kudryashov</i>	
TRANSPORT PROPERTIES OF COPPER WITH EXCITED ELECTRON SUBSYSTEM	880
<i>Yu V Petrov, K P Migdal, D V Knyazev, N A Inogamov, P R Levashov</i>	
ELECTRON-ION RELAXATION IN AL NANOPLASMA: WAVE PACKET MOLECULAR DYNAMICS	897
<i>N D Orekhov, V V Stegailov</i>	
A WIDE-RANGE MODEL FOR SIMULATION OF ALUMINUM PLASMA PRODUCED BY FEMTOSECOND LASER PULSES	904
<i>M E Povarnitsyn, N E Andreev</i>	
ELECTRON ACCELERATION UNDER THE ACTION OF A LASER PULSE ONTO IONIZING PLASMA CORONA	908
<i>L P Pugachev, V S Popov, N E Andreev</i>	
LASER WAKEFIELD ACCELERATION OF POLARIZED ELECTRON BEAMS	914
<i>D V Pugacheva, N E Andreev, B Cros</i>	
NONLINEAR STRUCTURE OF THE WAKEFIELD GENERATED BY RELATIVISTIC INTENSE ION BUNCH	920
<i>A A Koshelev, N E Andreev</i>	
COMPARATIVE STUDY OF LASER PULSES GUIDING IN CAPILLARY WAVEGUIDES AND PLASMA CHANNELS AT CONDITIONS OF NON-PERFECT FOCUSING	925
<i>M E Veysman, N E Andreev</i>	
EXPERIMENTAL VERIFICATION OF THE ABLATION PRESSURE DEPENDENCE UPON THE LASER INTENSITY AT PULSED IRRADIATION OF METALS	932
<i>I K Krasnyuk, A Yu Semenov, I A Stuchebruyukhov, K V Khishchenko</i>	
THEORETICAL AND EXPERIMENTAL STUDIES OF THE RADIATIVE PROPERTIES OF PLASMA AND THEIR APPLICATIONS TO TEMPERATURE DIAGNOSTICS OF Z-PINCH PLASMA	936
<i>N Yu Orlov, O B Denisov, G A Vergunova, O N Rosmej</i>	
ON THE HOT ELECTRONS AND K_{α} X-RAYS GENERATION IN THE INTENSE LASER INTERACTION WITH SILVER TARGETS	942
<i>O F Kostenko, N E Andreev, O N Rosmej, A Schönlein</i>	
FAST IGNITION OF PRECOMPRESSED DT FUEL PLACED IN AN ABSOLUTELY RIGID HEAT-INSULATED CYLINDER	946
<i>A A Charakhch'yan, K V Khishchenko</i>	
PARAMETERS OF SUPERSONIC ASTROPHYSICALLY-RELEVANT PLASMA JETS COLLIMATING VIA POLOIDAL MAGNETIC FIELD MEASURED BY X-RAY SPECTROSCOPY METHOD	956
<i>E D Filippov, S A Pikuz, I Yu Skobelev, S N Ryazantsev, D P Higginson, D Khaghani, G Revet, S N Chen, J Fuchs</i>	
DETERMINATION OF SPECTRAL REFLECTIVITY OF SPHERICALLY BENT MICA CRYSTALS APPLIED FOR DIAGNOSTICS OF RELATIVISTIC LASER PLASMAS	962
<i>M A Alkhimova, S A Pikuz, A Ya Faenov, I Yu Skobelev</i>	
DIAGNOSTICS OF RECOMBINING LASER PLASMA PARAMETERS BASED ON HE-LIKE ION RESONANCE LINES INTENSITY RATIOS	968
<i>S N Ryazantsev, I Yu Skobelev, A Ya Faenov, T A Pikuz, A N Grum-Grzhimailo, S A Pikuz</i>	
ON THE REFLECTION PROPERTIES OF GERMANIUM AND QUARTZ FOCUSING CRYSTALS	974
<i>E O Baronova, I A Subbotin, A A Lomov</i>	
X-RAY PHOTOELECTRON SPECTROSCOPY STUDIES OF THE SODIUM CHLORIDE SURFACE AFTER LASER EXPOSURE	980
<i>A P Savintsev, Yu O Gavasheli, Z Kh Kalazhokov, Kh Kh Kalazhokov</i>	
SHOCK-WAVE PROCESSES EVOLUTION IN FUSED QUARTZ UNDER INTENSE ENERGY ACTION	986
<i>V P Efmov, M F Ivanov, A D Kiverin, I S Yakovenko</i>	
STUDY OF OPTICAL AND MECHANICAL STRENGTHS OF THE GLASS COMPOSITES WITH SOL-GEL FILMS	1000
<i>A B Atkarskaya, E Yu Zakalova, V S Kaunov, V M Nartzev, P V Chartiý, V G Shemanin</i>	
ON THE MECHANISM OF DEEP CRATERS FORMATION UNDER THE ACTION OF HIGH POWER YTTERBIUM-FIBER LASER	1005
<i>E A Kochurin, V V Lisenkov, V V Osipov, V V Platonov, N M Zubarev</i>	

MONITORING OF THE THERMAL MELTING OF A SILVER SURFACE LAYER WITH USE OF PROBING LASER LIGHT	1011
<i>V M Batenin, V V Kachalov, A V Kourilovich, V Y Mendeleyev</i>	
ESTIMATION OF PROPAGATION LOSSES FOR INFRARED LASER BEAM IN TURBULENT ATMOSPHERE	1017
<i>A E Zaponov, M V Sakharov</i>	
RADIATION AND MATTER: ELECTRODYNAMICS POSTULATES AND LORENZ GAUGE	1021
<i>V B Bobrov, S A Trigger, G J Van Heijst, P P Schram</i>	
COMBINED DC ELECTRIC-ULTRAVIOLET TO NEAR INFRARED OPTICAL BREAKDOWN OF AR IN A WIDE RANGE OF IMPACT PARAMETERS	1027
<i>E Yu Loktionov, N A Pasechnikov, V D Telekh</i>	
DIPOLE–DIPOLE INTERACTIONS BETWEEN ATOMS IN A PARTLY EXCITED RESONANCE GAS	1032
<i>V A Sautenkov</i>	
BINARY IRON–CARBON NANOPARTICLE SYNTHESIS IN PHOTOLYSIS OF FE(CO)₅ WITH METHANE AND ACETYLENE	1035
<i>A V Eremin, E V Gurentsov, E Yu Mikheyeva, S A Musikhin</i>	
STRUCTURE OF INTERFACES IN GAN/ALN AND GE/SI MULTILAYERED HETEROSYSTEMS BY XAFS SPECTROSCOPY	1050
<i>S B Erenburg, S V Trubina, K S Zhuravlev, T V Malin, V A Zinovyev, A V Dvurechenskii, P A Kuchinskaya, K O Kvashnina</i>	
EXPERIMENTAL STUDIES OF POROUS COMPOSITES DESTRUCTION UNDER ELECTRON BEAM HIGH POWER IMPACT	1057
<i>B A Demidov, V P Efremov, Yu G Kalinin, E D Kazakov, A A Kurilo, M G Strizhakov</i>	
MOLECULAR DYNAMICS SIMULATION OF PRIMARY RADIATION DAMAGE IN FE–CR ALLOY	1063
<i>K P Zolnikov, A V Korchuganov, D S Kryzhevich</i>	
RECENT EXPERIMENTAL STUDY OF DD FUSION IN THE POTENTIAL WELL OF A VIRTUAL CATHODE AT NANOSECOND VACUUM DISCHARGE	1068
<i>A V Oginov, Yu K Kurilenkov, I S Samoylov, K V Shpakov, V P Tarakanov, V E Ostashev, A A Rodionov, V T Karpukhin</i>	
NEUTRON YIELD AND LAWSON CRITERION FOR PLASMA WITH INERTIAL ELECTROSTATIC CONFINEMENT	1078
<i>S Yu Gus'Kov, Yu K Kurilenkov</i>	
SIMULATION OF PROTON–BORON NUCLEAR BURNING IN THE POTENTIAL WELL OF VIRTUAL CATHODE AT NANOSECOND VACUUM DISCHARGE	1084
<i>Yu K Kurilenkov, V P Tarakanov, S Yu Gus'Kov</i>	
EXPERIMENTAL MODELING OF LIGHTNING STRIKE IN SOIL	1091
<i>V E Fortov, V P Smirnov, E E Son, Yu A Bykov, E V Grabovskiy, A N Gribov, G M Oleinik, A S Saveliev</i>	
DEVELOPMENT AND OPTIMIZATION OF A TWO-STAGE GASIFIER FOR HEAT AND POWER PRODUCTION	1097
<i>V V Kosov, V M Zaichenko</i>	
SCIENTIFIC BASES OF BIOMASS PROCESSING INTO BASIC COMPONENT OF AVIATION FUEL	1103
<i>V V Kachalov, V A Lavrenov, I I Lishchiner, O V Malova, A L Tarasov, V M Zaichenko</i>	
COMPARISON OF THERMAL CONVERSION METHODS OF DIFFERENT BIOMASS TYPES INTO GASEOUS FUEL	1109
<i>O M Larina, V A Sinelshchikov, G A Sytchev</i>	
ENERGY EFFICIENCY ANALYSIS OF REACTOR FOR TORREFACTION OF BIOMASS WITH DIRECT HEATING	1116
<i>J S Kuzmina, L B Director, A L Shevchenko, V M Zaichenko</i>	
CHALLENGES AND OPPORTUNITIES OF TORREFACTION TECHNOLOGY	1123
<i>V F Kosov, J S Kuzmina, G A Sytchev, V M Zaichenko</i>	
ENERGY PRODUCTION ESTIMATION FOR KOSH-AGACH GRID-TIE PHOTOVOLTAIC POWER PLANT FOR DIFFERENT PHOTOVOLTAIC MODULE TYPES	1129
<i>T S Gabderakhmanova, S V Kiseleva, S E Frid, A B Tarasenko</i>	

PHYSICS OF LOW TEMPERATURE PLASMA

THE INTERACTION OF LASER RADIATION WITH EXPLOSIVELY DRIVEN SHOCK WAVE COMPRESSED XE PLASMAS	1139
<i>Yu B Zaporozhets, V B Mintsev, V K Gryaznov, H Reinholz, G Röpke, V E Fortov</i>	
INFLUENCE OF OPTICAL NON-UNIFORMITY ON THE REFLECTANCE OF DENSE PLASMAS	1144
<i>G E Norman, I M Saitov</i>	
ION RECOMBINATION IN DENSE GASES	1152
<i>A V Lankin</i>	
EQUATION OF STATE OF A DENSE PLASMA: ANALYTICAL RESULTS ON THE BASIS OF QUANTUM PAIR INTERACTION POTENTIALS IN THE RANDOM PHASE APPROXIMATION	1157
<i>Zh A Moldabekov, T S Ramazanov, M T Gabdullin</i>	
EQUATION OF STATE OF DENSE HYDROGEN PLASMA	1162
<i>M T Gabdullin, T S Ramazanov, T N Ismagambetova, Zh Y Otarbay</i>	
MOMENTUM DISTRIBUTION FUNCTIONS OF STRONGLY CORRELATED SYSTEMS OF PARTICLES: WIGNER APPROACH AND PATH INTEGRALS	1168
<i>A S Larkin, V S Filinov, V E Fortov</i>	
DYNAMICAL EQUATIONS AND TRANSPORT COEFFICIENTS FOR THE METALS AT HIGH PULSE ELECTROMAGNETIC FIELDS	1179
<i>N B Volkov, E A Chingina, A P Yalovets</i>	
REFLECTING BOUNDARY CONDITIONS FOR CLASSICAL MOLECULAR DYNAMICS SIMULATIONS OF NONIDEAL PLASMAS	1191
<i>Ya S Lavrinenko, I V Morozov, I A Valuev</i>	
DEGENERATE BOSE GAS WITHOUT ANOMALOUS AVERAGES	1200
<i>V B Bobrov, S A Trigger, P P Schram</i>	
CURRENT-PRESSURE DEPENDENCIES OF DC MAGNETRON DISCHARGE IN INERT GASES	1214
<i>A O Serov, Yu A Mankelevich, A F Pal, A N Ryabinkin</i>	
STREAMER BRANCHING ON CLUSTERS OF SOLID PARTICLES IN AIR AND AIR BUBBLES IN LIQUIDS	1221
<i>N Yu Babaeva, D V Tereshonok, G V Naidis, B M Smirnov</i>	
INVESTIGATION OF SYNTHETIC JET MAGNETOHYDRODYNAMIC ACTUATOR	1227
<i>P N Kazanskiy, I A Moralev, A V Efimov, A A Firsov, R E Karmatskiy</i>	
ACTIVE FLOW CONTROL ON A NACA 23012 AIRFOIL MODEL BY MEANS OF MAGNETOHYDRODYNAMIC PLASMA ACTUATOR	1232
<i>P N Kazanskiy, I A Moralev, V A Bityurin, A V Efimov</i>	
PARTICLE IMAGE VELOCIMETRY ANALYSIS OF THE FLOW AROUND CIRCULAR CYLINDER INDUCED BY ARC DISCHARGE ROTATING IN MAGNETIC FIELD	1240
<i>D S Munhoz, V A Bityurin, A I Klimov, I A Moralev</i>	
EXPERIMENTAL AND THEORETICAL STUDY OF THE MICROWAVES TRANSMISSION THROUGH THE PLASMA STRUCTURES AND LAYERS IN A CONSTANT MAGNETIC FIELD	1250
<i>A N Bocharov, V A Bityurin, V G Brovkin, P V Vedenin, V P Petrovskiy, B A Balakirev, V N Korneev, A S Pashchina, O Yu Shkatov, A Yu Pervov</i>	
MAGNETO-PLASMA COMPRESSOR FOR RADIOPHYSICAL STUDY OF SUPERSONIC FLOWS AROUND BODIES	1255
<i>A N Bocharov, V A Bityurin, V G Brovkin, I Ch Mashek, P V Vedenin, B A Balakirev, V P Petrovskiy, A Yu Pervov, O Yu Shkatov</i>	
APPROACH TO SOLUTION OF COUPLED HEAT TRANSFER PROBLEM ON THE SURFACE OF HYPERSONIC VEHICLE OF ARBITRARY SHAPE	1260
<i>A N Bocharov, V A Bityurin, N N Golovin, N M Evstigneev, V P Petrovskiy, O I Ryabkov, I O Teplyakov, A A Shustov, Yu S Solomonov, V E Fortov</i>	
TRIPLE POINT OF "SHELF COULOMB" PLASMA MODEL CALCULATED USING HYBRID GIBBS ENSEMBLE TECHNIQUE	1269
<i>B V Zelener, B B Zelener, M A Butlitskiy</i>	
GAS-LIQUID PHASE TRANSITION IN MODIFIED PSEUDOPOTENTIAL AND "SHELF COULOMB" ULTRACOLD PLASMA MODELS	1274
<i>M A Butlitskiy, B B Zelener, B V Zelener</i>	
ON THE TEMPERATURE OF ANTIHYDROGEN FORMED IN MAGNETIC TRAP	1280
<i>A A Bobrov, S Y Bronin, E A Manykin, B B Zelener, B V Zelener</i>	
ON ELECTRON-PROTON ENERGY EXCHANGE IN STRONG MAGNETIC FIELD	1285
<i>B B Zelener, B V Zelener, E A Manykin, S Y Bronin, A A Bobrov</i>	

DIPOLE–DIPOLE INTERACTION BETWEEN RYDBERG ATOMS	1289
<i>L G D'Yachkov, B V Zelener, A B Klyarfeld, S Y Bronin</i>	
THERMODYNAMIC OF MIXTURES OF ULTRACOLD RYDBERG GASES WITH DIFFERENT LEVELS OF EXCITATION	1294
<i>B V Zelener, S Y Bronin, A B Klyarfeld</i>	
PREPARATION OF RYDBERG STATES IN ULTRACOLD LI-7 ATOMS BY USING COHERENT OR NON-COHERENT OPTICAL EXCITATION	1299
<i>E V Vilshanskaya, D A Murashkin, S A Saakyan, V A Sautenkov, B B Zelener</i>	
ENERGY INTERVALS BETWEEN RYDBERG STATES ND AND NF IN LITHIUM-7	1303
<i>S A Saakyan, V A Sautenkov, B B Zelener</i>	
MEASUREMENTS OF QUANTUM DEFECT IN RYDBERG D-STATES FOR LITHIUM ATOMS	1306
<i>D A Murashkin, S A Saakyan, V A Sautenkov, B B Zelener</i>	
NUMERICAL AND EXPERIMENTAL STUDY OF A WARMING UP EFFECT OF AN UNDEREXPANDED RAREFIED RF PLASMA JET OUTFLOWING INTO A FLOODED AREA	1309
<i>A Yu Shemakhin, V S Zheltukhin, A A Khubatkhuzin</i>	
STRUCTURE OF THE METALLIC FILMS DEPOSITED ON SMALL SPHERES TRAPPED IN THE RF MAGNETRON PLASMA	1316
<i>A V Filippov, A F Pal, A N Ryabinkin, A O Serov</i>	
INTERACTION IN EQUILIBRIUM PLASMAS OF CHARGED MACROPARTICLES LOCATED IN NODES OF CUBIC LATTICES	1325
<i>A V Filippov</i>	
DUSTY PLASMA AS A UNIQUE OBJECT OF PLASMA PHYSICS	1334
<i>G E Norman, A V Timofeev</i>	
ENERGY TRANSFER BETWEEN DEGREES OF FREEDOM OF A DUSTY PLASMA SYSTEM	1342
<i>V P Semyonov, A V Timofeev</i>	
SCREENING LENGTH IN DUSTY PLASMA CRYSTALS	1347
<i>V S Nikolaev, A V Timofeev</i>	
PROBLEM OF PHASE TRANSITIONS AND THERMODYNAMIC STABILITY IN COMPLEX (DUSTY, COLLOID ETC) PLASMAS	1353
<i>I A Martynova, I L Iosilevskiy</i>	
TRANSVERSE IONIZATION INSTABILITY OF THE ELONGATED DUST CLOUD IN THE GAS DISCHARGE UNIFORM POSITIVE COLUMN UNDER MICROGRAVITY CONDITIONS	1361
<i>A V Zobnin, A D Usachev, A M Lipaev, O F Petrov, V E Fortov, M Yu Pustynnik, H M Thomas, M A Fink, M H Thoma, G I Padalka</i>	
METEOROID IMPACTS AND DUST PARTICLES IN NEAR-SURFACE LUNAR EXOSPHERE	1368
<i>S I Popel, A P Golub', E A Lisin, Yu N Izvekova, B Atamaniuk, G G Dolnikov, A V Zakharov, L M Zelenyi</i>	
THERMAL FLUCTUATIONS OF THE PAIR-INTERACTION FORCES IN TWO-DIMENSIONAL FLUID YUKAWA SYSTEMS	1376
<i>O S Vaulina</i>	
NANOPARTICLE CONFINEMENT BY THE LINEAR PAUL TRAP	1380
<i>D S Lapitsky, V S Filinov, R A Syrovatka, V I Vladimirov, L M Vasilyak, V Ya Pecherkin, L V Deputatova</i>	
PARTICLE SEPARATION BY ALTERNATING ELECTRIC FIELDS OF QUADRUPOLE TYPE	1384
<i>D S Lapitsky</i>	
CHARGED PARTICLES CONFINEMENT CONDITION IN A MICROPARTICLE ELECTRODYNAMIC ION TRAP	1389
<i>R A Syrovatka, L V Deputatova, V S Filinov, D S Lapitsky, V Ya Pecherkin, L M Vasilyak, V I Vladimirov</i>	
MICROPARTICLE DYNAMICS IN COULOMB STRUCTURES IN LINEAR ELECTRODYNAMIC TRAPS WITH DIFFERENT NUMBERS OF ELECTRODES	1394
<i>D S Lapitsky, V S Filinov, R A Syrovatka, V I Vladimirov, L V Deputatova, L M Vasilyak, V Ya Pecherkin</i>	
FORMATION OF THE STRUCTURES FROM DUSTY CLUSTERS IN NEON DC DISCHARGE UNDER COOLING	1399
<i>D N Polyakov, V V Shumova, L M Vasilyak</i>	
DIRECT CURRENT DISCHARGE WITH MICROPARTICLES: THE ELECTRICAL CHARACTERISTICS AND THE PLASMA TRAP PARAMETERS	1406
<i>V V Shumova, D N Polyakov, L M Vasilyak</i>	
SPARK DISCHARGE IN CONDUCTIVE LIQUID WITH MICROBUBBLES	1412
<i>S P Vetchinin, L M Vasilyak, V Ya Pecherkin, V A Panov, E E Son</i>	
ANALYTICAL SOLUTIONS OF THE PRE-BREAKDOWN ELECTRO-HYDRODYNAMIC EQUATIONS AND NUMERICAL SIMULATIONS OF LIQUID INSULATOR FLOWS	1418
<i>M S Apfelbaum, A N Doludenko</i>	
HIGH-PRESSURE IGNITION PLASMA TORCH FOR AEROSPACE TESTING FACILITIES	1428
<i>D I Yusupov, Yu M Kulikov, M Kh Gadzhiev, A S Tyufiyaev, E E Son</i>	

MEASURING OF HIGH CURRENT CHANNEL PARAMETERS IN HIGH PRESSURE GAS BY COMBINED USING OF MAGNETIC PROBE AND HIGH SPEED STREAK PHOTOGRAPHY	1438
<i>A A Bogomaz, M E Pinchuk, A V Budin, A G Leks, V V Leont'Ev, A A Pozubenkov, N K Kurakina</i>	
ENERGY DEPOSITION IN DISCHARGE CHAMBER OF LIGHTNING PROTECTION MULTICHAMBER SYSTEM.....	1442
<i>M E Pinchuk, A V Budin, I I Kunkova, A A Bogomaz, A D Sivaev, A N Chusov, R I Zaynalov</i>	
HIGH CURRENT ELECTRIC ARCS ABOVE THE IN-GA-SN EUTECTIC ALLOY.....	1447
<i>I B Klementyeva, M E Pinchuk</i>	
PREPARATION AND PROPERTIES OF A COMPOSITE SIC WITH ADDITION OF MULTI-WALLED CARBON NANOTUBES SYNTHESIZED IN THE PLASMA JET	1452
<i>M B Shavelkina, R Kh Amirov, I Yu Kelina, N A Golubeva</i>	
DIFFUSE VACUUM ARC WITH CERIUM OXIDE HOT CATHODE	1459
<i>R Kh Amirov, N A Vorona, A V Gavrikov, G D Liziakin, V P Polistchook, I S Samoylov, V P Smirnov, R A Usmanov, I M Yartsev, A S Ivanov</i>	
THE FORMATION OF A CRATER ON THE SURFACE OF THE CATHODE IN THE EXPLOSION OF MICRO TIP.....	1465
<i>E V Oreshkin, S A Barendolts, G A Mesyats, V I Oreshkin, K V Khishchenko</i>	
MODIFICATION OF THE COMPOSITE MULTI-LAYER OXIDE CERAMIC COATING ON METEOROID SHIELDING ELEMENT BY COMPRESSION PLASMA FLOW	1470
<i>V M Astashinski, P P Khramtsov, U M Hryshchanka, M Yu Chernik, V A Vasetskij, I A Shikh, M V Doroshko, A I Makhnach</i>	
THE INVESTIGATION OF HETEROGENEOUS FLOW GENERATED BY THE DIRECT CURRENT PLASMA TORCH	1477
<i>N L Evmenchikov, O G Penyzkov, I N Shatan</i>	
INFLUENCE OF SURFACE FINISH ON THE PLASMA FORMATION AT THE SKIN EXPLOSION.....	1484
<i>I M Datsko, S A Chaikovskiy, N A Labetskaya, D V Rybka, V I Oreshkin, K V Khishchenko</i>	
THE EFFECT OF APPLIED VOLTAGE FREQUENCY ON SURFACE DIELECTRIC BARRIER DISCHARGE ENERGY	1488
<i>A V Lazukin, S V Gundareva, S A Krivov, A M Nikitin, D I Kavyrshin, S D Fedorovich</i>	
THE STUDY OF LEAD VAPOR IONIZATION IN DISCHARGE WITH A HOT CATHODE AND EFFICIENCY OF ITS DEPOSITION ON THE SUBSTRATES APPLIED FOR PLASMA SEPARATION METHOD.....	1494
<i>N N Antonov, A A Samokhin, S N Zhabin, A V Gavrikov, V P Smirnov</i>	
ION MASS SEPARATION IN CROSSED ELECTRIC AND MAGNETIC FIELDS AS A PART OF THE CONCEPT OF SPENT NUCLEAR FUEL PLASMA SEPARATION	1508
<i>A V Gavrikov, V S Sidorov, V P Smirnov, V P Tarakanov</i>	
CURRENT EVOLUTION AND PLASMA DENSITY SPACE DISTRIBUTION IN THE REFLEX DISCHARGE WITH RING CATHODES	1515
<i>A A Samokhin, G D Liziakin, A V Gavrikov, R A Usmanov, V P Smirnov</i>	
SPECTRAL MEASUREMENTS OF ELECTRON TEMPERATURE IN NONEQUILIBRIUM HIGHLY IONIZED HE PLASMA	1523
<i>O V Korshunov, V F Chinnov, D I Kavyrshin, A G Ageev</i>	
STUDY OF SPATIAL DISTRIBUTIONS OF HIGHLY IONIZED NONEQUILIBRIUM HELIUM PLASMA AT ATMOSPHERIC PRESSURES	1532
<i>V F Chinnov, D I Kavyrshin, A G Ageev, O V Korshunov, M A Sargsyan, A V Efimov</i>	
FEATURES OF SPATIAL DISTRIBUTION OF THE PARAMETERS ON THE INITIAL SECTION OF A SUPERSONIC PLASMA JET, CREATED BY PULSED DISCHARGE IN A CAPILLARY WITH ABLATIVE WALL.....	1542
<i>A G Ageev, V A Bityurin, V F Chinnov, A V Efimov, A S Pashchina</i>	
THE EFFECT OF GAS BUBBLES ON ELECTRICAL BREAKDOWN IN TRANSFORMER OIL.....	1548
<i>A S Tyuftyaev, M Kh Gadzhiev, M A Sargsyan, P L Akimov, N A Demirov</i>	
GENERATOR OF CHEMICALLY ACTIVE LOW-TEMPERATURE PLASMA.....	1554
<i>A S Tyuftyaev, M Kh Gadzhiev, M A Sargsyan, N A Demirov, N O Spector</i>	
RESEARCH METHODS OF PLASMA STREAM INTERACTION WITH HEAT-RESISTANT MATERIALS.....	1558
<i>A S Tyuftyaev, M Kh Gadzhiev, M A Sargsyan, V F Chinnov, N A Demirov, D I Kavyrshin, A G Ageev, M A Khromov</i>	
Author Index	