2nd International School on Surface Science "Technologies and Measurements on Atomic Scale"

1 – 7 October 2012, Khosta (Sochi), Russia

Students oral session

16:20 – 16:35. **V. Zheltov**[1], B. Andryushechkin[1], G. Zhidomirov[1], K. Eltsov[1], B. Kierren[2] ([1]*A.M. Prokhorov General Physics Institute of Russian Academy of Sciences, Moscow, Russia;* [2]*Institut Jean Lamour - UMR CNRS 7198, Nancy, France)* **Substrate-mediated interactions between chlorine atoms adsorbed on Au(111) and Ag(111): Scanning Tunneling Microscopy and Density Functional Theory approach.**

16:35 – 16:50. **A.B. Odobescu**, S.V. Zaitsev-Zotov (Kotel'nikov IRE RAS, Moscow, Russia) **Energy gap revealed by low-temperature scanning-tunneling spectroscopy of Si(111)-7x7 surface in illuminated slightly-doped crystals.**

16:50 – 17:05. **A.G. Rybkin**[1], A.M. Shikin[1], D. Marchenko[1,2], A. Varykhalov[2], and O. Rader[2] ([1]Physical department, St. Petersburg State University, Russia; [2]Helmholtz-Zentrum Berlin für Materialien und Energie, Elektronenspeicherring BESSY II, Germany) **Spin-dependent avoided-crossing effect on quantum-well states in Al/W(110).**

17:05 – 17:20. **D. Usachov**[1], A. Fedorov[1], O. Vilkov[1,2], V.K. Adamchuk[1], D.V. Vyalikh[1,2] ([1]Faculty of Physics, St. Petersburg State University, Russia; [2]Institute of Solid State Physics, Dresden University of Technology, Germany) **Photoemission-controlled tuning of pristine and doped graphene electronic structure.**

17:20 – 17:35. **O.E. Tereshchenko**[1,2], K.A. Kokh[3], S.V. Makarenko[1], V.A. Golyashov[2] ([1]Institute of Semiconductor Physics SB RAS, Novosibirsk; [2]Novosibirsk State University; [3]Institute of geology and mineralogy SB RAS, Novosibirsk, Russia) **Realization of lateral p-n junction on (0001) Bi_2Te_3 topological insulator**.

17:35 – 17:50. **A.V. Babichev**[1,2], V.Y. Butko[1,2], M.S. Sobolev[1], E.V. Nikitina[1], N.V. Kryzhanovskaya[1,2], and A.Yu. Egorov[1,2] ([1]St. Petersburg Academic University, Nanotechnology Research and Education Centre, RAS; [2]Ioffe Physical Technical Institute, Russian Academy of Science, St. Petersburg, Russia) **Electroluminescence of $GaP_xN_yAs_{1-x-y}$ nanoheterostructures through a transparent electrode made of CVD graphene.**

Students poster session

P1. **P.G. Ulyanov** (Saint-Petersburg State University, St. Petersburg, Russia) **AFM and EBSD applied to study the nanostructure of the metals and of the alloys subjected to thermal stress.**

P2. **K.I. Borygina** (Saint-Petersburg State University, St. Petersburg, Russia) **Hybrid polymer nanosystems based on ZnSe nanoparticles: AFM and XPS Study.**

P3. **Anna A. Rybkina**[1], A.G. Rybkin[1], A.M. Shikin[1], D. Marchenko[1,2], A. Varykhalov[2], and O. Rader[2] ([1]Physical department, St. Petersburg State University, Russia; [2]Helmholtz-Zentrum Berlin für Materialien und Energie, Elektronenspeicherring BESSY II, Berlin, Germany) **Features of electronic and spin structure of graphene after Au and Bi intercalation.**

P4. **V.E. Fahriev**, R.Z. Bakhtizin (Bashkir State University, Ufa, Russia) **Precision measurements of temperature Si-substrates in ultrahigh vacuum.**

P5. **B.V. Senkovskiy** (Saint-Petersburg State University, Russia) **Electronic energy structure of TiNi and TiNi-Cu alloys.**

P6. A. Dmitriev, **N. Fedotov**, V. Nasretdinova, S. Zaitsev-Zotov (Kotel'nikov IRE RAS, Moscow, Russia) **Low-temperature scanning tunneling microscopy and subsurface defects of Bi_2Se_3.**

P7. **V. Sevriuk**[1], I.V. Shalnev[2], P.N. Brunkov[2], A.A. Gutkin[2] ([1]St. Petersburg Academic University — Nanotechnology Research and Education Centre of the Russian Academy of Sciences; [2]Ioffe Physical-Technical Institute of the Russian Academy of Sciences, St. Petersburg, Russia) **Statistical analysis of AFM topography images of nanoparticles on flat surface.**

P8. **Maxim Sobolev** (Institution of the Russian Academy of Sciences Saint Petersburg Academic University – Nanotechnology Research and Education Centre RAS, Russia) **MBE growth of III-V-N materials on Si substrates.**

P9. **A.V. Babichev**[1,2], V.E. Gasumyants[3], and V.Y. Butko[1,2] ([1]St. Petersburg Academic University, Nanotechnology Research and Education Centre, RAS; [2]Ioffe Physical Technical Institute, Russian Academy of Science, St. Petersburg; [3]St. Petersburg State Polytechnical University, Russia) **Resistivity and thermopower of monolayered graphene.**

P10. **P.V. Fedotov**[1], A.I. Chernov[1], A.V. Talyzin[2], A.G. Nasibulin[3], E.D. Obraztsova[1] ([1]A.M. Prokhorov General Physics Institute, RAS, Moscow, Russia; [2]Department of Physics, Umeå University, Sweden; [3]NanoMaterials Group, Aalto University, Espoo, Finland) **Photoluminescence of graphene nanoribbon and nanotube composites.**

P11. **A.V. Pershina**[1,2], S.N. Bokova[2], E.D. Obraztsova[2], K.V. Elumeeva[3,4,5], A. V. Ishchenko[3], S.I.Moseenkov[3], V.L. Kuznetsov[3,5,6] ([1]National Research Nuclear University «MEPhI», Moscow; [2]A.M. Prokhorov General Physics Institute RAS, Moscow; [3]Boreskov Institute of Catalysis SB RAS, Novosibirsk, [4]Nikolaev Institute of Inorganic Chemistry, SB RAS, Novosibirsk; [5]Novosibirsk State University; [6]Novosibirsk State Technical University, Russia) **Raman diagnostics of onion-like carbon.**

P12. **S.N. Bokova-Sirosh**[1], E.D. Obraztsova[1], T.S. Mamonova[2], M.V. Shablygin[2] and Y.I. Yuzyuk[3] ([1]A.M. Prokhorov General Physics Institute, RAS, Moscow; [2]A.N. Kosygin Moscow State Textile University; [3]Southern Federal University, Rostov-on-Don, Russia) **Optical spectroscopy of polymer systems containing single-wall carbon nanotubes.**

P13. **E.A. Obraztsova**[1,2], N.A. Polgun[1], A.S. Orekhov[3], P.V. Shapkin[4], E.D. Obraztsova[1] ([1]A.M. Prokhorov General Physics Institute, RAS; [2]M.M. Shemyakin & Yu.A. Ovchinnikov Institute of Bioorganic Chemistry, RAS; [3]A.V. Shubnikov Institute of Crystallography, RAS; [4]P.N. Lebedev Physical Institute, RAS, Moscow, Russia) **Synthesis and characterization of Bi2Se$_3$ and Bi$_2$Te$_3$ crystals and flakes.**

P14. **A.I. Chernov**[1], E.D. Obraztsova[1], H. Kuzmany[2] ([1]A.M. Prokhorov General Physics Institute RAS, Moscow, Russia; [2]Fakultät für Physik, Universität Wien, Austria) **Ferromagnetic decoration of encapsulated single-walled carbon nanotubes.**

P15. **Petr A. Obraztsov**[1,2], Tommi Kaplas[2], Sergey V. Garnov[1], Yuri P. Svirko[2] ([1]A.M. Prokhorov General Physics Institute RAS, Moscow, Russia; [2]Department of Physics and Mathematics, University of Eastern Finland, Joensuu, Finland) **All-optical injection and control of photocurrents in unbiased graphene.**

P16. **A.A. Kapustin**, V.S. Stolyarov and S.I. Bozhko (Institute of Solid State Physics RAS, Chernogolovka, Russia) **STM/STS study of steps at the surface of ternary compound Bi$_2$Te$_2$Se.**

P17. **D.M. Korotin**[1], S. Bartkowski[2], E.Z. Kurmaev[1], M. Neumann[2], D.V. Gunderov[3], R.Z. Valiev[3] ([1]Institute of Metal Physics, Russian Academy of Sciences-Ural Division, Ekaterinburg, Russia; [2]Faculty of Physics, University of Osnabruck, Germany; [3]Institute of Physics of Advanced Materials, Ufa State Aviation Technical University, Russia) **XPS characterization of the surface of coarse-grained and nanostructured titanium and nitinol.**

P18. **A.D. Protopopova**, A.P. Tolstova, E.G. Zavyalova, A.M. Kopylov, V.A. Tverdislov, I.V. Yaminsky (Lomonosov Moscow State University, Physics Department, Russia) **Structure of adsorbed fibrinogen studied by single-molecule atomic force microscopy and molecular dynamics simulation.**

P19. **L.V. Arapkina**, V.A. Chapnin, K.V. Chizh, L.A. Krylova, V.A. Yuryev (A.M. Prokhorov General Physics Institute, Russian Academy of Sciences, Moscow, Russia) **Influence of irregular growth of monoatomic steps during Si/Si(001) epitaxy on generation of surface defects.**