CONFERENCE SCHEDULE

Monday, 10 September $17^{00} – 19^{00}$

Chairmen: ***I.M.Neklyudov***
V.M.Troyanov

PLENARY SESSION

OPENING CEREMONY, GENERALS

1. **Introductory**
15 min *I.M.Neklyudov (NSC KIPT NANU, Kharkov, Ukraine)*

2. **Radiation material Science from Alushta-1 to Alushta-XX**
30 min *V.N.Voyevodin (NSC KIPT NANU, Kharkov, Ukraine)*

3. **Carrying-out of new technological foundation of nuclear power of Russia**
30 min *V.M.Troyanov (SNC "NIIAR", Russia)*

4. **Appreciation of the development of nuclear power of Ukraine for prolonged**
30 min **prospects**
N.I.Vlasenko, N.P.Kukharchuk, O.V.Godun, G.R.Semenov, E.A.Dikov, V.N.Kiryanchuk, S.G.Ustimenko (SE "NAEK Energoatom", Kiev, Ukraine)

Tuesday, 11 September $9^{30} – 14^{00}$

Chairmen: ***V.N.Voyevodin***
F.A. Garner

PLENARY SESSION *A*:
PHYSICS OF RADIATION PHENOMENA IN METALS AND ALLOYS

1. **Second-order radiation phenomena in austenitic and high-nickel alloys growing**
30 min **to first order importance at higher damage levels associated with PWR plant life extension**
F.A. Garner[1], P.D. Freyer[2], Y. Isobe[3], M. Sagisaka[3], L.R. Greenwood[4], M.N. Gussev[5], O.P. Maksimkin[5] ([1]Radiation Effects Consulting, Richland; [2]Westinghouse Electric Company, Pittsburg, USA, [3]Nuclear Fuel Industries, Osaka, Japan; [4]Pacific Northwest National Laboratory, Richland USA; [5]Institute of Nuclear Physics, Almaty Kazakhstan)

2. **Details of defect concentration distribution and implanted into crystal atoms out**
20 min **of path boundary**
V.I. Sugakov (Institute for nuclear investigations NASU, Kiev, Ukraine)

3. **Why fcc, bcc and hcp lattices behave differently under irradiation?**
20 min *N.P. Lazarev (NCS KIPT NASU), Kharkov, Ukraine)*

COFFEE BREAK 15 min.

4. **Topical problems of plasticity and strength of solids**
20 min *V.E. Panin (Institute for physics of strength and material science SD RAS, Tomsk, Russia)*

5. **Changes of mechanical and magnetic properties of austenitic stainless steels**
20 min **under irradiation and post-radiation ageing**
O.P. Maksimkin (Institute for nuclear physics of NNC RK, Almati, Kazakhstan)

6. 30 min **Measurement of radiation induced segregation and depletion at grain boundary in ion-irradiated austenitic stainless steel**
H.-H. Jin[*], C. Shin, S. C. Kwon and J. Kwon (Nuclear Materials Division, Korea Atomic Energy Research Institute, Daejeon, Republic of Korea)

COFFEE BREAK 15 min

7. 20 min **Behavior of nano objects under irradiation**
R.A.Andrievskii (Institute of problems of chemical physics RAS, Chernogolovka, Russia)

8. 20 min **Influence of radiation factors on development of deformation processes in conditions of super plasticity**
V.V.Bryuhovetskiy, V.P.Poyida[*], V.F.Klepikov, D.E.Pedun, Y.V. Kolomak (institute of electrophysics and radiation technologies of NASU, [*]Kharkov national university named by V.N.Karazin, Kharkov, Ukraine)

9. 20 min **Procedure of the use of accelerated irradiation results for predicting of material state corresponding to the long-term operation of vessels of reactors WWER-1000**
D.Y.Erak, B.A.Gurovich, E.A.Kuleshova, Ya.I.Chtrombakh, O.O.Zabysov, D.A Zhyrko (NIC "Kurchatov Institute", Moscow, Russia)

TUESDAY, 11 September **$16^{00} – 19^{00}$**

Chairmen: ***A.S.Bakay***
A.G. Zaluzhnyi

PLENARY SESSION *A*:
PHYSICS OF RADIATION PHENOMENA IN METALS AND ALLOYS

10. 20 min **New prediction of irradiation of polymers and composites**
S.R. Allayarov[a], Yu.A. Olkhov[a], D.A. Dixon[b] ([a]Institute of Problems of Chemical Physics of RAS, Chernogolovka, Russia, [b]Department of Chemistry, Alabama University, Alabama, United States)

11. 20 min **Influence of the structure and deformation on containment of gaseous products of nuclear reactions (helium, hydrogen) in structural materials**
A.G. Zaluzhnyi (ITEP, Moscow, Russia)

12. 20 min **Cooperative modes of radiation embrittlement**
V.N. Voyevodin, I.N. Laptev, I.M. Neklyudov, V.V. Brik, A.A. Parkhomenko (NSC KIPT NASU, Kharkov, Ukraine)

COFFEE BREAK 15 min

13. 20 min **Simulation of crystalline system microstructure changes after irradiation**
D.Y.Kharchenko (Institute for applied physics NASU, Sumi, Ukraine)

14. 20 min **On possibility of anomaly diffusion of defects in the field of radiation damage**
I.G.Marchenko, I.M.Neklyudov (NCS KIPT NASU, Kharkov, Ukraine)

15. 20 min **Function of cascade source of defects**
Y.N. Devyatko, A.A. Plyasov, O.V. Khomyakov (National research nuclear university (MIPI), Moscow, Russia)

16. 20 min **Refined model and program for calculation of point defects concentration in multi-component heterogeneous materials**
S.V. Dyuldya, M.I. Bratchenko (NSC KIPT NASU, Kharkov, Ukraine)

TUESDAY, 11 September 16^{00} - 19^{00}

Chairmen: ***V.S.Ageev***
S.B.Kislitzin

POSTER SESSION OF SECTION *A*

1. **Erosion of tungsten surface under low energy bombardment by helium ions**
   T.I.Mazilova, E.V.Sadanov, O.V.Dudka, V.A.Ksenofontov, A.A.Mazilov, I.M.Mikhaylovskiy (NSC KIPT NASU, Kharkov, Ukraine)

2. **Development of potentials of interatomic interaction for simulation and prediction of characteristics of uranium nuclear fuels**
   D.E.Smirnova (Joint Institute for high temperatures RAS, Moscow, Russia)

3. **Effects of crystalline structure of material in random dynamic of high energy cascades of atomic collisions**
   S.V.Dyuldya, M.I.Bratchenko (NSC KIPT NASU, Kharkov, Ukraine)

4. **Thermal hydraulic model of free convection in supercritical loop of stand CU-EITF NSC KIPT**
   M.I.Bratchenko, S.V.Dyuldya (NSC KIPT NASU, Kharkov, Ukraine)

5. **Simulation of radiation and thermal loads on elements of construction and on specimens in the chamber of electron irradiation of stand CU-EITF**
   M.I.Bratchenko, S.V.Dyuldya (NSC KIPT NASU, Kharkov, Ukraine)

6. **Atomistic simulation of formation of tracks of fast heavy ions in nuclear materials**
   S.V.Starikov (Joint institute of high temperatures RAS, Russia. Institute for safety of nuclear power development RAS, Moscow, Russia)

7. **Stressed-deformed condition of grains under their contact interaction in structure inhomogeneous reactor materials**
   O.M.Schokotova (Institute for applied physics NASU, Sumi, Ukraine)

8. **Diffusion in near surface layers of oxide inclusions in precipitation strengthened α-Fe**
   N.A.Azarenkov, V.G Kirichenki, O.V.Kovalenko, V.N.Leonov, S.V.Litovchenko, V.A Chishkala (Kharkov national university named by V.N.Karazin, Kharkov, Ukraine)

9. **Influence of impurities and structural defects on formation of radiation center of paint in crystals of gadolinium-scandium-aluminum garnet**
   A.M.Kurbanov, I.Nuritdinov (INP AS RUz, Tachkent,Uzbekistan)

10. **Radiation-induced phenomena in materials used in the area of increased radiation**
    V.V.Arutyunian[1], E.A.Akhverdyian[1], A.V.Akopyian[1], V.S.Bagdasaryian[1], G.N.Eritsyian[1], N.E.Grigoryan[1], A.V.Saakyian[1], A.S.Oganesyian[1],A.V.Oganesyian[2] ([1] National Science Laboratory named byA.I.Alikhanyian ErevanPhysical Institute; [2]State Committee for Nuclear safety control RA)

11. **Variation of electrical resistance of polyamides in dependence on dose of irradiation by H^+, He^+ and N^+**
    V.N.Bondarenko, A.V.Goncharov, V.V.Kuzmenko, V.I.Sukhostavets, A.G.Tolstolutskiy (NSC KIPT NASU, Kharkov, Ukraine)

12. **Role of the surface layer state in the change of properties of steel pieces**
    S.S.Dyachenko, I.V.Doschechkina, I.V.Ponomarenko, I.S.Tatarkina (Kharkov national automobile-road university, Kharkov, Ukraine)

13. **Radiation-induced softening of metals: experiment and the model**
V.I. Dubinko[1], A.N. Dovbnya[1], V.A. Kushnir[1], I.V. Hodak[1], V.M. Grytsyna[1], V.P. Lebedev[2], V.S. Krylovskiy[2], S.V. Lebedev[2], V.F. Klepikov[3], P.N. Ostapchuk[3], A.V. Dubinko[3] ([1]National Science Center "Kharkov Physical-Technical Institute, [2]Kharkov National University named by V.N. Karazin, [3]Institute for Electrophysics and Radiation Technologies NASU, Kharkov, Ukraine)

14. **Deep cleaning of ruthenium and osmium for the search of rear nuclear decays**
F.A.Danevich[2], A.E.Dmitrenko[1], G.P.Kovtun[1], N.G.Kovtun[1], D.V.Poda[2], O.G.Polischuk[2], N.N.Pilipenko[1], V.I.Tretyak[2], A.P.Scherban[1] ([1]NSC KIPT NASU, Kharkov, Ukraine, [2]Institute for nuclear research NASU, Kiev, Ukraine)

15. **Influence of vacancy complexes formation on temperature dependence of the creep rate of metals under irradiation**
T.P.Didenko[1,] P.A.Selischev[2] ([1]Kiev national University named by Taras Shevchenko, [2] Department of Physics University of Pretoria, South Africa)

16. **On possibility of crater formation of the surface of structural materials under irradiation by ions of intermediate energies**
A.I.Kalinichenko, S.S.Perepelkin, V.E.Strelnitskiy (NSC KIPT NASU, Kharkov, Ukraine)

17. **Dislocation dynamics in extended relativity**
Yu .I. Gofman (Jerusalem College of Technology, Jerusalem, Israel)

18. **Structure changes on specimen depth in the zone of exposure to pulsed beam of relativistic electrons in the regime of before melting**
N.I.Bazaleev[1], V.V.Bryuhovetskiy[1], A.A.Zaharchenko[2], V.F.Klepikov[1]V.V.Litvinenko[1,3], A.G.Ponomarev[2], E.M.Prohorenko[1], V.T.Uvarov[2] ([1]Institute for electrophysics and radiation technologies of NASU, [2]National science center "Kharkov institute of physics and technology, [3]Kharkov national university named by V.N.Karazin, Kharkov, Ukraine)

19. **Structure transformation induced by implantation of deuterium at different temperature of irradiation of steel 18Cr10NiTi. I.Temperature ~295 K**
I.M.Neklyudov, A.N.Morozov, V.G.Kulish, V.I.Zhurba (NSC KIPT NASU, Kharkov, Ukraine)

20. **Structure transformation induced by implantation of deuterium at different temperature of irradiation of steel 18Cr10NiTi. II. Temperature ~100 K**
I.M.Neklyudov, A.N.Morozov, V.G.Kulish, V.I.Zhurba, A.V.Mats, N.A. Chernyak (NSC KIPT NASU, Kharkov, Ukraine)

21. **Threshold character of the temperature of deuterium desorption from Mg-V composites**
I.M.Neklyudov, A.N.Morozov, V.G.Kulish, V.I.Zhurba, N.S.Lomino, V.D.Ovcharenko, A.S.Kuprin, E.N.Reshetnyak (NSC KIPT NASU, Kharkov, Ukraine)

22. **On mechanisms of swelling suppression in quasi crystals**
G.N. Lazareva, A.A.Turkin, A.S. Bakai (NSC KIPT NASU, Kharkov, Ukraine)

23. **Mechanisms of deuterium retention in structural steels in conditions of radiation exposure**
G.D.Tolstolutskaya, V.N.Voyevodin, I.E.Kopanets, V.V.Ruzhitskiy, S.A.Karpov, A.V.Nikitin (NSC KIPT NASU, Kharkov, Ukraine)

24. **Accumulation of ion implanted deuterium in steels at high irradiation temperature**
G.D.Tolstolutskaya, I.E. Kopanets, A.V.Nikitin, S.A.Karpov,V.V.Ruzhitskiy, B.S.Sungurov (NSC KIPT NASU, Kharkov, Ukraine)

25. **Thermal desorption of helium from structural steels**
V.V.Ruzhitskiy, G.D.Tolstolutskaya, S.A.Karpov, I.E.Kopanets (NSC KIPT NASU, Kharkov, Ukraine)

26. **On possibility of the use of materials with quasi crystalline structure**
A.A.Mitrofanov, A.G.Shepelev, N.N.Pilipenko, S.D.Lavrinenko (NSC KIPT NASU, Kharkov, Ukraine)

27. **Influence of electron irradiation on structure-phase state of rock forming quartz**
E.P.Bereznyak, B.V.Bortz, L.A.Saenko (NCS KIPT NASU, Kharkov, Ukraine)

28. **Blistering and $\alpha' \rightarrow \gamma$ transformation at annealing of steel 12Cr18Ni10Ti irradiated by low-energy alpha-particles**
S.B.Kislitzin, M.F.Verechak, I.A.Minakov, A.N.Ozernoy, D.A.Satpaev, Y.Zh.Tuleushec (institute for nuclear physics of National nuclear center of Republic of Kazahstan, Almati, Kazahstan)

29. **Influence of the modification of sapphire surface under ion irradiation on the release of exited particles**
Afanasieva I.A., Bobkov V.V., Gritzina V.V., Rigov D.A., Shevchenko D.I. (Kharkov national university named by V.N.Karazin, Kharkov, Ukraine)

30. **Studies of accumulation and release of deuterium and helium in composite structures with tungsten coatings**
V.V. Bobkov, R.I. Starovoitov, L.P. Tishchenko, Yu.I. Kovtunenko (Kharkov National University, Kharkov, Ukraine)

31. **On safety and efficiency of radiation studies and technologies**
A.N.Dovbnya, V.A.Stratienko (NSC KIPT NASU, Kharkov, Ukraine)

32. **On measurement of parameters of microtargets with thritium for investigation of inertional nuclear synthesis**
A.N.Dovbnya, A.M.Egorov, V.A.Stratienko, A.V.Chagin (NSC KIPT NASU, Kharkov, Ukraine)

33. **Resonance exitation of non-linear waves of edge dislocation**
B.V.Borts[1], S.F.Skoromnay[1], V.I.Tkachenko[1,2] ([1]NSC KIPT NASU; [2]Kharkov national university named by V.N.Karazin, Kharkov, Ukraine)

34. **Comparative prediction of swelling of reactor WWER-1000 baffle on the base of different empiric models**
A.S.Kalchenko[1], V.V.Bryk[1], V.N.Voyvodin[1],N.P.Lazarev[1], F.A.Garner[2] ([1]NSC KIPT NASU, Kharkov, Ukraine, [2]Radiation Effects Consulting, Richland WA USA)

35. **Langmuir circulations and abnormal mass transfer at rolling of heterogeneous metals in vacuum**
B.V.Botrs[1], V.I.Tkachenko[1,2] ([1]NSC KIPT NASU, [2]Kharkov national university named by V.N.Karazin, Kharkov, Ukraine)

36. **On interaction of dense electron beams with metals**
A.N.Dovbnya, O.S.Druy, V.V.Egorenkov, V.A.Stratienko, V.B.Yuferov (NSC KIPT NASU, Kharkov, Ukraine)

WEDNESDAY,12 September **9^{30} – 14^{00}**

Chairmen: ***V.V.Novikov***
V.D.Risovaniy

SESSION OF SECTION *B*:
SRTUCTURAL AND FUEL MATERIALS FOR THERMAL NEUTRON REACTORS

1. 20 min **Experience of organization of joint international programs in the field of experimental investigations of materials for the core of ractors in "niiar"**
V.M.Troyanov, V.D.Risovaniy (OAO "SNC NIIAR", Dimitrovgrad, Russia)

2. 20 min **Designed accidents and problems of material development for reactor WWER**
V.V.Novikov (High technology science-researching institute of inorganic materials named by Bochvar, JSC "VNIINM", Moscow, Russia)

3. 20 min **Results of after reactor investigation of irradiated fuel of reactor WWER-1000 with high burn-up**
A.E.Novoselov, I.N.Volkova, E.A.Zvir, V.A.Zhitelev, S.V.Pavlov, V.S.Polenok, A.V.Strozhuk (JSC "SNC SRIAR", Dimitrovgrad, Russia)

4. 20 min **On prospects of developments and production of absorbing elements for Ukrainian NPS**
V.S.Krasnorutskiy, V.R.Tatarinov, N.N.Belash (Science-technical complex "Nuclear fuel cycle", NSC KIPT NASU, Kharkov, Ukraine)

COFFEE BREAK 15 min

5. 20 min **Innovative technologies that guarantee the fabrication of the vessel for reactor WWER-TOI of improved steel with designed life 60 years and possibility of its prolongation to 100 years**
G.P.Karzov, I.V.Teplukhina (FSUE TSNII KM "Prometey", Sank-Petersburg, Russia)

6. 20 min **Implementation of "Working program of metal characteristics control of reactor pressure vessel unit #3 of Rovenskaya NPS with the use of modernization of 4-6 set of representative samples" for control of pressure vessel operation with the possibility of designed service life prolongation**
P.I.Rizhko (OP RNPS, Kuznezsovsk, Ukraine)

7. 20 min **Effect of recovery annealing on properties of water-water reactor pressure vessel overlaying**
B.Z.Margolin, A.M.Morozov, V.A.Potapova, D.A.Chistyakov (FSUE SNII KM "Prometey", Sankt-Petersburg, Russia)

COFFEE BREAK 15 min

8. 20 min. **Embrittlement of the base metal of reactor pressure vessel of power unit #2 for Zaporozhskay NPS**
V.M.Revka[1], L.I.Chirko[1], E.E.Mayboroda[1], O.V.Trigubenko[1], Y.V. Chaykovskiy[1], G.P.Grinchenko[2], R.V.Frankov[2] ([1]Institute of nuclear researches NASU Ukraine, [2]Science-technical center (OP STC) NAER "Energoatom", Kiev, Ukraine)

9. 30 min **Material science problems of power generating units of NPS of Ukraine and ways of their solution at construction of new power generating units**
I.M.Neklyudov, L.S.Ozhigov, V.N.Voyevodin (NSC KIPT NASU, Kharkov, Ukraine)

Complex investigation of the damage mechanisms of welds N 111 of steam generators on power generating units of WWER-1000
I.M.Neklyudov, L.S.Ozhigov, A.S.Mitrofanov, V.N.Voyevodin, G.D.Tolstolutskaya, N.S.Zaritskiy, V.V.Brik, V.V.Rujitskiy (NSC KIPT NASU, Kharkov, Ukraine)

10. 20 min **Arrangement of reactor WWER-440 core with the decrease of fluence on the reactor pressure vessel**
V.V.Grabko (OP RNPS,Kuznetsovsk, Ukraine)

WEDNESDAY,12 September $16^{00} – 19^{00}$

Chairmen: ***G.V.Lisichenko***
V.S.Krasnorutskiy

SESSION OF SECTION B: STRUCTURAL AND FUEL MATERIALS FOR THERMAL REACTORS

11. 20 min **Interconnection of operational characteristics of steels for nuclear reactor vessels with evolution of their nanostructure under the exposure to operation temperature and irradiation**
B.A.Gurovich, E.A.Kuleshova, D.A.Maltseva, S.V.Fedotova (NIC "Kurchatov Institute" Moscow, Russia)

12. 20 min **Radiation-induced intergranular segregation in materials of reactors WWER-1000 vessels**
O.O.Zabusov, M.A.Saltikov, B.A.Gurovich, E.A.Kulechova, S.V.Fedotova, D.A.Zhurko (National investigation center "Kurchatov institute" Moscow, Russia)

13. 20 мин **Peculiarities of cracks propagation in steels at tests of Charpy specimens and discs**
V.V.Kharchenko, E.A.Kondryakov, A.V.Panasenko (Institute of problems of strength named by G.S.Pisarenko NASU, Kiev, Ukraine)

14. 20 мин **Structural investigation of steels 15Cr2MFA-A of modifications A and B, Cb-09XGMTA**
Ya.I.Shtrombakh, B.A.Gurovich[1], E.A.Kuleshova[1], D.A.Gurko[1], D.Yu.Erak[1], A.S.Frolov[1], D.A.Maltzev[1], I.V.Teplukhina[2] ([1]NIC"Kurchatov institute", Moscow, Russia; [2]FSUE TsNII KM "Prometey", Sankt-Petersburg, Russia)

COFFEE BREAK 15 min

15. 20 min **Multilevel approach to the problem of radiation embrittlement prediction for vessel metal and limiting state of reactor vessel**
S.A.Kotrechko[1], V.I.Dubinko[2], A.E.Volkov[3], V.A.Borodin[3] ([1]Institute of metallophysics named by G.V.Kurdyumov NASU, Kiev; [2]NSC KIPT NASU, Kharkov, Ukraine; [3] NIC "Kurchatov institute", Moscow, Russia)

16. 20 min **Iodide titanium – prospective material for production of alloys with shape memory and hydrogen resistant alloys for heat exchanging equipment of NPP**
M.L.Kotzar [1)], V.I.Nikonov [1)], D.S.Anischuk [2)], S.G.Akhtonov [2)], S.Y.Zavodchikov [2)], A.G.Ziganshin [2)], V.G.Smirnov [2)], M.G.Shtutsa [2)] ([1] JSC "VNIIKHT", Moscow; [2)]OAO "Tchepetskiy mechanical plant" Glazov, Russia)

17. 20 min **Experimental determination of radionuclide and isotope composition of spent fuel of 4-th unit of Chernobyl NPS**
A.A.Odintsov[1], A.A.Klyuchnikov[1], V.A.Krasnov[1], V.E.Khan[1], A.E.Novikov[2] ([1]Institute of problems of safety NASU, Tchernobyl, [2]GSP Tchernobylskay NPS, Slavytich, Ukraine)

Wednesday, 12 September 16^{00} - 19^{00}

Chairmen: ***S.D.Lavrinenko***
M.L.Kotsar

POSTER SESSION OF SECTION *B*

1. **Physical model of calculation of uranium nitride heat capacity**
   V.G.Baranov, Y.A.Devyatko, A.V.Tenishev, A.V.Khlunov, O.V.Khomyakov (National researching nuclear university "MIFI", Moscow, Russia)

2. **Difference of temperatures dependences and densities of thermal source MOKS fuel and dioxide fuel and associated with this special features of the accident on third block of "Fukusima-1"**
   V.D.Rusov, V.A.Tarasov, S.A.Chernejenko, A.A.Kakaev, E.V.Grechan, S.I.Kosenko, O.I.Pantak (Odessa polytechnical university, Odessa, Ukraine)

3. **Material-science prediction approach to the selection of vessel of weater-water nuclear reactor**
   A.N.Odeychuk (NPK VIERT NSC KIPT NASU, Kharkov, Ukraine)

4. **Formation of groups of radiation risks among the personnel**
   A.V.Mazilov, I.A.Stadnik, Y.A.Gordienko, D.V.Kutniy, V.N.Tkachenko (NSC KIPT NASU, Kharkov, Ukraine)

5. **Control pf rear-earth elements in materials of nuclear power**
   V.V.Levenets, A.P.Omelnik, A.A.Schur (NSC KIPT NASU, Kharkov, Ukraine)

6. **Influence of Doppler-effect on the spectrum of thermal neutron distribution and transmutation effects**
   N.A.Azarenkov, V.G.Kirichenko, S.V.Litovchenko, D.A.Shagalin (Kharkov national university named by V.N.Karazin, Kharkov, Ukraine)

7. **Hydrogen safety and technology of rotor service life extension of hydrogen-cooled generators of power units of NPS**
   O.I.Balitskiy (Physical-mechanical institute named by G.V.Karpenko NASU, Lvov, Ukraine)

8. **Mechanisms of hafnium corrosion on its use as material for AE in the core of reactor WWER**
   V.A.Zuyek, V.N.Gulko, M.V.Tretyakov, R.A.Rud (Science-technical complex "Nuclear fuel cycle", NSC KIPT NASU, Kharkov, Ukraine)

9. **Toughness of steel 10GN2MFA after long-term operation**
   L.S.Ozhigov, A.S.Mitrofanov, V.V.Bryk, A.G.Rudenko (NSC KIPT NASU, Kharkov, Ukraine)

10. **Plasma separation of SNF – one of possible ways of solution of the problem of closed nuclear fuel cycle in Ukraine**
    V.B.Yuferov, A.M.Egorov, S.V.Shariy, O.S.Druy, V.O.Iltseva, M.O.Shets, A.S. Svichkar, T.I.Tkacheva, V.I.Tkachev (NSC KIPT NASU, Kharkov, Ukraine)

11. **Immobilization of strontium into the matrix on the base of fluorine apatite**
    E.A.Prudius, F.V. Belkin, L.M.Litvinenko, A.G.Mironova, A.V.Pilipenko, S.Y.Saenko, R.V.tarasov, G.A.Kholomeev, V.A.Shkuroparenko (NSC KIPT NASU, Kharkov, Ukraine)

12. **Study of parameters of hot vacuum compacting on production of barrier and matrix materials for immobilization of RW**
    S.Y.Saenko, V.A.Chkuropatenko, R.V.Tarasov, A.E.Surkov, S.A.Savina, E.A.Prudevus, F.V.Beklin, L.M.Litvinenko, A.G.Mironova (NSC KIPT NASU, Kharkov, Ukraine)

13. **Model-calculation analysis of the effect of gaseous static treatment parameters on kinetics of void elimination in heat-proof nickel alloys**
S.Y.Saenko, J.S.Azhazha, G.A.Kholomeev, A.V.Pilipenko, V.V.Klochikhin[1] (NSC KIPT NASU, Kharkov; [1]JSC "Motor-Sich", Zaporozhye, Ukraine)

14. **Production of ceramics of zirconium dioxide stabilized by 3% Y_2O_3 by the method slip casting for production of protecting materials during the handling with radioactive wastes**
S.Y.Saenko, E.O.Svetlichniy, K.V.Lobach, O.G.Ledovskaya, S.I.Gribov (NSC KIPT NASU, Kharkov, Ukraine)

15. **Nanostructural materials for sorption of uranium from water media**
N.P.Dikiy[1], Y.V.Lyashko[1], E.P.Medvedeva[1], D.V.Medvedev[1], S.Y.Saenko[1], R.V.Tarasov[2], I.D.Fedoretz[2], N.P.Khlapova[2] ([1]NSC KIPT NASU, [2]Kharkov national university named by V.N.Karazin, Kharkov, Ukraine)

16. **Diagnostic control of stress-deformed state of metal of weld N 111 of power units of NPS be magnetic methods**
L.S.Ozhugov, S.V.Hramchenko (NSC KIPT NASU, Kharkov, Ukraine)

17. **Effect of the constraints loss on determination of toughness of vessel reactor steels on the base of surveillance specimens tests**
S.A.Kotrechko, A.V.Zatsarnaya, S.A.Mamedov (Institute of metalophysics named by G.V.Kurdumov NASU, Kiev, Ukraine)

18. **Assembly for determination of residual stresses of surface layer of metal of WWER-1000 vessels**
L.S.Ozhigov, S.V.Gojenko (NSC KIPT NASU, Kharkov, Ukraine)

19. **Procedure and equipment for sampling of metal from reactor WWER-1000 vessel**
I.M.Neklyudov, L.S.Ozhigov, S.V.Gojenko (NSC KIPT NASU, Kharkov, Ukraine)

20. **Damage of pipe-lines of second circuit of power units of WWER-1000**
L.S.Ozhigov, A.S.MItrofanov, E.A,Kraynyuk, A.V.Bajukov[1], P.E.Melnik[1] (NSC KIPT NASU, Kharkov, [1]OP South-Ukrainian NPS, Ukraine)

21. **Planning of VTK-tubing of steam generator PGV-1000M on the vase of obtained data**
L.S.Ozhigov, V.V.Petukhov, I.N.Shapoval (NSC KIPT NASU, Kharkov, Ukraine)

22. **Study of stressed-deformed state of units of steam generator PGV-1000M by the simulation methods (NSC KIPT NASU, Kharkov, Ukraine)**
L.S.Ozhigov, V.V.Petukhov, I.N.Shapoval (NSC KIPT NASU, Kharkov, Ukraine)

23. **Study of possibility of the use of solid phase compound of austenitic and carbon steels in elements of NPS pipe-lines**
B.V.Borts, V.A.Alexandrov, I.A.Vorobyev, I.M.Korotkova, A.A.Lopata, A.T.Lopata, G.V.Pisarev, N.D.Ribaltsenko, V.I.Sitin, N.I.Tatarintsev (NSC KIPT NASU, Khaekov, Ukraine)

24. **Swelling distribution in thick 304 stainless steel blocks in response to gradients in dpa rate and temperature**
F.A. Garner[1], D.L. Porter[2], Colin Knight [2], P.D. Freyer[3], Y. Isobe[4], M. Sagisaka[4], T. Okita[5], Y. Huang[6] ([1]Radiation Effects Consulting; [2]Idaho National Llaboratory; [3]Westinghouse Electric Company, USA; [4]Nuclear Fuel Industries, Japan; [5]University of Tokyo, Japan; [6]University of Wisconsin, USA)

25. **Increase of service life of NPS pipelines at the expense of the use long-length structural inserts of heterogeneous materials**
B.V.Borts, I.A.Vorobyev, I.M.Korotkova, A.A.Lopata, A.T.Lopata, Y.A.Marchenko, N.V.Perun, N.D.Rybalchenko, V.I.Sitin, N.I. Tatarintsev (NSC KIPT NASU, Kharkov, Ukraine)

26. **Correlation of distribution of dust fraction of adsorbent SKT-3 and adsorbed chemical elements iodine filters AU-1500 of ventilation systems for NPS**
I.M.Neklyudov, A.N.Dovbnya, N.P.Dikiy, Y.V.Lyashko, O.P.Ledenev, L.I.Fedorova, P.Ya.Poltinin (NSC KIPT NASU, Kharkov, Ukraine)

27. **Change of mechanical and dissipative characteristics of irradiated vessel steel in the result of magnetic treatment**
V.N.Voyevodin, V.I.Sokolenko, G.D.Tolstolutskaya, M.A.Brovina, A.V.Mazt, V.V.Kalinovskiy, I.E.Kopanets, V.S.Okovit, G.N.Tolmacheva (NSC KIPT NASU, Kharkov, Ukraine)

28. **Holandite matrix for utilization of radioactive wastes components**
B.G.Shabalin, S.Y.Saenko** (*State institution "Institute of geological chemistry of enrironment of National academy of sciences of Ukraine", Kiev; **NSC KIPT NASU, Kharkov, Ukraine)*

29. **Structure properties of Zr-x% Nb stops: modeling from first principles**
V.O.Kharchenko, (Institute of applied physics NASU, Sumi, Ukraine)

30. **Influence of magnetic treatment on magnetic properties of vessel steel 15Cr2NiMFA**
N.A.Chernyak, V.I.Sokolenko, A.V.Matz (NSC KIPT NASU, Kharkov, Ukraine)

31. **Study of adsorbents proposed for the use at restoration of filters for ventilation systems of NPS**
V.I.Sokolenko, E.I.Vinokurov, T.K.Grigorova, R.M.Sibileva, M.A.Khazhmuradov (NSC KIPT NASU, Kharkov, Ukraine)

32. **Characteristic properties of microstructure of failure surface of pressure vessel materials of reactors WWER-1000**
M.A.Saltikov, M.A.Artamonov, O.O.Zabusov, B.A.Gurovich (National researching "Kurchatov institute", Moscow, Russia)

33. **Theory of VVER-1000 fuel rearrangement optimization taking into account both fuel cladding durability and burnup**
S.N. Pelykh and M.V. Maksimov (Odessa National Polytechnic University, Odessa, Ukraine)

34. **Use of non-typical phase transformations for the overhaul-period renewal of pipe lines in nuclear power stations**
Bogachenko M.S.[2], Voyevodin V.N.[1], Oshkaderov S.P.[2], Neklyudov I.M.[1]([1]National science center "Kharkov institute of physics and technology, Kharkov; [2]Institute of metallophysics named by G.V.Kurdyumov NASU, Kiev, Ukraine)

35. **Thermal physical investigation of porosity metallic matrix**
V.A.Astafiev, V.G.Baranov, S.A.Pokrovskiy, A.V.Tenishev, A.V.Khlunov (National researching nuclear university "MIPI, Moscow, Russia)

Thursday, 13 September **$9^{30} – 12^{45}$**

Chairmen: ***B.A.Kalin***
V.S.Vakhrusheva

SESSION OF SECTION *B1*
ZIRCONIUM MATERIALS IN NUCLEAR POWER

1. 20 min **Modern status of zirconium materials in nuclear power**
V.N.Voyevodin, S.D.Lavrinenko, I.M.Neklyudov, N.N.Pilipenko (NSC KIPT NASU, Kharkov, Ukraine)

2. 20 min **Problems of production of zirconium rolled products in Ukraine**
V.S.Vakhrusheva (Pridneprovskaya state academy of building and architecture, Dnepropetrovsk, Ukraine)

3. 20 min **Investigation of magnesium thermal zirconium of domestic production**
S.D.Lavrinenko, N.N.Pilipenko, P.N.Vyugov, Y.P.Bobrov, I.B.Dolya, I.G.Tanztsura, Y.S.Stadnik, D.V.Koblik (NSC KIPT NASU, Kharkov, Ukraine)

4. 20 min **Study of structure-phase state of zirconium alloys after neutron irradiation**
V.N. Shishov (High-technologic science-researching institute of non-organic materials named by A.A.Bichvar, OAO "VNIINM", Moscow, Russia)

COFFEE BREAK 15 min

5. 20 min **Modern prospects of the use of accelerators for study of evolution of structure-phase state of Zr alloys and selection of their radiation resistance**
O.V.Borodin, V.V.Bryk, V.N.Voyevodin, R.L.Vasilenko, V.V.Melnichenko, [1]V.V.Novikov, [1]V.N. Shishov, [1]A.Y.Shevyakov (NSC KIPT NASU, Kharkov, Ukraine; [1]OAO "VNIINM", Moscow, Russia)

6. 20 min **Modification of structure-phase state of surface layers of fuel tubes of zirconium alloys relatively to two-phase coolant**
N.V.Volkov, B.A.Kalin (National reseearchibg nuclear university "MIPI", Moscow, Russia)

7. 20 min **Structure, phase composition and properties of alloys on the base of the system Zr-Al**
N.P.Brodnikovskyi, N.A.Krapivka, Y.A.Zubezt, N.E.Poryadchenko, I.V.Orichch, T.L.Kuznetsova, N.D.Bega, S.A.Firstov (Institute of problems of material science named by I.N.Frantzevich NASU, Kiev, Ukraine)

8. 20 min **Hydrogen in zirconium**
T.P.Chernyaeva, A.V.Ostapov (NSC KIPT NASU, Kharkov, Ukraine)

COFFEE BREAK 15 min

Thursday, 13 September **$13^{00} – 14^{00}$**

Chairmen: ***A.E.Novoselov***
N.A.Azarenkov

SESSION OF SECTION *C*
STRUCTURAL MATERIALS FOR REACTORS OF NEW GENERATION AND FOR FAST REACTORS AND FUSION SYSTEMS

1. 20 min **Supercritical water convection loop (NSC KIPT) for materials assessment for the next generation reactors**
A.S. Bakai[1], V.N. Boriskin[1], A.N. Dovbnya[1], S.V. Dyuldya[1] and D.A. Guzonas[2] (National Science Center "Kharkiv Institute of Physics and Technology", Kharkiv, Ukraine, [2] AECL, Chalk River Laboratories, Chalk River, Ontario, Canada)

2. 20 min **Swelling of ferritic and ferritic-martensitic steels under high damaging doses - first results**
V.V.Bryk, O.V.Borodin, V.N.Voyevodin, A.S.Kalchenko, V.V.Melnichenko, V.V.Novikov[1], V.S.Ageev[1] (NSC KIPT NASU, Kharkov, Ukraine; [1]VNIINM named by A.A.Bochvar, Moscow, Russia)

3. 20 min **Radiation resistance of rear-earth element oxides**
V.D.Risovaniy, A.V.Zakharov, E.M.Muraleva (OAO "SNC NIIAR", Dimitrovgrad, Ulyanovsk region, Russia)

Thursday, 13 September $16^{00} – 19^{00}$

Chairmen: ***A.E.Novoselov***
N.A.Azarenkov

SESSION OF SECTION *C*
STRUCTURAL MATERIALS FOR REACTORS OF NEW GENERATION AND FOR FAST REACTORS AND FUSION SYSTEMS

4. 40 min **Overview of void swelling of ferritic-martensitic and ODS alloys under high dose neutron or ion irradiation: Lessons learned for alloy development**
F.A. Garner[1], M.B. Toloczko[2], V.N. Voyevodin[3], V.V. Bryk[3], O.V. Borodin[3] ([1]Radiation Effects Consulting, Richland WA USA; [2]Pacific Northwest National Laboratory; [3]National Science Center "Kharkov Institute of Physics and Technology", Kharkov, Ukraine)

Difference in ion-induced swelling of two heats of MA957 ODS alloy and the relationship to dispersoid distribution
F.A. Garner[1], M.B. Toloczko[2], V. Bryk[3], O. Borodin[3], V. Voyevodin[3], L. Hsuing[4], P. Hosemann[5] ([1]Radiation Effects Consulting, Richland WA USA; [2]Pacific Northwest National Laboratory USA; [3]National Science Center "Kharkov Institute of Physics and Technology", Kharkov, Ukraine; [4]Lawrence Livermore National Laboratory; [5]University of California at Berkeley, USA)

5. 20 min **Tomography atomic-sonde investigation of nano-scaled properties of dispersion-hardened steel ODS EUROFER in initial state and after irradiation**
S.V.Rogozhkin[1], A.A.Aleev[1], A.G.Zaluzhniy[1], R.P.Kuybida[1], T.V.Kulevoy[1], A.A.Nikitin[1], N.A.Iskanderov[1], N.N.Orlov[1], P.Vladimirov[2], R.Lindau[2], A.Mőslang[2] ([1]SSC RF ITEP, Moscow, Russia; [2]Karlsruhe Institute of Technology, Institute for Material Research-1, Karlsruhe, Germany)

6. 20 min **Effect of lead melts and eutectic lead-bismuth on mechanical properties of ferritic-martensitic steel 20Cr13 and austenitic steel 18Cr10NiTi**
Oleg Yaskiv, Victor Fedirko (Phisical-mechanical institute named by G.V.Karpenko NASU, Lviv, Ukraine)

COFFEE BREAK 15 min

7. 20 min **Long-term strength test of structural steels 12Cr18Ni10Ti and 08Cr16Ni11M3-materials for cladding of burned-up FA of reactor BN-350 in conditions simulating long-term burial of burned-up nuclear fuel**
S.B.Kislitsin, A.P.Gortsev, A.S.Dikov, A.Y.Nesterova (Institute of physics of National nuclear center RK, Almati, Kazashstan)

8. 20 min **Atomic and low energy deuterium interaction with self-damaged tungsten**
O.V. Ogorodnikova[1], S. Markelj[2], K. Sugiyama[1], I. Čadež[2], Yu. Gasparyan[3], V. Efimov[3] ([1)]Max-Planck-Institut für Plasmaphysik, EURATOM Association; Garching, Germany, [2)]Jožef Stefan Institute, Association EURATOM-MHEST, Ljubljana, Slovenia, [3)]National Research Nuclear University "MEPHI", Moscow, Russia)*

9. 20 min **Investigation of lithium carbide as tritium breeding material for blanket of fusion reactor**
M.V.Alenina, V.P.Kolotov, Y.A.Platov[1] (Institute of geochemistry and analytical chemistry named by V.I.Vernadskiy RAS; [1]Institute of metallurgy and material science named by A.A.Baykov RAS, Moscow, Russia)

10. 20 min **Production of beryllium materials for nuclear and fusion power from beryllium containing waste**
M.L.Kotzhar, S.L.Kochubeeva, V.E.Matyasova, V.I.Nikonov (JSC "VNIIHT", Moscow, Russia)

Thursday, 13 September 16^{00} - 19^{00}

Chairmen: ***O.P. Maksimkin***
I.V.Teplukhina

POSTER SESSION OF SECTION *B1*

1. **Alloy zirconium-niobium for NPS**
V.M.Azhazha[1], B.V.Borts[1], I.N.Butenko[1], A.F.Bolkov[2], V.S.Vakhrusheva[3], V.N.Voyevodin[1], P.N.Vyugov[1], N.P.Vyugov[1],V.M.Gritsina[1],V.S.Krasnorutskiy[1,] S.D.Lavrinenko[1], V.V.Levenets[1], K.A.Lindt[2], I.M.Neklyudov[1], L.S.Ozhigov[1], L.S.Ozhigov[1], I.A.Petelguzov[1], N.N.Pilipenko[1], V.I.Popov[2], A.P.Redkina[1], V.I.Savchenko[1], T.P.Chernyaeva[1] ([1]NSC KIPT NASU, Kharkov; [2]SSPE "Zirconium"", Dnyeprodzerzhinsk; [3]Science-researching and designing-technologic institute, Dniepropetrovsk, Ukraine)

2. **Analysis of relationship of corrosion and diffusion characteristics of zirconium alloys on oxidation in gaseous medium**
N.A.Azarenkov, P.V.Vasilenko, V.G.Kirichenko, O.V.Kobalenko, S.V.Litovchenko, T.V.Potina (Kharkov national university named by V.N.Karazin, Kharkov, Ukraine)

3. **Nuclear-physical methods in investigation of materials and articles of zirconium production**
A.V.Zatz, V.V.Levenetz, A.P.Omelnik, V.M.Pistryak, A.A.Szhur (NSC KIPT NASU, Kharkov, Ukraine)

4. **Determination of the profile of F concentration in zirconium with the use of nuclear reaction $^{19}F(P, \alpha\gamma)^{16}O$**
V.V.Levenetz, A.A.Szhur, A.P.Omelnik, N.P.Usikov (NSC KIPT NASU, Kharkov, Ukraine)

5. **Study of parameters of sorption and desorption of hydrogen by quenched and cast alloy Zr-Ni**
D.V.Vinogradov[1], M.A.Tikhonovskiy[2], A.M.Bovda[2] ([1]Science production complex "VDERT", [2]ISSPMT NSC KIPT NASU, Kharkov, Ukraine)

6. **Determination of the diffusion coefficient of oxygen in oxide on zirconium alloys and in the substrate metal on the base of measurement data of corrosion gain in weight and oxide layer thickness**
N.I.Ischenko (STC NFC, KIPT NASU, Kharkov, Ukraine)

7. **Investigation of the phenomenon of "change of slope" on kinetics curves of alloys Zr-1% Nb corrosion**
I.A.Petelguzov, N.I.Ischenko (STC NFC, KIPT NASU, Kharkov, Ukraine)

8. **Effect of Zr and Al additions to the composition of first circuit coolant of reactor WWER-1000 on corrosion of stainless steels and zirconium alloys**
V.S.Krasnorutskiy, I.A.Petelguzov, V.M.Gritsina, V.A.Zuek, M.V.Tretyakov, R.A.Rud, E.A.Slabosiotskaya, N.I.Ischenko, N.V.Svichkar (KIPT NASU, Kharkov, Ukraine)

9. **On activity if chromium and aluminum in zirconium melts**
T.L.Kuznetzova, L.F.Dubikovskiy, M.P.Brodnikovskiy, S.V.Danko, M.I.Levitskiy[1], T.V.Lapshuk[1] (Institute of material science problems named by I.N.Frantzevich NASU; [1]Physical-technical institute of metals and alloys NASU, Kiev, Ukraine)

10. **Substructure changes in hafnium, zirconium and in alloy Zr-1%Nb after solution treatment**
E.V.Karaseva, G.P.Kovtun, K.V.Kovtun, D.G.Malikhin, V.I.Sokolenko, V.I.Zelenskaya (NSC KIPT NASU, Kharkov, Ukraine)

11. **Investigation of creep on specimens of alloys Zr-Nb (Zt-1% Nb and Zr-2,5% Nb) and of stainless steel EI-847 under stress relaxation**
S.P.Klimenko, T.P.Chernyaeva, V.M.Gritzina ((STC NFC,KIPT NASU, Kharkov, Ukraine)

12. **Influence of solution treatment and electron irradiation of alloy Zr-1% Nb on temperature ranges of deuterium desorption**
V.A.Matz, A.N.Morozov, V.G.Kulish, V.I.Zhurba, A.V.Matz (NSC KIPT NASU, Kharkov, Ukraine)

13. **Change of cladding tubes texture made of alloy Zr-1%Nb at creep**
Y.A.Perlovich, M.G.Isaenkova, M.M.Peregud. V.A.Markelov, O.A.Krimskaya, V.V.Fesenko, M.S.Lenskiy, Soe San Tlhu (National research nuclear university "MIPI", Moscow, Russia)

14. **Temperature ranges of gas release and evolution of distribution profiles of deuterium and zirconium**
V.V.Ruzhitskiy, G.D.Tolstolutskaya, I.E.Kopanets, A.V.Nikitin, S.Karpov (NSC KIPT NASU, Kharkov, Ukraine)

15. **Analysis of composition and of thickness of barrier coating on the surface of zirconium**
V.A.Belous, I.E.Kopanetz, S.A.Leonov, G.I.Nosov,G.D.Tolstolutskaya (NSC KIPT NASU, Kharkov, Ukraine)

16. **Influence of temperature on the processes of oxide film production on the surface of alloy Zr-1% Nb**
N.N.Pilipenko, R.V.Azhazha, I.G.Tantzyura, D.V.Kovteba, Y.S.Stadnik (NSC KIPT NASU, Kharkov, Ukraine)

17. **Investigation of structure imperfections of zone melted hafnium**
O.E.Kozhevnikov, P.Y.Vyugov, A.S.Bulatov, A.V.Kornietz (NSC KIPT NASU, Kharkov, Ukraine)

18. **Debye temperature and Grynayzena of hafnium**
A.S.Bulatov, A.V.Korniytz (NSC KIPT NASU, Kharkov, Ukraine)

19. **Determination of crack resistance of fuel tubes produced of zirconium alloys**
V.N.Voyevodin, P.I.Stoev, M.A.Tikhonovskyi, P.N.Vyugov (NSC KIPT, Kharkov, Ukraine)

20. **Mechanical characteristics of fuel tubes of Zr1Nb after deposition of ion-plasma coatings**
V.A.Belous, P.N.Vyugov, A.S.Kuprin, S.A.Leonov, G.I.Nosov, V.D.Ovcharenko, L.S.Ozhigov, A.G.Rudenko, V.I.Savchenko, G.N.Tolmacheva, V.M.Khoroshikh (NSC KIPT NASU, Kharkov, Ukraine)

21. **Influence of ion irradiation on mechanical characteristics of zirconium alloy Zr1Nb**
V.A.Belous, P.N.Vyugov, G.I.Nosov, L.S.Ozhigov, V.I.Savchenko, A.G.Rudenko, G.N.Tolmacheva (NSCKIPT NASU, Kharkov, Ukraine)

22. **Investigation of the structure of fine-dispersed zirconium dioxide produced by thermal vacuum method**
V.A.Kutovoy, A.A.Nikolaenko, V.I.Tkachenko, Y.G.Kazarinov (NSC KIPT NASU, Kharkov, Ukraine)

23. **Influence of deformation by rolling on creep characteristics and electrophysical characteristics of Zr and Zr1Nb**
E.V.Karasev, V.I.Sokolenko, V.A.Frolov (NSC KIPT NASU, Kharkov, Ukraine)

24. **Influence of annealing and outer thermal radiation parameters on stability of zirconium nanostructure**
O.V.Borodin, V.N.Voyevodin, M.A.Tikhonovskyi, A.B.Shevtsov (NSC KIPT NASU, Kharkov, Ukraine)

25. **Two level models of water extraction and uranium complex by supercritical carbon dioxide**
B.V.Borts[1)], S.F.Scoromnaya[1] V.I.Tkachenko[1,2)] ([1]NSC KIPT NASU, [2]Kjarkov national university named by V.N.Karazin, Kharkov, Ukraine)

26. **Influence of ion irradiation on variation of structure of alloy Ti-20Zr in nanocrystalline state**
V.A.Kuprin, O.V.Borodin, V.V.Bryk, R.L.Vasilenko, V.N.Voyevodin, A.S.Kuprin, V.D.Ovcharenko, G.N. Tolmacheva (NSC KIPT NASU, Ukraine)

27. **Particularities of acoustic emission at study of plastic deformation of hafnium**
P.I.Stoev, A.A.Vasiliev, K.V.Kovtun (NSC KIPT NASU, Kharkov, Ukraine)

28. **Acoustic emission at deformation of nanocrystalline titanium and zirconium**
P.I.Stoev, M.A.Tikhonovskiy, A.N.Velikodniy, I.F.Kislyak, K.V.Kutniy (NSC KIPT NASU, Kharkov, Ukraine)

Thursday, 13 September 16^{00} - 19^{00}

Chairmen: ***V.N. Fedirko***
S.A.Kotrechko

POSTER SESSION OF SECTION *C*

1. **Magnetic Phase Formation in Austenitic Steels and Model Alloys Irradiated in BOR-60 and EBR-II fast reactors**
M.N. Gussev[1], J.T. Busby[1], L. Tan[1], F.A. Garner[2], E.M. Rabenberg[3] ([1]Oak Ridge National Laboratory, Oak Ridge, TN, [2]Radiation Effects Consulting, Richland, USA, [3]Boise State University, Boise, Idaho)

2. **Recent insights on the parametric dependence of irradiation creep of austenitic stainless steels**
F.A. Garner[1], E.R. Gilbert[2], V.S. Neustroev[3] ([1]Radiation Effects Consulting, Richland USA; [2]Pacific Northwest National Laboratory, Richland USA; [3]SSC Research Institute of Atomic Reactors, Dimitrovgrad, Russian Federation)

3. **Dynamic mechanical characteristics of monocrystals of the system Si-Ge**
G.Sh.Darsevelidze, G.V.Bokuchava, G.G.Chubinidze, G.N.Archuadze, I.R.Kurashvili, B.M.Shirokov[1] (I. Vekua Sukhumi Institute of Physics and technology, Tbilisi, Georgia; [1]NSC KIPT NASU, Kharkov, Ukraine)

4. **Boron carbide synthesis by boron implantation with carbon ions**
A.I. Guldamashvili, G.V. Bokuchava, Yu.I. Nardaya, Z.G. Salukvadze, Ts.M. Nebieridze, A.V. Sichinava (I. Vekua Sukhumi Institute of Physics and technology, Tbilisi, Georgia)

5. **Relation of variation of diameter and length of gas-filles specimens irradiated in RU BOR-60**
V.S.Neustroev, S.V.Belozerov, E.I.Makarov (OAO "State science center science-researching institute of atomic reactors", Dimitrovgrad, Russia)

6. **Introduction of new technologies of beryllium treatment for production of components for power plants, precision apparatus and items of space technique**
Belikov B.A., Gitarskiy L.S., Sizenev V.S., Strulya I.L. (Institute of beryllium OAO "Kompozit". Korolev, Moscow region, Russia)

7. **Investigation of the effect of irradiation by helium ions of ferrite surface**
N.A.Azarenkov, V.G.Kirichenko, O.V.Kovalenko, S.V.Litovchenko) Kharkov national university named by V.N.Karazin, Kharkov, Ukraine)

8. **Influence of grain size on processes of structure formation of the surface of low-alloyed copper alloys of the the system Cu-Cr-Zr under ion sputtering**
A.I.Belyaeva[1], I.V.Kolenov[1], A.A.Savchenko[1], A.A.Galuza[1], V.S.Voytsenya[2], V.G.Konovalov[2], I.V.Rigkov[2], O.A.Skorik[2], S/I.Solodovchenko[2],A.F.Bardamid[3] ([1]NTU "Kharkov polytechnical institute"; [2]NSC KIPT NASU, Kharkov, Ukraine; [3]Kiev national university named by N.Shevchenko, Kiev, Ukraine)

9. **Production of alloy of ruthenium with curium and technetium**
E.M.Pichuzhkina, K.V.Rotmanov, V.M.Radchenko, S.V.Tomilin (OAO "SNC Science-researching institute of atomic reactors", Dimitrovgrad, Ulyanovsk region, Russia)

10. **Formation of multilayer metal- ceramic structures of liquid metal blanket of fusion reactor**
S.A.Leonov, V.M.Khoroshikh (NSC KIPT NASU, Kharkov, Ukraine)

11. **Investigation of microstructure characteristics of nuclear graphite**
B.P.Zlobenko, B.G.Shabalin, V.G.Yatsenko, Y.G.Fedorenko, L.V.Spasova (SI "Institute of geochemistry of environment NASU, Kiev, Ukraine)

12. **Inhomogeneities of radiation hardening, of swelling and corrosion along the perimeters of FA wrappers made of steel 12Cr18Ni10Ti**
O.P.Maksimkin, N.S.Silnyagina, L.G.Turubarova, K.V.Tzay (Institute for nuclear physics of NNC RK, Almati, Kazakhstan)

13. **Some distinctions of defect structure evolution for steel 08Cr16Ni11M3 under irradiation in reactor BN-350**
O.P.Maksimkin, K.V.Tzay (Institute for nuclear physics of NNC RK, Almaty, Kazakhstan)

14. **Investigation of corrosion resistance of graphite under electron irradiation in the oxygen flow at temperatures 600-800°C**
V.F.Zelenskiy, N.P.Odeychuk, V.P.Rizhov, V.N.Borisenko, V.O.Gamov, A.N.Lyashenko, A.L.Ulibkin, V.K.Yakovlev (NSC KIPT NASU, Kharkov, Ukraine

15. **Volt-ampere characteristics and magnetoresistance of granular high-temperature super conductor $YBa_2Cu_3O_{7-\delta}$ in weak magnetic fields**
T.V.Sukhareva, V.A.Finkel (NSC KIPT NASU, Kharkov, Ukraine)

16. **Obtaining of textured band of paramagnetic alloys Ni-W with high content of tungsten for production of high-temperature superconducting conductors of second generation**
V.V.Derevyanko, S.A. Leonov, M.S.Sungurov, T.V.Sukhareva, V.A.Finkel, Y.N.Shakhov (NSC KIPT NASU, Kharkov, Ukraine)

17. **Formation of cellular structure in beryllium at treatment by pressure**
I.I.Papirov, A.A.Nikolaenko, V.S.Shokurov, A.I.Pikalov (NSC KIPT NASU, Kharkov, Ukraine)

18. **Investigation of steel 18Cr10NiTi alloyed with nanostructured oxides of ZrO_2**
V.M.Arjavitin, A.F.Vanzha, I.M.Korotkova, E.V.Lutsenko, V.I.Sitin (NSC KIPT NASU, Kharkov, Ukraine)

19. **Hafnium – material for compensation systems of excess reactivity in nuclear power reactors**
V.D.Risovaniy, A.A.Vasiliev**, B.A.Shiliyaev**, K.V.Kovtun***
*(*State science center of Russia Federation "NIIAR", Dimitrovgrad, Russia; **NSC KIPT NASU, Kharkov, Ukraine)*

20. **Estimation of the state of hot chamber burial, reloading path and cooling pond of spent fuel maintenance of reactor BN-350**
S.N.Pustobaev[1], A.I.Ivanov[1], I.L.Yakovlev[1], I.L.Tazhibaeva[2], A.Kh.Klepikov[2], V.M.Tzingaev[3], E.S.Tur[3] ([1] TOO "MAEK-Kazatomprom", Aktau; [2]STC BYAT, Almati; [3]INP NUC RK, Kurchatov, Kazakhstan)

21. **Use of pyrocarbon matrix for reversible immobilization of wastes**
I.V.Gurin, V.A.Gurin, S.Y.Saenko, V.V.Guyda, E.V.Gurina (NSC KIPT NASU, Kharkov, Ukraine)

22. **Carbon structural materials of increased purity**
I.V.Gurin, V.A.Gurin, A.N.Bukolov, V.V.guyda, V.V.Kolosenko, S.G.Fursov, A.A.Zavalishun, Y.E.Murin, Y.A.Gribanov. Ya.V.Kravtzov, E.S.Aulova, Y.V.Guyda (NSC KIPT NASU, Kharkov, Ukraine)

23. **Production of metallic calcium of high purity**
A.A.Talanov[1], M.L.Kotzar[2] ([1]Tchepez mechanical plant, Glazov; [2]Leading science-researching institute of chemical technology, Moscow, Russia)

24. **Characteristics of surface energy of some materials containing elements of IV-VI groups**
A.D. Osipov (NSC KIPT NASU, Kharkov, Ukraine)

25. **Temperature variation of adhesion at contact in systems containing elements of IV- VI groups**
A.D. Osipov (NSC KIPT NASU, Kharkov, Ukraine)

14 SEPTEMBER, FRIDAY 9^{30}–14^{00}

Chairmen: ***V.F.Klepikov***
V.A.Belous

SESSION OF SECTION *D*
PHYSICS OF RADIATION AND ION-PLASMA TECHNOLOGIES

1. 20 min. **Multi purpose nanostructurized coating on the base of titanium**
V.A.Belous (NSC KIPT NASU, Kharkov, Ukraine)

2. 20 min **Crystallographic mechanisms of compacting of powder uranium dioxide during molding and sintering**
M.G.Isaenkova, M.Y.Perlovich, V.G.Baranov, A.V. Tenishev (SRNU "MIPI", Moscow, Russia)

3. 20 min **Mechanisms of formation of heterogeneous metal interface joined in solid phase; integration of technology in NPS.**
B.V. Borts (NSC KIPT NASU, Kharkov, Ukraine)

COFFEE BREAK 15 min

4. 20 min **Treatment of materials by relativistic electron beams**
Yu .I. Gofman (Jerusalem College of Technology, Jerusalem, Israel)

5. 20 min **Simulation of evolution of film roughness under magnetron deposition**
A.A.Turkin[1], Y. T. Pei,[2] K .P. Shaha,[2] C.Q.Chen,[2] D. I. Vainshtein,[2] J. Th. M. De Hosson[2] (National Science Center "Karkov institute of physics and technology" , Kharkov, Ukraine,, [2] Department of Applied Physics, Materials Innovation Institute M2i and Zernike Institute for Advanced Materials, University of Groningen, Groningen, Netherlands

6. 20 min **Wear-resistant Ti-Al-Y-N coatings, produced of filtered vacuum - arc plasma by the method PIII&D**
V.A.Belous, V.V.Vasiliyev, A.A.Luchaniniv, E.N.Reshetnyak, V.E.Strelnitskiy, V.I.Kovalenk0, V.G.Marinin (NSC KIPT NASU, Kharkov, Ukraine)

COFFEE BREAK 15 min

7. 20 min **Gas-phase synthesis of nanostructures diamond films alloyed by nitrogen**
Dudnik S.F., Vasilenko R.L., Voyevodin V.N., Gritsina V.M., KoshevoyK.I., Opalev O.A., Reshetnyak E.N., Strelnitskiy V.E. (NSC KIPT NASU, Kharkov, Ukraine)

8. 20 min **Influence of chromium, vanadium and Al_2O_3 – Cr, Al_2O_3 –V coatings on strength of fuel uranium dioxide particles**
A.P.Patokin, V.L.Kapustin, B.M.Shirokov, A.V.Shiyan (NSC KIPT NASU, Kharkov, Ukraine)

9. 20 min **Corrosion resistance of multi component vacuum-arc nitride coatings in reactor water**
V.A.Belous, A.S. Kuprin, V.D.Ovcharenko, E.N.Reshetnyak, M.G.Kholomeev, S.K.Goltvyanitza[1] NSC KIPT NASU, Kharkov; [1]OOO"Rial", Zaporozhye, Ukraine)

FRIDAY, 14 September $16^{00} – 19^{00}$

Chairmen: ***V.E.Storizhko***
Y.A.Perlovich

SESSION OF SECTION *E*
METHODOLOGY OF EXPERIMENT AND IRRADIATION FACILITIES

1. 20 min. **Kiev scanning nuclear microprobe with system of precision automatic 2-d irradiation of specimen by MeB micro beam of ions**
S.O.Lebed, O.G Kukharenko, M.G.Tolmachev, O.V.Tretyak[1] ([1]Institute of high technologies, Kiev state university named by Taras Shevchenko, Ukraine; [2]Research laboratory "Spectrum", Company "T.M.M.", Kiev, Ukraine)

2. 20 min. **Method of thermomechanical analysis to define the molecular-topological structure of the irradiated polymers and composites**
Yurii Andreevich Olkhov[1], Sadulla Reimovich Allayarov[1], David Adams Dixon[2] ([1]Institute of Problems of Chemical Physics of RAS, Chernogolovka, Russia, [2]Department of Chemistry, Alabama University, Alabama, 35487-0336, United States

3. 20 min **Study and use of parametric X-ray radiation of relativistic charged particles from straight and bended crystals**
A.V.Schagin (NSC KIPT NASU, Kharkov, Ukraine)

COFFEE BREAK 15 min

4. 20 min **Experimental specimens of detecting systems**
G.P.Vasilyev, V.K.Voloshin, A.S.Deev, A.A. Kaplyi, S.K.Kiprich, N.I.Maslov, S.V.Naumov, V.D.Ovchinik, S.M.Potin, V.I.Yalovenko 9NSC KIPT NASU, Kharkov, Ukraine)

5. 20 min **Modification of isotopic methods for investigation of diffusion in metals and alloys**
N.A.Azarenkov, A.S.Posukhov, V.E.Semenenko, M.G.Strvoyedov (Kharkov national university named by V.N.Karazin, Kharkov, Ukraine)

6. 20 min **Development and production of low background scintillation detectors on the base of high-purity materials**
G.P.Kovtun, A.P.Shcrban, D.A.Solopikhin, F.A.Danevich, D.V.Poda*, O.G.Polischuk*, V.I.Tretyak* (NSC KIPT NASU, Kharkov; *Institute of nuclear researches NASU, Kiev, Ukraine)*

7. 20 min **Experimental methods for investigation of impurity atoms position in monocrystals by the method of ion channeling**
A.A.Vnuchenko. A.B.Kramchenkov, V.L.Denisenko, A.N.Bugay, S.N.Ignatenko, Y.A.Pavlenko, R.Y.Lopatkin, V.E.Srorizhko (Institute of applied physics NASU, Sumy, Ukraine)

14 September, FRIDAY 16^{00} - 19^{00}

Chairmen: ***B.M.Shirokov***
S.V.Litovchenko

POSTER SESSION OF SECTION *D*

1. **Reaction-activated diffusion chromium plating of steel 20in nano crystalline powder**
V.I.Zmiy, S,G.Rudenkiy (NSC KIPT NASU, Kharrov, Ukraine)

2. **Electroplastic treatment of zirconium alloy surface by nanoparticles**
N.A.Azarenkov, V.G.Kirichenko, S.V.Litovchenko, V.A.Chishkala, G.N.Litovchenko (Kharkov national university named by V.N.Karazina, Kharkov, Ukraine)

3. **Evolution of microstructure of zirconium alloy surface under laser exposure**
N.A.Azarenkov, V.G.Kirichenko, O.V.Kovalenko, S.V.Litovchenko, S.V.Starostenko (Kharkov national university named by V.N.Karazin, Kharkov, Ukraine)

4. **Production and study of high porosity oxide ceramics**
N.A.Azarenkov, V.G.Kirichanko, S.V.Litovchenko, V.A.Chishkala, N.S. Bizin (Kharkov national university named by V.N.Karazin, Kharkov, Ukraine)

5. **Protective quasieutectic coatings on steels**
N.A.Azarenkov, V.G.Kirichanko, S.V.Litovchenko, V.A.Chishkala, I.A.Manucharyan (Kharkov national university named by V.N.Karazin, Kharkov, Ukraine)

6. **Optimizing of the process of calculation of isobara-isothermic potential under chemical deposition of tungsten, tantalum and silicon carbide**
P.I.Glushko, A.Y.Zhuravlev, B.M.Shirokov, A.V.Shiyan (NSC KIPT NASU, Kharkov, Ukraine)

7. **Study of characteristics of dysprosium hafnat powder dispersivity after treatment in planetary mill**
N.N.Belash[1], I.A.Chernov[1], E.A.Svetlichniy[2], K.V.Lobach[2] ([1]National science complex "Nuclear fuel cycle", [2]ISSPMT, NSC KIPT NASU, Kharkov, Ukraine)

8. **Use of argon for increase of hardness of nitride compound of system Ti-Si-N at vacuum-arc deposition**
V.A.Belous[1], Y.A.Zadnyeprovskiy[1], N.S.Lomino[1], O.V.Sobol[2] ([1]NSC KIPT ; [2]NTU KPI, Kharkov, Ukraine)

9. **Use of the method of phase diagrams at analysis of characteristics of diamond-like coating deposited in the regime of pulsed potential**
V.V.Vasiliyev, A.I.Kalinichenko, V.E.Strelnitsky (NSC KIPT NASU, Kharkov, Ukraine)

10. **Dependence of electrophysical characteristics of diamond coatings on their thickness and condition of production**
A.A.Verevkin, V.I.Gritsina, S.F.Dudnuk, V.E.Kutniy, O.A.Opalev, A.S.Rybka, V.E.Strelnitskiy (NSC KIPT NASU, Kharkov, Ukraine)

11. **Nanocomposite coatings on the base of solid solutions (Zr, Ti)N and (Ti, Hf)N alloyed by silicon**
[1]A.A.Drobyshevskay, [2]V.M.Beresnev, [2]V.V.Grudnitskiy, [3]P.V.Turbin, [3]L.V.Malikov ([1]NSC KIPT NASU, [2]Kharkov national university named by V.N.Karazin, [3]Science physical-technologic center MONMS and NASU, Kharkov, Ukraine)

12. **Principles of production of multilayer functional coatings on the base of refractory compounds by combined methods of deposition**
Drobyshevskaya A.A. (NSC KIPT NASU, Kharkov, Ukraine)

13. **Multilayer materials for protection off electron-photon flows**
B.V.Borts, I.G.Marchenko)NSC KIPT NASU, Kharkov, Ukraine)

14. **Dislocation-induced coalescence in the formation of film nanostructure deposited from atom-ion flows**
I.G.Marchenko, I.I.Marchenko (NSC KIPT NASU, Kharkov, Ukraine)

15. **Alloying of TiN coatings by silicon by simultaneous sputtering of Ti ans Si targets with the gas plasma source**
V.A.Belous, V.M.Lunev, G.I.Nosov, A.S.Kuprin, G.N.Tolmacheva (NSC KIPT, Kharkov, Ukraine)

16. **Mechanical characteristics of vacuum-arc alloyed nitrid titanium coatings**
V.A.Belous, I.N.Babaev, Y.A.Zadneprovskiy, V.G.Marinin (NSC KIPT NASU, Kharkov, Ukraine)

17. **Variation of thermal stresses in steel Ct40 as the result of magnetic treatment**
A.V.Mazt, L.S.Ozhigov, V.I.Sokolenko, V.V.Varganov (NSC KIPT NASU; *Ukrainian science-research institute of refracroty materials named by A.S.Berezhnoy, Kharkov, Ukraine)*

18. **Processes of dynamic sorption of caesium by ceolites from water solutions**
V.V.Levenets, A.Y.Lonin, A.A. Schur (NSC KIPT NASU, Kharkov, Ukraine)

Applied radiation effects of metallic materials treatment by tube high-current relativistic electron beam
A.V.Babich[1], S.E.Donetz[1], V.V.Litvinenko[1,2], V.F.Klepikov[1], Y.F.Lonin[3], A.G.Ponomarev[3], V.T.Uvarov[3] ([1]Institute of electrophysics and radiation technologies NASU; [2]Kharkov national university named by V.N.Karazin; [3]NSC KIPT NASU, Kharkov, Ukraine)

Mechanisms of nanocrystalline structure formation in surface layers of steel EK-181
A.V.Panin, M.V.Leontieva-Smirnova (Institute of physics of strength and material science SD RAS, Tomsk,; *JSC "High technology science technology institute of inorganic materials named by A.A. Bochvar", Moscow, Russia)*

Formation of structure and distribution of dust particles and adsorbed chemical elements in air filter of NPS in conditions of forced acoustic resonance
O.P.Ledenev, I.M.Neklyudov (NSC KIPT NASU, Kharkov, Ukraine)

14 September, Friday

16^{00} - 19^{00}

Chairmen: ***V.V.Levenets***
V.B.Yuferov

POSTER SESSION OF SECTION *E*

1. **Development of methods for determination of cesium content in water solutions**
   V.V.Levenezt, A.Y.Lonin, A.A.Schur (NSC KIPT NASU, Kharkov, Ukraine)

2. **Investigation of detecting properties of structures on the base of laminated semiconductors**
   O.N.Sidor, Z.D.Kovalyuk, V.I.Dubinko[1] (Chernovtzhy department of the Institute of problems of material science named by I.N.Franzhevich NASU; [1]NSC KIPT NASU, Kharkov, Ukraine)

3. **Acoustic-emission research of laminated composites at scretch testing**
   N.A.Azarenkov, V.M.Beresnev, V.G.Kirichenko, S.V.Litovchenko, G.N.Litovchenko, L.V.Gravnova (Kharkov national university named by V.N.Karazin, Kharkov, Ukraine)

4. **Study of ecological state of soils in village Pyatikhatky**
   A.V.Zazt, V.A.Diordozta, V.V.Levenezt, I.L.Rolik, M.F.Kozhevnikova, A.A.Szhur, I.V.Udalov, N.P.Usikov (NSC KIPT NASU, Kharkov, Ukraine; *Kharkov national university named by V.N.Karazin, Kharkov, Ukraine)*

5. **Study of melted metal surfaces by in situ method of backward Rutherford scattering**
   A.B.Kramchenkov, M.I.Zakharezt, A.N.Bugay, V.E.Storigko (institute of applied physics NASU, Sumy, Ukraine)

6. **Spectrometer of positron life with coincidence method $\beta^{+}\gamma$**
   A.B.Dudnik, A.N.Bugay, V.Y,Zhovkliy, A.I.Kulmientiev, V.E.Stirozhko, A.I.Chemeris (Institute of applied physics NASU, Sumi, Ukraine)

7. **Electro pulsed grinding of elastic materials at low temperatures**
   V.B.Yuferov, A.N.Ozerov, D.V.Vinnikov, I.V.Buravilov, A.N.Ponomarev (NSCKIPT NASU, Kharkov, Ukraine)

8. **Electro hydraulic degassing of electrolytes at low pressure**
   D.V.Vinnikov, A.N.Ozerov, V.B.Yuferov, I.V.Buravilov, A.N.Ponomarev (NSC KIPT NASU, Kharkov, Ukraine)

9. **Experimental facility for express simulation radiation tests**
   V.F.Zelenskiy, N.P.Odeychuk, V.P.Ryzhov, V.O.Gamov, A.L.Ulibkin, V.K.Yakovlev (NSC KIPT NASU, Kharkov, Ukraine)

10. **Methodology of structure materials irradiation on linear ion accelerator**
    R.A.Anokhin, V.A.Bomko, S.N.Dubnyuk, A.V.Zhuravlev, B.V.Zaytsev, O.V.Kalmikov, A.F.Kobezt, K.V.Pavliy, G.D.Tolstolutskay (NSC KIPT NASU, Kharkov, Ukraine)

11. **Temperature stability of characteristics of radiation monitoring unit of detecting on the base of CdZnTe**
S.A.Sokolov, D.V.Nakonechniy, A.A.Zakharchenko, A.V.Rybka, V.E.Kutnyi (NSC KIPT NASU, Kharkov, Ukraine)

12. **Method of mechanical properties measurement of ring specimens under tensil testing**
L.S.Ozhigov, A.G.Rudenko, V.I.Savchenko (NSC KIPT NASU, Kharkov, Ukraine)

13. **Use of pyro ceramics for acceleration of particles**
A.V.Shchagin, V.S.Miroshnik, V.I.Volkov, A.M.Egorov (NSC KIPT NASU, Kharkov, Ukraine)

14. **Energy resolution of the Si(Li) x-ray detector**
D.A. Sanzharevsky, V.A. Stratienko, A.V. Shchagin (National Science center KIPT NASU, Ukraine)

15. **Temperature dependence of energy resolution and current of leakage Si planar detectors**
G.P.Vasiliev, V.K.Voloshin, A.S.Deev, N.I.Maslov, V.D.Ovchinikov, S.M.Potin, M.Y.Shulika, V.I.Yalovenko (NSC KIPT NASU, Kharkov, Ukraine)

16. **Measurement of radiation energy of spectrometer on the base of non –cooled silicon detectors**
G.P.Vasiliev, V.K.Voloshin, A.S.Deev, N.I.Maslov, S.V.Naumov. V.D.Naumov, V.D.Ovchinik, S.M.Potin, V.I.Yalovenko (NSC KIPT NASU, Kharkov, Ukraine)

17. **Source of metal ions for accelerating facilities**
P.A.Litvinov, V.A.Baturin, S.A.Pustovoytov (Institute of applied physics NASU, Sumi, Ukraine)

18. **Measurement of spectrum of soft X-ray radiation of solid state source excited by tritium**
A.N.Dovbnya, A.M.Egorov, D.A.Sangarevskiy, V.A.Stratienko, A.V.Shchagin (NSC KIPT NASU, Kharkov, Ukraine)

19. **Source of neutrons based on sub-critical accelerator-driven assembly – instrument for material science investigation and production of medical radioisotopes**
I.M.Neklyudov, I.M.Karnaukhov, V.N.Borts, A.N.Vodin, A.Y.Zelinskiy, S.N.Oleynik, I.V.Ushakov (NSC KIPT NASU, Kharkov, Ukraine)

SATURDAY, 15 September $9^{30} – 13^{00}$

Chairmen: ***I.M.Neklydov***
V.N.Voyevodin

GENERAL QUESTIONS. CONFERENCE CLOSING

1. 20 min **Handling of wastes in Ukraine: state, problems and prospective solutions**
G.V.Lisichenko[1], S.Y.Saenko[2] ([1]Institute of geochemistry of environment of NAS and EM of Ukraine, Kiev; [2]NSC KIPT NASU, Kharkov, Ukraine)

2. 20 min **Plans of construction of new researching fast reactor in NIIAR**
A.L.Izhutov, M.N.Svyatkin, V.M.Troyanov (JSC SSC "NIIAR", Dimitrovgrad, Russia)

3. 20 min **IAEA Coordinated Research Projects on modeling and characterization of nuclear fuel and in-core structural materials**
V. Inozemtsev (International Atomic Energy Agency, Vienna, Austria)

COFFEE BREAK 15 min

4. 20 min **Science-technical accompanying of nuclear power development and use of radiation technologies in different fields of economy of Ukraine**
I.M.Neklyudov (NSC KIPT, Kharkov, Ukraine)

5. 40 min **Reports of section chairmen**

GENERAL DISCUSSION