

RUSSIAN ACADEMY OF SCIENCES
“ROSATOM” STATE NUCLEAR ENERGY CORPORATION
MOSCOW AVIATION INSTITUTE
MOSCOW STATE UNIVERSITY
ST.-PETERSBURG POLYTECHNICAL UNIVERSITY
NATIONAL RESEARCH NUCLEAR UNIVERSITY “MEPHI”
P.G. DEMIDOV YAROSLAVL STATE UNIVERSITY
YAROSLAVL BRANCH OF INSTITUTE OF PHYSICS AND TECHNOLOGY RAS
RUSSIAN STATE TECHNOLOGICAL UNIVERSITY (MATI)
INSTITUTE OF MICROELECTRONICS TECHNOLOGY AND HIGH PURITY MATERIALS RAS

PROGRAM

OF THE XXI INTERNATIONAL CONFERENCE ON

ION - SURFACE INTERACTIONS

(ISI-2013)

22-26 August 2013

Yaroslavl

Moscow 2013

ORGANIZING COMMITTEE

- Yu.A.Ryzhov – chairperson, academician of the RAS
V.E.Yurasova – vice chairperson, Moscow State University
I.I.Shkarban – vice chairperson, Moscow Aviation Institute
A.I.Titov – vice chairperson, St.-Petersburg Polytechnical University
V.A.Kurnaev – National Research Nuclear University “MEPHI”
A.F.Vyatkin – vice chairperson, Institute of Microelectronics Technology of RAS
A.A.Semyonov – scientific secretary, Moscow Aviation Institute

Members of organizing committee:

- V.I.Bachurin – Yaroslavl State University
L.B.Begrambekov – National Research Nuclear University “MEPHI”
A.M.Borisov – Russian State Technological University (MATI)
J.S.Colligon – Manchester Metropolitan University (United Kingdom)
I.K.Gainullin – Moscow State University
Yu.M.Gasparyan – National Research Nuclear University “MEPHI”
N.N.Gerasimenko – Moscow Institute of Electronic Techniques
P.A.Karaseov – St.-Petersburg Polytechnical University
G.V.Kornich – Zaporozhye National Technical University (Ukraine)
L.M.Kovrizhnikh – General Physics Institute of the RAS
V.A.Kurnaev – National Research Nuclear University “MEPHI”
L.N.Lesnevsky – Moscow Aviation Institute
A.A.Pisarev – National Research Nuclear University “MEPHI”
A.S.Rudy – Yaroslavl branch of Institute of Physics and Technology RAS
A.I.Rusakov – Yaroslavl State University
A.F.Shcherbak – National Research Nuclear University “MEPHI”
E.Yu.Zykova – Moscow State University

PROGRAMME COMMITTEE

V.E.Yurasova – chairperson, Moscow State University, Russia

Members of programme committee:

A.G.Borisov – University of Paris-Sud, France
V.T.Gritsyna – Kharkov National University, Ukraine
S.O.Kucheyev – Lawrence Livermore National Laboratory, USA
Yu.V.Martynenko – Scientific Center “Kurchatov Institute”, Russia
E.S.Mashkova – Institute of Nuclear Physics of MSU, Russia
T.Michely – University of Koeln, Germany
T.D.Radzhabov – University for Information Technology, Uzbekistan
D.I.Tetel'baum – University of Nizhni Novgorod, Russia
Sam Zhang – Nanyang Technological University, Singapore

INTERNATIONAL ADVISORY BOARD

A.I.Bazhin (Ukraine), R Baragiola (USA), J.Burgdorfer (Austria),
V.Esaulov (France), J.-P.Gauyacq (France), R.Hoekstra (The Netherlands),
F.F.Komarov (Belorussia), U.Kh.Rasulev (Uzbekistan), P.Sigmund (Denmark),
A.I.Titov (Russia), R.Webb (UK), J.Williams (Australia),
H.Winter (Germany), Y.Yamazaki (Japan)

LOCAL ORGANISING COMMITTEE

Chairs: A.I.Rusakov, A.S.Rudy

Vice chair: V.I.Bachurin

Members of local organizing committee:

I.I.Amirov, T.V.Voronina, A.V.Egorova, A.A.Ermolenko, S.A.Kashchenko,
I.A.Kuznetsova, A.L.Mazaletskaya, A.V.Metlitskaya, O.S.Trushin

SPONSORS

Russian Foundation for Basic Research
«Dynasty» Foundation
Publishing house “Elsevier”
CJUSI «Diagnostics of micro- and nanostructures»
Yaroslavl factory “Krasnii Mayak”
Historical and Cultural Complex "Viatskoe"

SCIENTIFIC SECTIONS

1. Sputtering, surface structure, desorption.
2. Ion scattering and propagation.
3. Emission of ions, electrons, photons and X-rays under ion-surface interaction.
4. Ion implantation and surface modification.
5. Ion-assisted processes in thin films and nanostructures.
6. Plasma-surface interaction - physics and technology.

Oral reports will be held in the conference hall of Yaroslavl State University from 22 to 26 August from 9⁰⁰ to 18⁰⁰. Invited talks will be allowed 25 minutes and additional 5 minutes for discussion. Oral contributions will be 10 minutes and additional 5 minutes for discussion.

The working time of poster sessions is from 18⁰⁰ to 20⁰⁰. Poster reports should be put on board (60 cm x 80 cm) in the hall of the third floor at Yaroslavl State University in the evening *before* the working day of the respective poster section. Poster stands will be marked with numbers corresponding to the numbers of the poster reports in this program.

Poster schedule:

22 August – sections 1 and 2;

23 August – sections 3 and 4;

25 August – sections 5 and 6.

From 18⁰⁰ to 20⁰⁰ some discussions may be organized in the conference hall. The topics for discussions will be identified at the beginning of the conference.

8⁰⁰-8⁴⁵ – Breakfast, 10⁴⁵-11⁰⁰ – Coffee break, 13⁰⁰-14⁰⁰ – Lunch,
16⁰⁰-16¹⁵ – Tea break, 20⁰⁰-20³⁰ – Dinner.

22 August, Thursday

PLENARY SESSION

Chairs: A.I. Rusakov, V.A. Kurnaev

9⁰⁰-9¹⁰ **OPENING OF THE CONFERENCE**

9¹⁵-9⁴⁰ **Helmut Winter** (Humboldt University, Germany)
Fully coherent scattering of fast atoms from surfaces.

9⁴⁵-10¹⁰ **John Colligon** (Manchester Metropolitan University, UK)
MAX phase coatings: production, properties and applications.

10¹⁵-10⁴⁰ **Katharina Lorenz** (Universidade Tecnica de Lisboa, Portugal)
Ion implantation and rare earth doping of group-III nitride
semiconductors.

10⁴⁵-11⁰⁰ *Coffee break*

Chair: H. Winter

11²⁰-11⁴⁵ **Johan Malherbe** (Pretoria University, South Africa)
Analysis of ion bombarded carbons.

11⁵⁰-12¹⁵ **Vladimir Popov** (Rzhanov Institute of Semiconductor Physics, Russia)
Structure and properties of the ultrathin single crystal diamond
membranes produced by ion implantation and lift-off technique.

12²⁰-12⁴⁵ **Akio Itoh** (Kyoto University, Japan)
Collision experiments for biomolecules and liquid targets.

Photography of conference participants on the bank of Volga River

13²⁰-14⁰⁰ *Lunch*

INVITED TALKS AND ORAL CONTRIBUTIONS

22 August, Thursday

Section 1. Sputtering, surface structure, desorption

Chairs: H. Winter, O.S. Trushin

- 14³⁰-14⁵⁵ **A. Visikovskiy** (Kyushu University, Japan)
Skimming-trajectory effect for energy losses of medium energy He ions passing along major crystal axes of KI(001) and RbI(001).
- 15⁰⁰-15²⁵ **Valeriy Smirnov** (JSC "Wostec", Russia)
Wave-ordered structure induced by nitrogen ion beam on silicon surface: a self-forming hard nanomask and its applications.
- 15³⁰-15⁵⁵ **Bartłomiej Czerwinski** (Universite Catholique de Louvain, Belgium)
Cluster-induced sputtering and chemistry in carbon-based materials: a microscopic view.
- 16⁰⁰-16¹⁵ *Tea break*
- 16¹⁵-16⁴⁰ **Christian Linsmeier** (Forschungszentrum Julich, Germany)
Depth-resolved quantitative XPS analysis of oxygen ion interactions with a beryllium-tungsten alloy.
- 22 16⁴⁵-17¹⁰ **Jianming Xue** (Peking University, China)
Irradiation of nanostructured material with energetic ions
- 17¹⁵-17²⁵ **K.Dobes, M.Köppen, M.Oberkofler, C.P.Lungu, C.Porosnicu, T.Hösch, Ch.Linsmeier, F.Aumayr.** Studies of beryllium surfaces under the impact of nitrogen and deuterium.
- 17³⁰-17⁴⁰ **Ana L.F.deBarros, Enio F. da Silveira and Karl Wien.** Organic ion species sputtered from contaminated water ice by 1.5 MeV N²⁺ ions.
- 17⁴⁵-17⁵⁵ **Yu.V.Martynenko, S.N.Korshunov, I.D.Skorlupkin.** Ion sputtering of metals with simultaneous electron irradiation.
- 18⁰⁰-20⁰⁰ *POSTERS, 1 and 2 sections*
- 20⁰⁰-20³⁰ *Dinner*

23August.Friday

Section 2. Ion scattering and propagation

Chairs: V.N.Popok,F.Djurabekova

- 9⁰⁰-9²⁵ **Daniel Primetzhofer** (Uppsala University, Sweden)
Electronic excitations in solids studied by time-of-flight medium-energy ion scattering.
- 9³⁰-9⁵⁵ **Dominik Goebel** (Johannes Kepler Universitaet Linz, Austria)
Quantitative analysis of nanometer layers by Low-Energy Ion Scattering: experiment and simulation.
- 10⁰⁰-10²⁵ **Hidde Brongersma** (Calipso B.V., The Netherlands)
High-resolution in-depth analysis with Low-Energy Ion Scattering: experiments and simulation.
- 10³⁰-10⁵⁵ **Oscar Grizzi** (Instituto Balseiro, CONICET, Argentina)
Direct recoil spectroscopy of atoms and self-assembled monolayers at surfaces.
- 11⁰⁰-11¹⁵ *Coffee break*
- 11¹⁵-11⁴⁰ **Tokihiro Ikeda** (RIKEN, Japan)
Application of ion microbeams through tapered glass capillary optics.
- 11⁴⁵-11⁵⁵ **G.P.Pokhil, V.V.Cherdyntsev.** Model of the dynamics of ion propagation through dielectric capillaries.
- 12⁰⁰-12¹⁵ **V.K.Egorov, E.V.Egorov, G.V.Sharonov.** Ion beam study of the synthetic monocrystal diamond substrates.
V.K.Egorov, E.V.Egorov. Determination of the film coatings porosity degree by Rutherford backscattering method of helium ions.
- 12²⁰-12³⁵ **P.Yu.Babenko, A.N.Zinoviev, A.P.Shergin.** Simulation of multiple scattering in argon ion collisions with an aluminum target at glancing angles of 5-10⁰.
P.Yu.Babenko, A.N.Zinoviev, A.P.Shergin. Universal dependence in formation of L_{2,3} vacancies resulting from keV ion collisions with solids.
- 12⁴⁰-12⁵⁵ **U.Kutliev, X.Matyakubov, M.Saidova.** Peculiarities of trajectories of ions scattered from A³B⁵ semiconductor surfaces.
U.Kutliev, M.Kurbanov, X.Matyakubov. Investigation of ion scattering from the double component single crystal surfaces with atomic steps.
- 13⁰⁰-14⁰⁰ *Lunch*

23 August, Friday

Section 3. Emission of ions, electrons, photons and X-rays under ion-surface interaction

Chairs: A.S.Rudy, V.T.Gritsyna

- 14⁰⁰-14²⁵ **Pierfrancesco Riccardi** (University of Calabria, Italy)
High energy excited states of graphene on Ni(111) probed by secondary electrons.
- 14³⁰-14⁵⁵ **Zoran Miskovic** (University of Waterloo, Canada)
Dynamic polarization of carbon nano-structures by charged particles
- 15⁰⁰-15²⁵ **Russell Gwilliam** (University of Surrey, UK)
Ion beam processing for the production of Si based optical emitters.
- 15³⁰-15⁵⁵ **Arkady Krasheninnikov** (University of Helsinki, Finland)
Production of defects in graphene and inorganic 2D materials under electron and ion irradiation.
- 16⁰⁰-16¹⁵ *Tea break*
- 16²⁰-16³⁰ **N.N.Andrianova, A.M.Borisov, Yu.S.Virgiliev, E.S.Mashkova, V.S.Sevostyanova.** The effects of deep ion-induced modification of highly oriented pyrolytic graphite.
- 16³⁵-16⁴⁵ **V.V.Khvostov, I.K.Khrustachev, K.F.Minnebaev, E.Yu.Zykova, V.E.Yurasova.** On energy spectra of secondary ions emitted from graphite and silicon single crystals.
- 16⁵⁰-17⁰⁰ **V.V.Bobkov, I.A.Afanas'eva, V.V.Gritsyna, V.T.Gritsyna, D.A.Ryzhov, D.I.Shevchenko.** Influence of type of the bonds in compounds on the mechanisms of sputtered excited particles formation under ion bombardment.
- 17⁰⁵-17¹⁵ **M.Ya.Amusia and V.I.Matveev.** Polarization bremsstrahlung in collisions of fast ions with multiatomic targets.
- 17²⁰-17³⁰ **G.M.Filippov.**
Mixed states of quantum particles and coherence criterion.
- 17³⁵-17⁴⁵ **P.Konarski, M.Miśnik, L.Dobrzański, J.Kozłowski.** Annealed Ni/Ti/SiC structure analysed by SIMS and GDMS.
- 17⁵⁰-18⁰⁰ **M.V.Sorokin, A.Russakova, A.Dauletbekova, and K.Schwartz.**
Accumulation of color centers in lithium fluoride under irradiation with swift ions: absorption and luminescence studies.
- 18³⁰-20⁰⁰ ***POSTERS, 3 and 4 sections***
- 20⁰⁰-20³⁰ *Dinner*

24August.Saturday

Section 4. Ion implantation and surface modification

Chairs: A.I.Titov, A.Krashennikov

- 9⁰⁰-9²⁵ **Elke Wendler** (Friedrich Schiller University of Jena, Germany)
Damage formation in ion implanted semiconductors at 15 K and its correlation with primary energy deposition and general material properties.
- 9³⁰-9⁵⁵ **Vladimir Popok** (Aalborg University, Denmark)
Cluster Ion Implantation and Radiation Damage in Graphite and Diamond.
- 10⁰⁰-10²⁵ **Platon Karaseov** (St. Petersburg State Polytechnic University, Russia)
Influence of collision cascade density on damage formation in semiconductors.
- 10³⁰-10⁴⁰ **I.M.Mysiura, I.O.Girka, V.T.Gritsyna and Yu.G.Kazarinov.**
Ion beam modification of the nanometer metal films deposited on dielectric substrate.
- 10⁴⁵-11⁰⁰ *Coffee break*
- 11⁰⁵-11³⁰ **Lourdes Pelaz** (Universidad de Valladolid, Spain)
Modeling of collision cascades in semiconductors: damage generation and annealing.
- 11³⁵-12⁰⁰ **Nikolay Sobolev** (Ioffe Physical Technical Institute, Russia)
Defect engineering in implantation technology of silicon light emitting structures.
- 12⁰⁵-12³⁰ **Alexey Mikhaylov** (Lobachevsky State University of Nizhny Novgorod, Russia)
Ion-beam engineering of silicon-based nanomaterials.
- 12³⁵-13⁰⁰ **Alexander Azarov** (University of Oslo, Norway)
Radiation damage formation and annealing in ZnO.
- 13⁰⁵-13³⁰ **Bhupendra Dev** (Indian Association for the Cultivation of Science, India)
Ion irradiation and implantation effects in multilayer and multistripe systems.
- 13³⁵-13⁴⁵ **I.Yu.Grubova, M.A.Surmeneva, A.A.Ivanova, V.V.Shugurov, N.N.Koval, I.I.Selezneva, R.A.Surmenev.** The effect of the ultra-high-molecular-weight polyethylene surface treatment by low energy plasma on its structure, physicochemical and biological properties.
- 13⁵⁰-14⁵⁰ *Lunch*
- 15²⁰ *Excursions*
- 20⁰⁰-22⁰⁰ *Dinner*

25August.Sunday

Section 4. Ion implantation and surface modification

Chairs: E.Wendler, P.Karaseov

- 9⁰⁰-9²⁵ **Flyura Djurabekova** (University of Helsinki, Finland)
Processing of insulators with and without nanoparticles by swift heavy ions.
- 9³⁰-9⁵⁵ **K.Nakajima** (Kyoto University, Japan)
Surface structures of ionic liquids using high-resolution RBS.
- 10⁰⁰-10¹⁵ **S.Rubanov, B.A.Fairchild, A.Suvorova, P.Olivero and S.Prawer.**
Conventional and analytical electron microscopy study of phase transformation in implanted diamond layers.
S.Rubanov. Structural damage in diamond after FIB milling.
- 10²⁰-10³⁰ **J.Polvi and K.Nordlund.** Self-recoil irradiation effects in crystalline polyethylene.
- 10³⁵-10⁴⁵ **R.Ritter, R.A.Wilhelm, E.Gruber, R.Heller, M.Stöger-Pollach, A.Mücklich, U.Werner, H.Vieker, A.Beyer, S.Facsko, A.Gölzhäuser, F.Aumayr.** Slow highly charged ions as a tool for the fabrication of nanopores in 1 nm thick carbon nanomembranes.
- 10⁵⁰-11⁰⁵ *Coffee break*
- 11¹⁰-11³⁵ **Nikolai Sobolev** (Universidade de Aveiro, Portugal)
Radiation effects in quantum-size III-V semiconductor structures.
- 11⁴⁰-11⁵⁰ **D.I.Tetelbaum, E.V.Kuril'chik, G.P.Pokhil, V.L.Levshunova.** Long-range effect: the role of electronic processes in subsurface layers and dislocations in bulk of solids.
- 11⁵⁵-12⁰⁵ **Yu.V.Martynenko, S.N.Korshunov, N.E.Belova, I.D.Skorlupkin.** New effects at ion implantation with simultaneous electron irradiation.
- 12¹⁰-12²⁰ **S.A.Krat, B.A.Bernt, Yu.M.Gasparyan, M.S.Zibrov, A.A.Pisarev.**
The setup for study of deuterium and lithium codeposition in magnetron discharge.
- 12²⁵-12³⁵ **F.F.Komarov, L.A.Vlasukova, O.V.Milchanin, M.Makhavikou, I.Parkhomenko, E.Wendler, W.Wesch, A.Mudryi.** Structural and luminescent properties of Sn-doped silicon dioxide.
- 12⁴⁰-12⁴⁵ **S.G.Cherkova, G.A.Kachurin, V.A.Volodin, V.A.Skuratov, A.G.Cherkov, S.S.Kosolobov, G.N.Kamaev, A.H.Antonenko.** Effect of swift heavy ions on the alternating nanolayers of Si and SiO₂.
- 12⁵⁰-13⁰⁰ **R.A.Andrievski.** Interaction of ion and neutron radiation with nanomaterials.
- 13⁰⁵-14⁰⁰ *Lunch*

25 August, Sunday

Section 5. Ion-assisted processes in thin films and nanostructures

Chairs: J.S.Colligon, Yu.M.Gasparyan

- 14⁰⁰-14²⁵ **Bernd Rauschenbach** (Leibniz Institute of Surface Modification, Germany)
Ion Beam Sputtering Induced Nano-sculptured Thin Films
- 14³⁰-14⁵⁵ **Thomas Michely** (University of Cologne, Germany)
Fluence, temperature and impurity dependence of ion beam induced pattern formation on Si(001).
- 15⁰⁰-15²⁵ **Robert Kolasinski** (Sandia National Laboratories, USA)
Low energy ion scattering as a probe of the atomic-scale behavior of hydrogen on surfaces.
- 15³⁰-15⁵⁵
- 16⁰⁰-16¹⁵ *Tea break*
- 16²⁰-16³⁰ **Yu.M.Gasparyan, A.A.Mednikov, V.S.Efimov, A.A.Pisarev, O.V.Ogorodnikova, K.Sugiyama, I.Čadež and Dr.S.Markelj.**
Deuterium retention in self damaged tungsten after atomic and plasma exposure.
- 16³⁵-16⁴⁵ **L.Repetto, B.Šetina Batič, G.Firpo and U.Valbusa.**
Characteristic fluences in ion induced dewetting of thin solid films.
- 16⁵⁰-17⁰⁰ **L.Kh.Antonova, G.N.Mikhailova, A.V.Troitskii, A.Yu.Didyk, V.A.Malginov, T.I.Demikhov, E.I.Suvorova.**
Effect of radiation defects induced by ion irradiation on composite HTSC tapes.
- 17⁰⁵-17¹⁵ **O.S.Trushin, T.Ala-Nissila, S.C.Ying, and E.Granato.**
Surface alloying during energetic deposition in Cu/Ni(100).
- 17²⁰-17³⁰ **A.Litnovsky, M.Hellwig, M.Komm and D.Matveev.**
Ion loads and impurity deposition on tungsten plasma-facing components in fusion devices.
- 17³⁵-17⁴⁵ **C.Grisolia, B.Rousseau, A.El.Kharbachi, L.Marchetti, J.Chene, V.Malard, A.Semerok, L.Mercadier, J.Herman, F.Gensdarmes, A.Royette, S.Peillon, D.Vreland, L.Begrambekov.**
Plasma wall interactions in TOKAMAK: their consequences on safety issues and possible techniques in order to fulfill a safe operation.
- 17⁵⁰-18⁰⁰ **B.G.Atabaev, V.N.Giryanskiy, R.Djabbarganov, A.P.Kovarskiy, D.Yu.Kazancev, D.A.Nikolaev.** The negative ion cluster sputtering of gallium nitride bombarded by cesium ions.
- 18⁰⁵-20⁰⁰ *POSTERS, 5 and 6 sections*
- 20⁰⁵-21³⁰ *Dinner, banquet*

26 August, Monday

Section 6. Plasma-surface interaction - physics and technology

Chair V.A.Kurnaev

- 9⁰⁰-9²⁵ **Guosong Wu** (City University of Hong Kong, Hong Kong)
Ion Beam and Plasma Processing of Biomaterials
- 9³⁰-9⁵⁵ **Daniel Sanchez-Portal** (Centro de Fisica de Materiales CSIC-UPV/EHU, Spain)
Energy loss in solids and nanostructures from TDDFT simulations.
- 10⁰⁰-10¹⁰ **L.B.Begrambekov, A.M.Zakharov, A.S.Kaplevsky, P.A.Shigin.**
Application of layer-to-layer sputtering and TDS analysis for investigation of hydrogen isotope balance in C:H films irradiated by deuterium plasma.
- 10¹⁵-10²⁵ **A.Ya.Levvi, V.M.Astashynski, M.Yu.Zotova, N.N.Cherenda, V.V.Uglov, A.P.Yalovets.** Formation of metal target surface relief during the action of compression plasma flows.
- 10³⁰-10⁴⁰ **A.Kirschner, P.Wienhold, A.Kreter, D.Borodin, D.Matveev, S.Brezinsek, V.Philipps and the TEXTOR team.**
Enhanced erosion of deposited particles at plasma-wetted areas in fusion experiments.
- 10⁴⁵-11⁰⁰ *Coffee break*
- 11⁰⁵-11¹⁵ **E.Marenkov, S.Krasheninnikov, R.Smirnov, A.A.Pisarev.**
On hydrogen transport in media with a continuous distribution of traps over binding energy.
- 11²⁰-11³⁰ **A.A.Novoselov, V.Ya.Bajankin.**
The long-range changes of the chemical composition and defect structure of irradiated rolled Cu-Ni foils.
- 11³⁵-11⁴⁵ **I.Sh.Abdullin, V.S.Zheltukhin.** About the mechanism of volume processing of the capillary and porous materials by low pressure RF plasma.
- 11⁵⁰-12⁰⁰ **P.Trokhimchuk, M.Makoviychuk, I.Dmytruk.**
The problem of the creation and modeling of laser-induced transformations in relaxed optics.

Closing of the conference

- 12⁰⁵-12⁵⁰ **Conference discussion**
- 12⁵⁵-13⁰⁰ **Summary**
- 13⁰⁵-14⁰⁰ *Lunch*
- 15⁰⁰ and later **Departure of participants from Yaroslavl**

POSTER REPORTS

22 August, Thursday

Section 1. Sputtering, surface structure, desorption

- 1.1. **V.K.Abgaryan, R.Ahmetzhanov, H.W.Loeb, V.A.Obukhov, M.V.Cherkasova.** Erosion modeling of the accelerated electrode of an ion engine grid system.
- 1.2. **K.K.Abgaryan, D.I.Bazhanov, I.V.Mutigullin.** Computer modeling of process of sapphire (0001) surface nitridation.
- 1.3. **N.N.Andrianova, A.M.Borisov, Yu.S.Virgiliev. E.S.Mashkova, D.V.Petrov.** Ion-beam erosion of carbon fiber composites.
- 1.4. **N.N.Andrianova, A.M.Borisov, E.S.Mashkova, D.V.Petrov, E.A.Pitirimova.** Structure and morphology modification of glassy carbon under high-fluence ion irradiation.
- 1.5. **V.I.Bachurin, S.E.Birkgan.** The simulation of two step ion polishing of the silicon surface.
- 1.6. **S.E.Birkgan.** The simulations of formation of wave-like structures under ion bombardment of solid surface.
- 1.7. **G.A.Bleykher, V.P.Krivobokov.** Solid surface erosion under the action of high-power pulsed ion beams.
- 1.8. **V.B.Bondarenko, A.V.Filimonov.** Inhomogeneities of electrostatic potential on the semiconductor surface as ions self-organizing effect.
- 1.9. **V.I.Gorbenko.** Ab initio study of atoms interacting with graphene by atomic-force probe technique.
- 1.10. **E.S.Gorlachev, I.I.Amirov, S.P.Zimin, V.V.Naumov, G.A.Dubov, V.F.Gremenok, I.N.Tsyrelchuk.** Properties of plasma sputtering of polycrystalline $Pb_{1-x}Sn_xS$ films.
- 1.11. **S.A.Denisov, Yu.N.Drozdo, S.A.Matveev, V.Yu.Chalkov, M.V.Stepikhova, M.V.Shaleev, D.V.Shengurov, V.G.Shengurov.** Morphology, microstructure and photoluminescence of epitaxial Si and SiGe layers, grown with exert a negative potential to substrate.
- 1.12. **Yu.A.Ermakov, A.E.Ieshkin, D.V.Petrov, V.S.Chernysh.** Gas cluster ions accelerator: the first experiments.
- 1.13. **O.A.Yermolenko, G.V.Kornich.** Molecular dynamics study of low-energy noble gas ions interaction with metal clusters on polyethylene.
- 1.14. **A.A.Zalutskaya, A.V.Prokaznikov.** Different colors of nanostructured silicon surfaces by plasma etching.
- 1.15. **V.I.Keeprich, G.V.Kornich, A.I.Bazhin, S.V.Chertopalov.** Mathematical simulation of the film deposition from composite atom-cluster beam.
- 1.16. **E.S.Kiselyova, N.N.Nikitenkov, M.E.Konishchev, O.S.Kuzmin, A.N.Nikitenkov, A.A.Pustovalova, N.C.Morozova, P.N.Bychkov, V.F.Pichugin.** The structure, elemental and phase composition of the coating of titanium oxynitride deposited by reactive magnetron sputtering.

- 1.17. **V.S.Kovivchak**, **T.V.Panova**, **K.A.Michailov**, **E.V.Knayzev**. Crater formation on surface of copper alloys under high power ion beam irradiation.
- 1.18. **V.S.Kovivchak**, **T.V.Panova**, **O.V.Krivozubov**, **N.A.Davletkildeev**, **E.V.Knyzev**. Influence intrinsic oxide on formation microstructures on surface silicon under high power ion beam irradiation.
- 1.19. **F.F.Komarov**, **M.V.Greben**, **L.A.Vlasukova**, **O.V.Milchanin**, **A.V.Mudryi**. Structure and optical properties of Si and SiO₂/Si system with A³B⁵ semiconductor nanocrystals formed by ion implantation.
- 1.20. **D.D.Korshunova**, **N.P.Pron**, **S.A.Krivelevich**, **V.I.Bachurin**. Controlling of phase formation in the double metal systems using ion bombardment.
- 1.21. **A.N.Kupriyanov**, **O.S.Trushin**, **I.I.Amirov**. Molecular dynamic modeling of ion-plasma sputtering of nanopatterning cuprum surface.
- 1.22. **L.N.Lesnevskiy**, **Yu.A.Ryzhov**, **A.A.Semenov**, **A.E.Troshin**, **I.I.Shkarban**. The sputtering of plasma deposited coatings based on the ceramics and intermetallides.
- 1.23. **S.V.Madeev**, **S.A.Khartov**. The model of carbon sputtering-deposition processes in the gap between screen and acceleration grids of ion thruster.
- 1.24. **A.D.Mokrushin**, **E.V.Egorov**, **V.P.Andrejchuk**, **L.A.Pesin**. Analysis of fluorine contained polymers by usage of ion and x-ray beams.
- 1.25. **O.Yu.Nishchak**, **N.F.Savchenko**, **O.A.Streletsky**, **V.V.Khvostov**. Plasma treatment effects on adsorption properties of amorphous linear-chain carbon.
- 1.26. **B.L.Oksengendler**, **F.G.Djurabekova**, **S.E.Maksimov**, **N.Yu.Turaev**, **N.N.Turaeva**. Mechanism of nanoobjects sputtering by ion bombardment.
- 1.27. **A.V.Rogov**, **M.Yu.Nagel**, **Yu.V.Martynenko**. Surface smoothing at simultaneous sputtering and deposition of surface material.
- 1.28. **M.Ruzibaeva**. Formation of transition layer under aluminium ion bombardment of SiO₂ - Si system.
- 1.29. **V.N.Samoilov**, **N.V.Nosov**. The effects of focusing in the azimuthal angle direction of atoms ejected from (001) Ni and (001) Au.
- 1.30. **T.N.Smirnova**, **V.N.Chernik**. Impact of oxygen plasma beams on spacecraft materials.
- 1.31. **O.M.Stepanova**, **A.V.Yuryeva**, **V.P.Krivobokov**. Numerical study on erosion processes on target surface in direct current magnetron sputtering systems.
- 1.32. **K.A.Tolpin**, **E.Yu.Zykova**, **V.E.Yurasova**. Simulation of single crystal deformed region sputtering.
- 1.33. **B.E.Umirzakov**, **M.K.Ruzibaeva**. Sputtering and structure change of surface layers at ion bombardment of TiN multicomponent films.
- 1.34. **B.E.Umirzakov**, **D.A.Tashmukhamedova**, **H.H.Baltaev**, **A.K.Tashatov**, **M.T.Normuradov**. Influence of low-energy ion-bombardment on Mo, Pd and Pd-Ba composition surfaces.
- 1.35. **A.A.Chirov**, **A.B.Nadiradze**, **V.V.Shaposhnikov**. Electrostatic charge neutralization of the surfaces of spacecraft by streams of cold plasma ions.

- 1.36. **A.S.Shumilov**. Modeling of the surface profile evolution at low-energy ion sputtering in Ar plasma.

Section 2. Ion scattering and propagation

- 2.1. **Yu.A.Belkova, Ya.A.Teplova**. Calculation method for nonequilibrium characteristics of light ions, passing through thin organic films.
- 2.2. **A.I.Vilensky, K.G.Sabbatovsky, V.D.Sobolev**. Electrical properties of latent tracks of heavy ions in polymers.
- 2.3. **L.A.Vlasukova, F.F.Komarov, V.N.Yuvchenko, W.Wesch, E.Wendler, A.Yu.Didyk, V.A.Skuratov, A.K.Dauletbekova, A.T.Akilbekov, S.B.Kislitsin**. Threshold and criterion for track etching in SiO₂.
- 2.4. **S.S.Volkov, A.A.Aristarhova, Yu.E.Dmitrevsky, T.I.Kitaeva, N.L.Puzevitch, M.Yu.Timashev, V.P.Zyganov**. Ion scattering from surface nanolayers of emitter structures of infrared range devices.
- 2.5. **I.K.Gainullin**. Productive realization of numerical solution of the 3D charge transfer problem.
- 2.6. **V.V.Evstifeev, N.V.Kostina, A.N.Musatov**. Scattering of ions with the different masses and the same speed from mono atomic film.
- 2.7. **V.V.Evstifeev, N.V.Kostina, A.N.Musatov**. Simulation of ion (Me⁺→Me) scattering by mono atomic films.
- 2.8. **V.K.Egorov, E.V.Egorov, M.S.Afnas'ev**. Analytical possibilities of ion beam investigations for thin film epitaxial and nondirected coatings.
- 2.9. **A.N.Zinoviev**. He-Au potential obtained from Rutherford backscattering data.
- 2.10. **F.F.Komarov, A.S.Kamyshan, P.A.Hryshyn**. Proton beam transmission through insulating nanocapillaries.
- 2.11. **V.P.Koscheev, D.A.Morgun, Yu.N.Shtanov, T.A.Panina**. Modeling of 400 GeV proton deflections by germanium crystal.
- 2.12. **I.V.Lysova, A.N.Mikhailov**. Energy characteristics of heterogeneous flow of particles in carbon nanotubes.
- 2.13. **N.V.Mamedov, V.A.Kurnaev, D.N.Sinel'nikov, D.V.Kolodko, D.A.Trufanov**. Conversion ability of converter materials for the "ARIES-L" device.
- 2.14. **N.V.Novikov, Ya.A.Teplova**. Methods for estimation of equilibrium charge distribution of ions in solid and gaseous media.
- 2.15. **N.A.Nurmatov, Y.S.Ergashov, N.Talipov, I.X.Xamidjonov**. Study the thermal diffusion, segregation and distribution of niobium atoms in depth of diluted alloy of molybdenum with niobium.
- 2.16. **B.E.Umirzakov, S.J.Nimatov, H.H.Boltaev**. Influence of ion bombardment on the depth profile of the impurity atoms in solar cell and diode structures.

23August.Friday

***Section 3. Emission of ions, electrons, photons and X-rays
under ion- surface interaction***

- 3.1. **N.A.Azarenkov, V.V.Bobkov, I.A.Afanas'eva, V.V.Gritsyna, V.T.Gritsyna, D.A.Ryzhov and D.I.Shevchenko.** Ion-photon emission under ion bombardment of garnet structures of different composition.
- 3.2. **V.P.Afanas'ev, D.A.Ivanov, P.S.Kaplya, A.V.Lubenchenko, O.I.Lubenchenko.** Influence of multiple elastic photoelectron scattering on energy spectra of multi-layer targets.
- 3.3. **V.P.Afanas'ev, D.A.Ivanov, I.A.Kostanovsky, A.V.Lubenchenko.** Measuring of layer-by layer profiles of deuterium and hydrogen based on electron RBS and SRE.
- 3.4. **V.P.Afanas'ev, D.A.Ivanov, A.V.Lubenchenko, O.I.Lubenchenko.** X-ray photoemission on layered inhomogeneous targets.
- 3.5. **V.P.Afanas'ev, Yu.M.Shulga, I.A.Kostanovskiy, A.V.Lubenchenko, D.A.Ivanov.** Graphen foam study via electron spectroscopy.
- 3.6. **I.A.Afanas'eva, V.V.Bobkov, V.V.Gritsyna, D.A.Ryzhov, D.I.Shevchenko.** Ion-photon spectrometry of processes at electrolysis of organic dye solution.
- 3.7. **A.F.Vladimirov.** Modeling of electronic states of atom flying away from metal surface.
- 3.8. **O.L.Golubev.** The ion point sources of field evaporation based on the emitters from alloys and compounds.
- 3.9. **N.Kh.Dzhemilev, S.E.Maksimov, Sh.T.Khojiev.** Statistical mechanism of formation of energy spectra of sputtered molecular clusters.
- 3.10. **A.A.Zalutskii.** Investigation of iron ions recharging processes on surfaces of natural nanoclays (based on data of Mossbauer spectroscopy).
- 3.11. **B.A.Kalin, N.V.Volkov, I.V.Oleynikov, R.A.Valikov, L.P.Nekrasova.** Identification of the emission peaks from oxide films on metal surface in infrared wavelength waves.
- 3.12. **P.Konarski, K.Kaczorek, I.Dul, J.Senkara.** Inconel alloys annealed in vacuum – SIMS, GDMS and XPS depth profile analysis.
- 3.13. **V.A.Litvinov, V.T.Koppe, D.I.Shevchenko, V.V.Bobkov, I.I.Okseniuk.** SIMS study of gas release from getter zirconium-based alloys.

- 3.14. **S.E.Maksimov, N.Kh.Dzhemilev, S.F.Kovalenko, O.F.Tukfatullin, Sh.T.Khojiev.** Decay rate constants of sputtered vanadium oxide clusters.
- 3.15. **V.M.Mikoushkin, E.V.Likhachev, V.V.Bryzgalov, A.P.Solonitsina, D.E.Marchenko.** Photoemission study of the quantum well states created by ion bombardment of the GaAs surface.
- 3.16. **I.E.Mytropolsky, V.V.Kuzma, V.G.Drobnich, V.S.Buksar.** Adaptation of the method of ion-photon spectroscopy for determination of heavy metals in soil and surface water (on example of Zn).
- 3.17. **S.N.Morozov, U.Kh.Rasulev.** Secondary electron and ion emission from Tb and Tm under cluster ion bombardment.
- 3.18. **S.N.Morozov, U.Kh.Rasulev.** SIMS of the Ag plate of quartz resonator under Cs^{9+} and Si^{9+} multiply charged ion bombardment.
- 3.19. **S.N.Morozov, U.Kh.Rasulev.** SIMS of silicon with Sb_m^+ cluster projectiles
- 3.20. **N.N.Nikitenkov, A.N.Nikitenkov, V.S. Sypchenko, O.V.Vilhivskaja.** Layer-by-layer chemical analysis of the heterogeneous systems with use of the secondary ions energy distributions.
- 3.21. **A.N.Pustovit.** Directions in the creation of an absolute quantitative mass-spectral method of impurity analysis in solids.
- 3.22. **V.V.Styrov, N.D.Tolmacheva, Yu.I.Tyurin, S.Kh.Shigalugov, V.D.Khoruzhii, Yu.A.Sivov, E.Yu.Plotnicova.** Heterogeneous chemiluminescence of $\text{Y}_2\text{O}_2\text{S}$ crystalline phosphors, activated by europium.
- 3.23. **D.A.Tashmukhamedova, H.H.Baltaev, S.B.Danaev, S.I.Parmankulov.** Electronic spectroscopy of the surface of GaAs films implanted by ions Ba^+ .
- 3.24. **D.A.Tashmukhamedova, B.E.Umirzakov, D.M.Muradkabilov, S.B.Danaev, T.Sh.Xakimov.** Investigation of change of composition, structure and issue properties of SiO_2/Si films at ion-bombardment.
- 3.25. **Y.S.Ergashov, N.A.Nurmatov, N.Talipov, I.X.Xamidjonov.** Investigation the features of formation the photoelectron spectra of alloy Mg-(0,5%) Ba.

Section 4. Ion implantation and surface modification

- 4.1. **A.V.Alekseev, G.G.Gumarov, V.A.Shustov, V.Yu.Petukhov, V.I.Nuzhdin.** Study of uniaxial magnetic anisotropy of iron silicide thin films ion-synthesized in external magnetic field.
- 4.2. **V.V.Bobkov, R.I.Starovoitov, L.P.Tishchenko, Yu.I.Kovtunenkov, L.A.Gamayunova.** Implantation of deuterium ions into composite structures with tungsten coatings.
- 4.3. **V.S.Bronsky, S.N.Shilobreeva, A.V.Khokhlov.** Numerical simulation of the iron isotopes (^{54}Fe , ^{56}Fe) implantation in silicates: verification of the calculated (program SRIM, SUSPRE) and experimental data.
- 4.4. **R.A.Valikov, B.A.Kalin, N.V.Volkov.** Increasing wear resistance of the surface tubular samples of E110 alloy by ion mixing at influence radial ion beam Ar^+ .
- 4.5. **A.F.Zatsepin, E.A.Buntov, V.A.Pustovarov, V.S.Kortov, Н.В.Гаврилов.** Photoluminescence of implantation-induced defects in $\text{SiO}_2:\text{Pb}^+$ glasses.
- 4.6. **V.I.Zinenko, Yu.A.Agafonov, V.V.Saraykin.** Low-temperature implantation of boron ions in silicon.
- 4.7. **A.A.Ivanova, A.A.Sharonova, I.Yu.Grubova, M.A.Surmeneva, R.A.Surmenev, V.F.Pichugin, M.Epple.** Application of RF-magnetron sputter deposition method for producing a silver-containing calcium phosphate coating for medical implants.
- 4.8. **A.V.Kabyshev, F.V.Konusov.** Evolution of optical properties of alumina irradiated with chromium ions and annealed in air.
- 4.9. **B.A.Kalin, N.V.Volkov, R.A.Valikov, A.S.Yashin.** Application of wide-aperture beam of argon ions to finish treatment of outer surface of tubular samples.
- 4.10. **A.I.Kamardin, A.A.Simonov, V.G.Lisizin, T.D.Radjabov.** Ion-assisted deposition of coats on glassceramic and artificial stones.
- 4.11. **K.V.Karabeshkin, P.A.Karaseov, A.I.Titov.** Crystal lattice damage formation in silicon during PF_n^+ ion implantation.
- 4.12. **Y.A.Kochergina, V.A.Fedorov, L.A.Novgorodov, S.V.Vasileva.** Change surface morphology and properties of ionic crystals with gold implanted in thermoelectric influence.
- 4.13. **A.A.Lo-zovan, S.S.Alexandrova.** Droplet phase reduction during deposition of coatings by PLD on the inner surface of the tubes.
- 4.14. **M.I.Makoviychuk.** Ion irradiation and adsorptivity of surface: research using the method of flicker-noise spectroscopy.

- 4.15. **M.M.Mezdrogina, M.V.Eremenko, E.I.Terukov, I.N.Trapeznikova.** The effect of surface localized plasmons and dipole-dipole interaction on the generation of carriers in the MQW structures on the base InGaN/GaN.
- 4.16. **M.M.Mezdrogina, E.I.Terukov, I.N.Trapeznikova, Yu.V.Kozhanova.** Photoinduced defects in the structures with MQW on the base of InGaN/GaN, doped by Eu, Sm, Eu+Sm and in the a-Si:H films.
- 4.17. **S.J.Nimatov, D.S.Rumi.** Submonolayer films on Si(111) surface under low energy ion bombardment.
- 4.18. **O.Odudemowo, J.B.Malherbe, D.F.Langa, A.J.Botha, N.G.van der Berg, L.Prinsloo, E.Wendler, W.Wesch, P.Chakraborty, E.F. da Silveira.** Modification of glassy carbon under strontium ion implantation.
- 4.19. **O.A.Podsvirov, A.I.Sidorov, V.A.Brunov, D.V.Churaev.** Migration of metal ions in glasses under electron irradiation.
- 4.20. **V.V.Poplavsky, A.V.Dorozhko, V.G.Matys.** Ion-beam formation of catalytical active layers on the carbon substrates.
- 4.21. **N.P.Pron, D.D.Korshunova, S.A.Krivelevich, R.V.Selukov.** Formation of silicate clusters as a result of nonequilibrium solid solution decay.
- 4.22. **V.I.Pryakhina, D.O.Alikin, D.K.Kuznetsov, S.A.Negashev, V.Ya.Shur.** Polarization reversal in MgO:LiNbO₃ single crystals modified by plasma-source ion irradiation.
- 4.23. **V.I.Psarev, L.A.Parkhomehko.** Investigation of structure-functional state of disperse precipitation in an ion-irradiated material.
- 4.24. **T.D.Radjabov, A.M.Nazarov, S.V.Koveshnikov, Yu.V.Piseckiy, N.I.Gudkova.** Application of the ion implanted fiber for creation chromatographic the gauge.
- 4.25. **A.V.Russakova, A.T.Akilbekov, A.K.Dauletbekova, M.V.Koloberdin, M.Baizhumanov, M.V.Zdorovets.** LiF crystals irradiated with 150 MeV Kr ions: peculiarities of color center creation and thermal annealing.
- 4.26. **A.S.Rysbaev, J.B.Huzhaniyozov, A.M.Rahimov, I.R.Bekpulatov, R.F.Fayzullaev, Z.A.Rysbaeva.** Possibility of modification of structure and properties of Si(111) and Si(100) surfaces by P⁺, B⁺ and alkaline ions implantation.
- 4.27. **I.A.Supryadkina, K.K.Abgaryan, D.I.Bazhanov, I.V.Mutigullin, L.I.Fedina.** Theoretical investigation of ion-induced point defects and their complexes in the silicon.
- 4.28. **V.S.Sypchenko, N.N.Nikitenkov, T.I.Sigfusson, Ju.I.Tyurin, E.S.Kiseleva, Ju.N.Jur'ev.** The study of temperature and radiation effects on the Al_xO_{1-x}/Ti_{HK} system.

- 4.29. **T.T.Thabethe**, **J.B.Malherbe**, **T.T.Hlatshwayo**, **E.Wendler**, **W.Wesch**, **P.Ch**
- 4.30. **V.V.Chirkov**, **G.G.Gumarov**, **V.Y.Petukhov**, **V.F.Valeev**. The change of Kerr effect sign in ion-beam synthesized Fe₃Si films.
- 4.31. **A.A.Shemukhin**, **A.V.Nazarov**, **Yu.V.Balakhin**, **V.S.Chernysh**. Modification of silicon films on sapphire by ion irradiation.
- 4.32. **D.V.Shyrokorad**, **G.V.Kornich**. Neural network method of initial impurity concentration profile renewal at ion depth profiling.
- 4.33. **K.D.Chterbachev**, **M.I.Voronova**, **V.T.Bublik**, **V.N.Mordkovich**, **D.M.Pazhin**, **V.I.Zinenko**, **Yu.A.Agafonov**. Influence of a chemical nature of implanted ions on a structure of a damaged layer in Si substrates.

25August,Sunday

Section 5. Ion-assisted processes in thin films and nanostructures

- 5.1. **V.I.Bachurin, I.I.Amirov, M.O.Izumov, V.V.Naumov, P.S.Selyukov, S.G.Simakin.** The study of the nanostructures formation on ALSI thin film surface under ion – plasma sputtering.
- 5.2. **A.I.Belov, D.S.Korolev, A.B.Kostyuk, I.A.Chugrov, D.A.Grachev, A.N.Mikhaylov, A.V.Ershov, E.S.Demidov, D.I.Tetelbaum.** Electron transport and electroluminescence in dielectric layers with silicon nanoclusters formed by using ion implantation.
- 5.3. **E.Yu.Buchin, D.A.Kokanov, V.V.Naumov, S.G.Simakin.** Phase fluctuations in the Co-Cu granular films.
- 5.4. **V.M.Vetoshkin, R.M.Zakirova, P.N.Krylov, I.V.Fedotova.** Ion-beam treatment of ITO films obtained reactive RF magnetron sputtering.
- 5.5. **Z.A.Isakhanov, B.E.Umirzakov, Z.E.Muchtarov, R.Kurbanov.** The influence of ion bombardment on the profile of atom distribution on Ni-CdS interface.
- 5.6. **A.B.Kostyuk, D.S.Korolev, A.I.Belov, D.V.Guseinov, A.I.Bobrov, D.A.Pavlov, A.N.Mikhaylov, D.I.Tetelbaum, A.L.Stepanov.** Effect of ion irradiation on structure and optical properties of gold nanoclusters in dielectric matrix.
- 5.7. **S.E.Krivitskiy, V.M.Sharapov, A.M.Zimin, V.S.Kulikauskas.** Investigation of co-deposited tungsten-deuterium films.
- 5.8. **L.N.Lesnevskiy, S.V.Ivanova, M.A.Lyakhovetsky, A.M.Ushakov.** Comparative analysis of methods for protecting coatings formation on zirconium parts of advanced power plants.
- 5.9. **V.L.Levshunova, E.A.Pitirimova, G.P.Pokhil, D.I.Tetelbaum.** Observation of long range effect by Kikuchi line.
- 5.10. **M.N.Lubov, D.V.Kulikov, O.Kurnosikov, Yu.V.Trushin.** Kinetic modeling of three-dimensional growth of the subsurface impurity nanoclusters at cobalt deposition on copper surface.
- 5.11. **V.M.Mikoushkin, A.P.Solonitsyna, V.M.Lavchiev.** Interface formation due to diffusion stimulated by the surface ion bombardment.
- 5.12. **K.F.Minnebaev, E.I.Rau, A.A.Khaidarov, V.E.Yurasova.** Changes in composition and surface structure of alloys in regions of different deformation.

- 5.13. **N.N.Nikitenkov, V.S.Sypchenko, E.S.Kiselyova, A.N.Nikitenkov, I.V.Dushkin, T.I.Sigfusson, Ju.I.Tyurin, Ju.N.Jur'ev.** Hydrogen diffusion in Al_xO_{1-x} thin films from the substrate of the nanocrystalline titanium saturated in hydrogen plasma.
- 5.14. **O.A.Podsvirov, A.Ya.Vinogradov, A.I.Titov, V.S.Belyakov, E.N.Shubina, M.V.Mishin, V.S.Protopopova, A.L.Shakhmin, A.V.Arhipov, P.G. Gabdullin, S.I.Krel, N.N.Karasev, P.A.Karasev.** Preparation and characterization of Ni - carbon nanocomposite thin films.
- 5.15. **A.S.Rysbaev, J.B.Huzhaniyozov, A.M.Rahimov, R.F.Fayzullaev, I.R.Bekpulatov, Z.A.Rysbaeva.** Structure and properties of nanoscale thin $CoSi_2$ films formed on silicon surface by molecular-beam epitaxy of Co and Si atoms.
- 5.16. **A.S.Sabirov, G.M.Filippov.** Investigation of the surface vortex and potential fields of conducting cylinders.
- 5.17. **R.Kh.Saidahmedov, K.K.Kadirbekova, A.I.Kamardin, A.A.Simonov, T.D.Radjabov.** Parameters of chromic coats on steel and tools.
- 5.18. **R.V.Selyukov, I.I.Amirov, M.O.Izyumov, V.V.Naumov.** Surface morphology of platinum film exposed by ion-plasma sputtering.
- 5.19. **A.V.Stepanov.** Simulation of channeling in carbon nanotubes arrays supported by porous alumina oxide.
- 5.20. **I.E.Tyschenko, V.A.Volodin, A.G.Cherkov.** Structural transformations in thin silicon-on-insulator films implanted with high doses of low-energy hydrogen ions.
- 5.21. **A.S.Yanovsky, S.V.Tomilin, V.P.Grankin, D.V.Grankin.** Recombination peculiarities of atomic hydrogen on palladium nanoparticles formed on semiconductor substrate.

Section 6. Plasma-surface interaction - physics and technology

- 6.1. **I.S.Abdullin, R.G.Ibragimov, V.V.Paroshin.** Modification of composite polymer membranes high-frequency capacitive plasma of low pressure.
- 6.2. **I.S.Abdullin, R.G.Ibragimov, O.V.Zaitseva.** Morphology of the polymer membranes regenerated high-frequency capacitive plasma of low pressure.
- 6.3. **I.S.Abdullin, R.G.Ibragimov, O.V.Zaitseva.** Oil hydrophobic sorbents obtaining by means modification under high-frequency capacitive plasma of low pressure.
- 6.4. **I.Sh.Abdullin, V.S.Zheltukhin, I.A.Borodaev.** Mathematical modeling of silver nanocoating deposition on fur in low pressure RF plasma.
- 6.5. **I.Sh.Abdullin, I.I.Vasiliev, A.V.Trofimov.** Surface cleaning of tool steel before application of protective coatings.
- 6.6. **I.Sh.Abdullin, E.B.Gatina, F.F.Kadyrov, M.F.Shaekhov.** Осаждение биосовместимого бактерицидного покрытия на поверхность эндопротезов тазобедренного сустава. Deposition of bactericidal biocompatible coating on the surface of hip endoprosthesis.
- 6.7. **V.N.Arustamov, K.B.Ashurov, Kh.Kh.Kadirov, I.Kh.Khudaykulov.** Influence of cathode spots of vacuum arc discharge upon surface layer properties of constructional materials.
- 6.8. **V.N.Arustamov, Kh.B.Ashurov, Kh.Kh.Kadirov, I.Kh.Khudaykulov.** Plasma technological effect of vacuum -arc discharge on surface of constructional materials in the presence of surface-active substances.
- 6.9. **V.N.Arustamov, K.B.Ashurov, D.N.Vasilkovskiy, Kh.Kh.Kadirov, I.Kh.Khudaykulov.** Formation of the redundant surface ionic charge in cathode spots of vacuum arc.
- 6.10. **V.N.Arustamov, K.B.Ashurov, Kh.Kh.Kadirov, I.Kh.Khudaykulov.** The complex technology of vacuum arc discharge treatment of surface of constructional materials.
- 6.11. **V.N.Arustamov, K.B.Ashurov, h.Kh.Kadirov, R.B.Nagaybekov, I.Kh.Khudaykulov.** On structure and parameters of cathode spots of vacuum arc.
- 6.12. **A.I.Bazhin, A.Ye.Pokyntelytsia, V.A.Stupak, A.N.Trotsan.** Production of gallium doped zinc oxide thin films by pulsed magnetron sputtering.

- 6.13. **L.B.Begrambekov, A.V.Grunin, V.N.Ermakov, A.S.Kaplevskii, Ya.A.Sadovskii, S.V.Vergazov, P.A.Shigin.** Захват и выделение водорода из нержавеющей стали при её облучении в водородной плазме с примесью кислорода. Capture and release of hydrogen from stainless steel irradiated by a hydrogen plasma containing oxygen
- 6.14. **A.L.Bondareva, G.I.Zmievskaia, V.D.Levchenko, A.V.Zakirov, T.V.Lechenko.** Blistering simulation for specification of optical properties of disordered porous media.
- 6.15. **A.M.Borisov, V.G.Vostrikov, E.A.Romanovsky, N.V.Tkachenko, A.V.Vinogradov, B.L.Krit, S.V.Savushkina, M.N.Polyansky.** Synthesis and properties of the ceramic-like coatings obtained by plasma treatment in electrolyte.
- 6.16. **D.V.Grankin.** Luminescence of Zn_2SiO_4 -Mn in the reactive atmosphere of the low-temperature hydrogen plasma.
- 6.17. **D.V.Grankin, A.I.Bazhin.** The luminescence of the irradiated by UV-light α - Al_2O_3 stimulated by the interaction of H- and O-atoms from the low-temperature plasma.
- 6.18. **M.V.Grankin, A.I.Bazhin.** Plasmochemical reactions on a surface with nanostructures stimulated by electron transitions.
- 6.19. **K.A.Dzhbaai, T.G.Shikova, V.A.Titov.** Preparation of SnO_x and ITO films by magnetron sputtering method followed by thermal and plasma chemical oxidation.
- 6.20. **V.S.Efimov, A.A.Mednikov, Yu.M.Gasparyan, A.A.Pisarev, O.V.Ogorodnikova, K.Sugiyama, M.Mayer, T.Schwarz-Sellinger, A.V.Spitsyn, A.V.Golubeva, N.P.Bobyry.** Deuterium retention in Eurofer steel at gas and plasma exposure.
- 6.21. **M.V.Eroshkin, G.V.Kiselev, E.N.Moos.** Cathode surface sputtering of He-Ne laser.
- 6.22. **M.Zibrov, G.Khodachenko, A.Tumarkin, A.Kaziev.** High rate deposition of coatings in a magnetron discharge with melted cathode.
- 6.23. **G.I.Zmievskaia, A.L.Bondareva.** Computer simulation model non-point defects into metal/semiconductor bilayer under influence of inert gases ions.
- 6.24. **A.Ibatullina, Y.Bukina, E.Sergeeva, I.Sh.Abdullin.** Controlling the properties of the surface of fibers and textiles of community, technical and medical purposes by plasma ions.
- 6.25. **T.S.Kamilov, A.I.Kamardin, A.A.Simonov, S.J.Turakhodjaev.** Formation of sensor controls using ion -plasma coats.
- 6.26. **V.I.Kristva, Ye Naing Tun.** Influence of a dielectric film at the cathode surface on dynamics of glow-to-arc discharge transition.

- 6.27. **T.V.Levchuk.** About spontaneous disintegration of a charged jet of a viscous conductive fluid.
- 6.28. **G.R.Nikolaenko, G.N.Kulevtsov, E.D.Markova.** Treatment effect of "cold" plasma on the hygienic properties skin special for oil and gas sector workers.
- 6.29. **V.A.Obukhov, M.V.Cherkasova.** Plasma interaction with a channel surface of the multichannel hollow cathode.
- 6.30. **N.A.Pankin, N.A.Smolanov, V.P.Mishkin, K.N.Nicshev.** Electron microscopy of macroparticles formed by arc discharge plasma on surface of Ti (N, C)-coats.
- 6.31. **O.A.Semenova, A.M.Efremov.** Electrophysical parameters and composition of the CH₄ plasma under the conditions of dc glow discharge.
- 6.32. **N.A.Smolanov, N.A.Pankin.** Structure and properties of a material deposition from the arc discharge plasma near the cathode and on the walls of the vacuum chamber.
- 6.33. **A.V.Tumarkin, G.V.Khodachenko, A.V.Kaziev, M.S.Zibrov.** Investigation of a magnetron discharge with melted cathode.
- 6.34. **D.I.Cherkez, A.V.Spitsyn, A.V.Golubeva, N.P.Boby, V.M.Chernov, M.M.Potapenko.** Gas driven permeation of deuterium through V-4Ti-4Cr.