III International School-Conference

“Applied Nanotechnology & Nanotoxicology”

October 10 – 13, 2019

Sochi, Russia

Boreskov Institute of Catalysis
Institute of Cytology and Genetics
ITMO University

III International School-Conference
Applied Nanotechnology and Nanotoxicology
ANT-2019

October 10 - 13, 2019

Sochi, Russia

SCIENTIFIC PROGRAM

Novosibirsk-2019

Organised by

Boreskov Institute of Catalysis, Novosibirsk, Russia
Institute of Cytology and Genetics, Novosibirsk, Russia
ITMO University, Saint Petersburg, Russia

Honorable Presidents of the Conference

Prof. Valerii BUKHTIYAROV, Boreskov Institute of Catalysis, Novosibirsk, Russia
Prof. Aristides TSATSAKIS, University of Crete, Heraklion, Greece

International Advisory committee

Prof. Anna SHVEDOVA, West Virginia University, Morgantown, WV, USA
Prof. Liliya FATKHUTDINOVA, Medical University Department of Hygiene and Occupational Health, Kazan, Russia
Prof. Elmira BADAMSHINA, Institute of Problems of Chemical Physics of RAS, Chernogolovka, Russia
Dr. Vladimir VINOGRADOV, ITMO University, St. Petersburg, Russia

Program committee

Prof. Kirill GOLOHVAST, Far Eastern Federal University, Vladivostok, Russia
Dr. Aleksey VEDYAGIN, Boreskov Institute of Catalysis, Novosibirsk, Russia
Prof. Mikhail MOSHKIN, Institute of Cytology and Genetics, Novosibirsk, Russia
Dr. Alexander VINOGRADOV, ITMO University, St. Petersburg, Russia
Dr. Dmitry SHLYAPIN, Center of New Chemical Technologies BIC SB RAS, Omsk, Russia

Organizing committee

Chairperson

Dr. Aleksey VEDYAGIN, Boreskov Institute of Catalysis, Novosibirsk, Russia
Dr. Yury BAUMAN, Boreskov Institute of Catalysis, Novosibirsk, Russia
Dr. Ekaterina ILYINA, Boreskov Institute of Catalysis, Novosibirsk, Russia
Dr. Maxim MEL'GUNOV, Boreskov Institute of Catalysis, Novosibirsk, Russia
Dr. Liudmila STEPANOVA, Center of New Chemical Technologies BIC SB RAS, Omsk, Russia

Secretariat

Marina KLYUSA, Boreskov Institute of Catalysis, Novosibirsk, Russia
Marina SUVOROVA, Boreskov Institute of Catalysis, Novosibirsk, Russia

Secretary

Svetlana LOGUNOVA, Boreskov Institute of Catalysis, Novosibirsk, Russia

Scientific program

The main topics of the Conference scientific program are:

1. **Nanotechnology**
   - Synthesis of novel nanostructured materials
   - Unique physicochemical features of nanostructures
   - Characterization methods for nanoparticles
   - Nanosize effects in catalysis
   - Nanotechnologies for green chemistry and clean energy

2. **Nanotoxicology**
   - Toxicology of nanoparticles
   - Toxicity of purified and non-purified nanomaterials, oxidative stress and antioxidants
   - Tissue specific response to nanoparticles
   - Recognition and clearance of nanoparticles
   - Individual resistance/susceptibility to nanocontamination
   - Animal models in Nanotoxicology
   - Nanomedicine (nanoparticles as carriers of pharmaceuticals; nanoparticle based contrast agents; targeted delivery to pathology center; therapy with catalytically active nanoparticles; nanoparticles in the transmission of external influences)

The Scientific program includes plenary (45 min), keynote (30 min) lectures, oral (15 min) and poster presentations.

Proceedings

Selected papers will be published in the special issues of **"Toxicology Reports"**, "**Biointerface Research in Applied Chemistry**", and "**Letters in Applied NanoBioScience**" after Conference. The submission deadline is February 20, 2020.

Time-table

III International School-Conference «Applied Nanotechnology & Nanotoxicology» «ANT-2019»

October 10 – 13, 2019, Sochi, Russia

Time	October 10 Thursday	Time	October 11 Friday	Time	October 12 Saturday	October 13 Sunday
		Chair:	*Vedyagin A.*	*Chair:*	*Kamanina N.*	
		09:00-09:45	**PL-2 Kamanina**	**09:00-09:45**	**PL-4 Moshkin**	
		09:45-10:30	**PL-3 Hernández**	**09:45-10:30**	**PL-5 Mishakov**	
		10:30-11:00	***Coffee***	**10:30-11:00**	***Coffee***	
		Chair:	*Krivoshapkina E.*	*Chair:*	***Brzhezinskaya M.***	
		11:00-11:30	**KL-3 Brzhezinskaya**	**11:00-11:30**	**KL-5 Shur**	
		11:30-12:00	**KL-4 Dostanic**	11:30-11:45	OP-11 Kitsyuk	
		12:00-12:15	OP-01 Yurpalov	11:45-12:00	OP-12 Sherstiuk	
		12:15-12:30	OP-02 Mel'gunov	12:00-12:15	OP-13 Minigalieva	
09:00-16:00	**Registration**	12:30-12:45	OP-03 Shubin	12:15-12:30	OP-14 Nikolaeva	
		12:45-13:00	OP-04 Yeganyan	12:30-12:45	OP-15 Martakov	
		13:00-14:30	***Lunch***	12:45-13:00	OP-16 Golubeva	
		Chair:	*Shur V.*	**13:00-14:30**	***Lunch***	**10:00 – 19:00** **Post-Tour to Sochi**
		14:30-14:45	OP-05 Stoyanovskii	*Chair:*	*Mel'gunov M.*	
		14:45-15:00	OP-06 Stepanova L.	14:30-14:45	OP-17 Dorovskikh	
		15:00-15:15	OP-07 Prozorovich	14:45-15:00	OP-18 Krivoshapkina	
		15:15-15:30	OP-08 Tregubenko	15:00-15:15	OP-19 Krasnikova	
		15:30-15:45	OP-09 Demidova	15:15-15:30	OP-20 Nazarovskaia	
Chair:	*Moshkin M.*	15:45-16:00	OP-10 Bauman	**15:30-16:30**	**Poster Session**	
16:00-16:15	**Opening** OP0-Vedyagin	**16:00-19:00**	**Sightseeing excursion around Rosa Khutor**	**16.00-16.30**	***Coffee***	
				Chair:	*Mishakov I.*	
16:15-17:00	**PL-1 Imae**			16:30-16:45	OP-21 Koskin	
17:00-17:30	**KL-1 Krivoshapkin**			16:45-17:00	OP-22 Alikin	
17:30-18:00	**KL-2 Golokhvast**			17:00-17:15	OP-23 Karnaukhov	
18:00-18:05	**Group Photo**			17:15-17:30	OP-24 Kuryavyi	
				17:30-18:00	**Closing**	
19:00-22:00	**Welcome reception**			**19:00-22:00**	**Banquet**	

Scientific program

October 10, Thursday

The hotel Golden Tulip Rosa Khutor

09.00 – 16.00 *Registration*

EINDHOVEN HALL

16.00 – 16.15 ***Opening Ceremony***

OP-Opening
Vedyagin A.A., Zibareva I.V.
BALANCING BETWEEN TECHNOLOGICAL ADVANTAGES AND TOXICOLOGICAL JEOPARDY OF THE NANOOBJECTS
Boreskov Institute of Catalysis, Novosibirsk, Russia

PLENARY LECTURE

Chairperson: Professor Mikhail Moshkin

16.15 – 17.00
PL-1
Imae T.
PREPARATION OF METAL/METAL OXIDE/CARBON NANOPARTICLES AND THEIR FUNCTIONALITIES AND CATALYTIC APPLICATIONS
National Taiwan University of Science and Technology, Taipei, Taiwan, ROC

KEYNOTE LECTURES

17.00 – 17.30
KL-1
Krivoshapkin P.[1], Koshevaya E.[2], Kiselev G.[1], Sherstyuk A.[1], Nazarovskaia D.[1], Krivoshapkina E.[1], Morozov V.[3], Shtil A.[4]
HIGH-ELECTRON DENSITY NANOMATERIALS FOR THERANOSTICS
[1]ITMO University, Saint Petersburg, Russia
[2]Institute of Chemistry Komi SC RAS, Syktyvkar, Russia
[3]Burnazyan Federal Medical Biophysical Center, Moscow, Russia
[4]Blokhin Cancer Research Center, Moscow, Russia

17.30 – 18.00
KL-2
Golokhvast K.S., Chaika V.V.
NANOMATERIALS - NEW CHALLENGES
Far Eastern Federal University, Vladivostok, Russia

18.00 – 18.05 ***Group Photo***

19.00 ***Welcome reception***

October 11, Friday

The hotel Golden Tulip Rosa Khutor

EINDHOVEN HALL

PLENARY LECTURES

Chairperson: Dr. Aleksey Vedyagin

09.00 – 09.45
PL-2
Kamanina N.[1,2]
MODIFICATION OF THE MATERIAL PROPERTIES VIA NANOTECHNOLOGY APPROACH
[1]Vavilov State Optical Institute, Saint Petersburg, Russia
[2]Saint Petersburg Electrotechnical University, Saint Petersburg, Russia

09.45 – 10.30
PL-3
Hernández Jerez A.F.
NANOFORMULATIONS OF PESTICIDES AND SAFETY - TOXICOLOGY AND RISK ASSESSMENT
Department of Legal Medicine and Toxicology, University of Granada, Granada, Spain

10.30 – 11.00 *Coffee*

KEYNOTE LECTURES

Chairperson: Dr. Elena Krivoshapkina

11.00 – 11.30
KL-3
Brzhezinskaya M.
INVESTIGATION OF ADVANCED CARBON NANOSTRUCTURES USING SYNCHROTRON RADIATION
Helmholtz-Zentrum Berlin fuer Materialien und Energie, Berlin, Germany

11.30 – 12.00
KL-4
Dostanić J., Lončarević D.
NEW AND FUTURE DEVELOPMENTS IN PHOTOCATALYTIC WATER SPLITTING
University of Belgrade, Belgrade, Serbia

ORAL PRESENTATIONS

12.00 – 12.15
OP-1
Drozdov V.A., Trenikhin M.V., Gulayeva T.I., Yurpalov V.L., Lavrenov A.V.
STRUCTURE, TEXTURE AND MORPHOLOGY OF THE NANOPARTICLES FORMED BY RELATIVISTIC ELECTRON BEAM IRRADIATION OF CARBON BLACK
Center of New Chemical Technologies BIC, Omsk, Russia

12.15 – 12.30
OP-2
Mel'gunov M.S.
SPECIFIC SURFACE AREA OF METAL-ORGANIC FRAMEWORKS
Boreskov Institute of Catalysis, Novosibirsk, Russia

12.30 – 12.45
OP-3
Shubin Y.V.[1], Plyusnin P.E.[1], Vedyagin A.A.[2], Stoyanovskii V.O.[2], Korenev S.V.[1]
SYNTHESIS AND CATALYTIC PROPERTIES OF NANOALLOYS OF IMMISCIBLE METALS
[1]Nikolaev Institute of Inorganic Chemistry SB RAS, Novosibirsk, Russia
[2]Boreskov Institute of Catalysis, Novosibirsk, Russia

12.45 – 13.00
OP-4
Yeganyan J.R., Knyazyan N.B.
OBTAINING NANOSTRUCTURED MATERIALS BASED ON SEGREGATING ALUMINOBOROSILICATE SYSTEMS
M.G. Manvelyan Institute of General and Inorganic Chemistry of the NAS RA, Yerevan, Armenia

13.00 – 14.30 *Lunch*

ORAL PRESENTATIONS

Chairperson: Professor Vladimir Shur

14.30 - 14.45
OP-5
Stoyanovskii V.O.[1], Vedyagin A.A.[1], Volodin A.M.[1], Kenzhin R.M.[1], Plyusnin P.E.[2]
PHOTOLUMINESCENCE SPECTROSCOPY OF Rh^{3+} IONS IN ESTIMATION OF THE THERMAL STABILITY OF BIMETALLIC PdRh/La-Al_2O_3 MODEL CATALYSTS
[1]Boreskov Institute of Catalysis, Novosibirsk, Russia
[2]Nikolaev Institute of Inorganic Chemistry SB RAS, Novosibirsk, Russia

14.45 – 15.00
OP-6
Stepanova L.N.[1], Belskaya O.B.[1,2], Kobzar E.O.[1], Vasilevich A.V.[1], Leont'eva N.N.[1], Licholobov V.A.[3]
STUDY OF INFLUENCE OF THE COMPOSITION OF Ni(Mg)AlO$_x$ CATALYSTS, PREPARED BY MECHANOCHEMOCAL ROUTE, ON THEIR PROPERTIES IN AQUA-PHASE FURFURAL HYDROGENATION
[1]Center of New Chemical Technologies BIC, Omsk, Russia
[2]Omsk State Technical University, Omsk, Russia
[3]Boreskov Institute of Catalysis, Novosibirsk, Russia

15.00 – 15.15
OP-7
Ivanets A.I.[1], Prozorovich V.G.[1], Roshchina M. Yu.[1], Srivastava V.[2], Sillanpaa M.[2,3]
EFFICIENCY DESTRUCTION OF IBUPROFEN ONTO MAGNESIUM FERRITE CATALYST
[1]Institute of General and Inorganic Chemistry of National Academy of Sciences of Belarus, Minsk, Belarus
[2]Department of Green Chemistry, Lappeenranta University of Technology, Mikkeli, Finland
[3]Department of Civil and Environmental Engineering, Florida International University, Miami, USA

15.15 – 15.30
OP-8
Belopukhov E.A.[1,2], Tregubenko V.Yu.[1,2]
METHODS OF REGULATING OF THE ALUMINA CATALYST SUPPORTS MECHANICAL STRENGTH: AN EXPERIMENT AND A MODEL USING THE DECISION TREES AND RANDOM FOREST
[1]Center of New Chemical Technologies BIC, Omsk, Russia
[2]Omsk State Technical University, Omsk, Russia

15.30 – 15.45
OP-9
Demidova Yu.S.[1,2], Simakova I.L.[1,2], Suslov E.V.[3], Mozhajcev E.S.[3], Volcho K.P.[2,3], Salakhutdinov N.F.[2,3], Simakov A.V.[4], Murzin D.Yu.[5]
MONOTERPENE ALCOHOLS AMINATION FOR PHARMACEUTICAL APPLICATIONS OVER GOLD CATALYSTS
[1]Boreskov Institute of Catalysis, Novosibirsk, Russia
[2]Novosibirsk State University, Novosibirsk, Russia
[3]Novosibirsk Institute of Organic Chemistry, Novosibirsk, Russia
[4]Centro de Nanociencias y Nanotecnología de la Universidad Nacional Autónoma de México, México
[5]Åbo Akademi University, Turku/Åbo, Finland

15.45 – 16.00
OP-10
Bauman Y.I.[1], Mishakov I.V.[1,2], Serkova A.N.[1], Rieder D.[3], Vedyagin A.A.[1]
SYNTHESIS OF FUNCTIONAL CARBON NANOSTRUCTURES ON SELF-ORGANIZING Ni-M CATALYSTS
[1]Boreskov Institute of Catalysis, Novosibirsk, Russia
[2]Novosibirsk State University, Novosibirsk, Russia
[3]Karlsruhe Institute of Technology, Karlsruhe, Germany

16.00 – 19.00 ***Sightseeing excursion around Rosa Khutor***

October 12, Saturday

The hotel Golden Tulip Rosa Khutor

EINDHOVEN HALL

PLENARY LECTURES

Chairperson: Professor Natalia Kamanina

09.00 – 09.45
PL-4
Moshkin M.
NANOPARTICLES AND BRAIN
Federal Research Centre Institute Cytology and Genetics SB RAS, Novosibirsk, Russia

09.45 – 10.30
PL-5
Mishakov I.V.[1,2], Bauman Y.I.[1], Asmedyanova A.D.[1,2], Rudneva Yu.V.[3], Serkova A.N.[1], Korneev D.V.[4], Plyusnin P.E.[2,3], Shubin Yu.V.[2,3],
Vedyagin A.A.[1]
SYNTHESIS OF NANOSTRUCTURED CARBON MATERIALS VIA METAL DUSTING OF Ni-BASED ALLOYS
[1]*Boreskov Institute of Catalysis, Novosibirsk, Russia*
[2]*Novosibirsk State University, Novosibirsk, Russia*
[3]*Nikolaev Institute of Inorganic Chemistry SB RAS, Novosibirsk, Russia*
[4]*Monash University, Melbourne, Australia*

10.30 – 11.00 *Coffee*

KEYNOTE LECTURE

Chairperson: Dr. Maria Brzhezinskaya

11.00 – 11.30
KL-5
Shur V.Ya., Shishkina E.V., Gunina E.V., Zubarev I.V., Kuznetsov D.K., Vazhenin V.A., Morozova M.V., Zelenovskii P.S.
HIGHLIGHTS AND PERSPECTIVES OF NANOPARTICLE FABRICATION AND SHAPE CONTROL FOR NANOTOXICOLOGY IN THE URAL CENTER FOR SHARED USE "MODERN NANOTECHNOLOGY"
School of Natural Sciences and Mathematics, Ural Federal University, Ekaterinburg, Russia

ORAL PRESENTATIONS

11.30 – 11.45
OP-11
Kitsyuk E.P.[1], Gerasimenko A.Yu.[2,3], Privalova P.Yu.[2], Suetina I.A.[4], Mezenceva M.V.[4], Russu L.I.[4]
THE STUDY OF CARTILAGE CELLS MORPHOLOGY GROWN ON THE MWCNT ARRAY
[1]Scientific-manufacturing complex "Technological Centre", Moscow, Russia
[2]National Research University of Electronic Technology MIET, Moscow, Russia
[3]M. Sechenov First Moscow State Medical University, Moscow, Russia
[4]N.F. Gamaleya Scientific Research Institute of Epidemiology and Microbiology, Moscow, Russia

11.45 – 12.00
OP-12
Sherstiuk A.A., Azaryan A.D., Fakhardo A.F., Krivoshapkin P.V.
HAFNIUM OXIDE NANOPARTICLES MODIFIED WITH POLYMER SHELL
ITMO University, Saint Petersburg, Russia

12.00 – 12.15
OP-13
Sutunkova M.P.[1], Katsnelson B.A.[1], Privalova L.I.[1], Minigalieva I.A.[1], Gurvich V.B.[1], Soloveva S.N.[1], Klinova, S.V.[1], Makeyev, O.G.[2],
Valamina, I.E.[2], Sakhautdinova R.R.[1], Bushueva T.V.[1], Shur, V.Y.[3], Zubarev, I.V.[3], Shishkina, E.V.[3]
YEKATERINBURG NANOTOXICOLOGICAL TEAM'S EXPERIENCE IN ASSESSING EXPERIMENTALLY ADVERSE HEALTH EFFECTS OF METAL OXIDE NANOPARTICLES
[1]The Yekaterinburg Medical Research Center for Prophylaxis and Health Protection in Industrial Workers, Yekaterinburg, Russia
[2]The Central Research Laboratory of the Ural State Medical University, Yekaterinburg, Russia
[3]Institute of Industrial Ecology, the Urals Branch of the Russian Academy of Sciences, Yekaterinburg, Russia

12.15 – 12.30
OP-14
Nikolaeva V.O., Krivoshapkina E.F., Krivoshapkin P.V.
SPIDER WEB AS A NATURAL NANOCOMPOSITE MATERIAL FOR ECO-FRIENDLY APPLICATIONS
ITMO University, Saint Petersburg, Russia

12.30 – 12.45
OP-15
Martakov I.S.[1], Torlopov M.A.[1], Sitnikov P.A., Shevchenko O.G.
FORMATION OF PHENOLIC ACID LAYER ON γ-AlOOH NANOPARTICLES SURFACE AND THEIR ANTIOXIDANT AND MEMBRANE-PROTECTIVE ACTIVITY
[1]Institute of Chemistry, Komi Science Centre, Ural Branch, RAS, Syktyvkar, Russia
[2]Institute of Biology, Komi Science Centre, Ural Branch, RAS, Syktyvkar, Russia

12.45 – 13.00
OP-16
Golubeva O.Yu.[1], Shamova O.V.[2]
HEMOLYTIC ACTIVITY OF ALUMINOSILICATE NANOPARTICLES WITH DIFFERENT MORPHOLOGY
[1]Institute of Silicate Chemistry, Russian Academy of Sciences, Saint Petersburg, Russia
[2]Institute of Experimental Medicine, Saint Petersburg, Russia

13.00 – 14.30 ***Lunch***

ORAL PRESENTATIONS

Chairperson: Dr. Maxim Mel'gunov

14.30 – 14.45
OP-17
Dorovskikh S.I.[1,2], Vikulova E.S.[1,2], Kal'nui D.B.[1,2], Maximovskyi E.V.[1,2], Morozova N.B.[1]
MOCVD OF Pt AND $Pt_xIr_{(1-x)}$ COATINGS WITH HIGH SURFACE AREAS ON THE CONTACTS OF ELECTROPHYSIOLOGICAL DIAGNOSTIC ELECTRODES
[1]Nikolaev Institute of Inorganic Chemistry, SB RAS, Novosibirsk, Russia
[2]Novosibirsk State University, Novosibirsk, Russia

14.45 – 15.00
OP-18
Paramonova A.P., Nikolaeva V.O., Krivoshapkina E.F.
NANOBIOARCHITECTONICS: DIRECTED DESIGN OF HYBRID MATERIALS
ITMO University, Saint Petersburg, Russia

15.00 – 15.15
OP-19
Krasnikova I.V.[1], Pogosova M.A.[1], Sanin A.O.[1], Gandomy Y. A.[2], Ryazantsev S.V.[1], Fikile Brushett[2] and Keith Stevenson[1]
ELECTROLYTES FOR LITHIUM REDOX FLOW BATTERIES FOR HIGH POWER AND HIGH ENERGY DENSITY ENERGY STORAGE
[1]Skolkovo Institute of Science and Technology, ,Moscow, Russia
[2]Massachusetts Institute of Technology, MA, USA

15.15 – 15.30
OP-20
Nazarovskaia D.A.[1], Koshevaya E.D.[2], Morozov V.N.[3], Kolyvanova M.A.[4], Krivoshapkina E.F.[1], Krivoshapkin P.V.[1]
SOL-GEL SYNTHESIS OF TANTALUM OXIDE NANOPARTICLES FOR CANCER THERANOSTICS
[1]SCAMT Laboratory, ITMO University, Saint Petersburg, Russia
[2]Institute of Chemistry, FRC Komi SC UB RAS, Syktyvkar, Russia
[3]Lomonosov Moscow State University, Moscow, Russia
[4]Burnasyan SRC-FMBC FMBA, Moscow, Russia

The hotel Golden Tulip Rosa Khutor
HALL

15.30 – 16.30 POSTER SESSION
PP-1 ÷ PP-18

16.00 – 16.30 *Coffee*

ORAL PRESENTATIONS

Chairperson: Dr. Ilya Mishakov

16.30 – 16.45
OP-21
Koskin A.P., Volodin A.M., Vedyagin A.A.
SYNTHESIS OF CALCIUM AND STRONTIUM MAYENITE-TYPE ALUMINATES AS A PRECURSOR OF OXYGEN CONDUCTIVE CERAMICS
Boreskov Institute of Catalysis, Novosibirsk, Russia

16.45 – 17.00
OP-22
Alikin E.A.[1], Denisov S.P.[1], Baksheev E.O.[1,2], Vedyagin A.A.[3]
NANOTECHNOLOGICAL ASPECTS IN DESIGN OF OXYGEN STORAGE COMPONENTS
[1]Ecoalliance LTD, Novouralsk, Russia
[2]Ural Federal University, Yekaterinburg, Russia
[3]Boreskov Institute of Catalysis, Novosibirsk, Russia

17.00 - 17.15
OP-23
Karnaukhov T.M.[1,2], Veselov G.B.[1,2], Vedyagin A.A.[1]
NANOSTRUCTURED METAL OXIDE SYSTEMS BASED ON MgO FOR OXIDATION AND REDUCTION PROCESSES
[1]Boreskov Institute of Catalysis, Novosibirsk, Russia
[2]Novosibirsk State University. Novosibirsk, Russia

17.15 – 17.30
OP-24
Kuryavyi V.G.[1], Buznik V.M.[2], Ustinov A.Yu.[1], Tkachenko I.A.[1],
Kvach A.A.[1], Marchenko Yu.V.[1], Opra D.P.[1]
NANOSTRUCTURED SAMPLES AND NANOCOMPOSITES OBTAINED IN A PLASMA OF A PULSE HIGH-VOLTAGE DISCHARGE
[1]Institute of Chemistry, Far East Branch, Russian Academy of Sciences, Vladivostok, Russia
[2]All Russian Scientific Research Institute of Aviation Materials, Moscow, Russia

17.30 – 18.00 *Closing Ceremony*

19.00 *Banquet*

October 13, Sunday

10.00 – 19.00 ***POST-TOUR TO SOCHI***

We invite you to city-tour around **Sochi** - the pearl of the Black Sea coast.

10:00 - departure from the Hotel
10:30 – 11:00 excursion to the apiary, honey degustation
11:00 - 14:00 – visit to the Sochi Arboretum
14:00 - 14:15 - transfer to Navaginskaya Street - the main pedestrian street in the city
14:15 - 15:00 - lunch time*
15:00 - 15:30 - visit to the Sochi Seaport
15:30 - 17:30 - tour to the Olympic Park
17:30 - 18:00 - transfer to the Airport
18:00 - 19:00 - transfer to the Hotel

*Lunch is not included in the tour price.

POSTER SESSION

PP-1

Baksheev E.O.[1,2], Alikin E.A.[2], Pronina M.O.[1], Kasyanova V.V.[1], Myshkina A.V.[1], Bazhukova I.N.[1], Mashkovtsev M.A.[1]

THE ENZYME-LIKE CATALYTIC ACTIVITY OF MALTODEXTRIN-COATED CERIUM OXIDE NANOPARTICLES

[1]Ural Federal University, Yekaterinburg, Russia
[2]Ecoalliance LTD, Novouralsk, Russia

PP-2

Chichkan A.S. [1,2], Chesnokov V.V.[1]

CATALYTIC DECOMPOSITION OF LIGHT HYDROCARBONS FOR ASSOCIATED PETROLEUM GAS UTILIZATION

[1]Boreskov Institute of Catalysis, Novosibirsk, Russia
[2]Novosibirsk State Technical University, Novosibirsk, Russia

PP-3

Demidova Yu.S.[1,2], Suslov E.V.[3], Mozhajcev E.S.[3], Munkuev A.A.[3], Simakova O.A.[4], Volcho K.P.[2,3], Salakhutdinov N.F.[2,3], Simakova I.L.[1,2], Murzin D.Yu.[4]

CONTROLLED HYDROGENATION OF MONOTERPENOIDS OXIMES AND NITRO-DERIVATIVES OVER Au AND Pt CATALYSTS

[1]Boreskov Institute of Catalysis, Novosibirsk, Russia
[2]Novosibirsk State University, Novosibirsk, Russia
[3]Novosibirsk Institute of Organic Chemistry, Novosibirsk, Russia
[4]Åbo Akademi University, Turku/Åbo, Finland

PP-4

Dudysheva N.[1,2], Golysheva E.[1,2], Dzuba S.[1,2]

NANOSTRUCTURES FORMED BY GUEST MOLECULES IN DISORDERED MEDIA BY PULSED EPR OF SPIN PROBES

[1]Physics Department, Novosibirsk State University, Novosibirsk, Russia
[2]Voevodsky Institute of Chemical Kinetics and Combustion RAS, Novosibirsk, Russia

PP-5

Ilyina E.V., Bedilo A.F., Shuvarakova E.I.

SYNTHESIS AND PROPERTIES OF NANOCRYSTALLINE CALCIUM ALUMINATES

Boreskov Institute of Catalysis, Novosibirsk, Russia

PP-6

Egorova E.M., Kaba S.I.

THE CORRECTION OF *IN VITRO* TOXICITY OF A SILVER NANOPARTICLE STABILIZER IN STUDIES ON ENDOTHELIAL CELLS

Institute of General Pathology and Pathophysiology, Moscow, Russia

PP-7

Katin K.P.[1,2], Grishakov K.S.[1,2], Gimaldinova M.A.[1,2], Maslov M.M.[1,2]

A COMPUTATIONAL SEARCH FOR THE NOVEL HIGH-ENERGY COMPOUNDS WITH HNIW-LIKE CAGED STRUCTURE

[1]National Research Nuclear University MEPhI, Moscow, Russia
[2]Research Institute for the Development of Scientific and Educational Potential of Youth, Moscow, Russia

PP-8

Maslov M.M.[1,2], Grishakov K.S.[1,2], Gimaldinova M.A.[1,2], Katin K.P.[1,2]

METALLICITY OF SILICON: *Ab initio* STUDY OF SP^3-HYBRIDIZED SILICON ALLOTROPES

[1]National Research Nuclear University MEPhI, Moscow, Russia
[2]Research Institute for the Development of Scientific and Educational Potential of Youth, Moscow, Russia

PP-9

Kuriganova A.B., Smirnova N.V.

ELECTROCHEMICAL ONE-POT SYNTHESIS OF NANODISPERSED SnO_2-BASED MATERIALS FOR PEM FUEL CELLS APPLICATIONS

Platov South-Russian State Polytechnic University (NPI), Novocherkassk, Russia

PP-10

Lebedev E.A.[1], Sorokina L.I.[1], Gromov D.G.[1], Shaman Yu. P.[2], Sysa A.V.[2], Ryazanov R.M.[2]

FEATURES OF ELECTROPHORETIC DEPOSITION AND PHYSICOCHEMICAL PROPERTIES OF NANOSTRUCTURED Al-CuO_x POWDER MATERIALS

[1]National Research University of Electronic Technology, Zelenograd, Russia
[2]Scientific-manufacturing Complex "Technological Centre", Zelenograd, Russia

PP-11

Grishakov K.S.[1,2], Maslov M.M.[1,2], Katin K.P.[1,2], Gimaldinova M.A.[1,2]

THEORETICAL STUDY OF NOVEL NITROGEN NANOSTRUCTURES: STRUCTURE AND ENERGY CHARACTERISTICS

[1]National Research Nuclear University MEPhI, Moscow, Russia
[2]Research Institute for the Development of Scientific and Educational Potential of Youth, Moscow, Russia

PP-12

Minigalieva I.A., Privalova L.I., Sutunlova M.P., Panov V.G., Gurvich V.G., Katsnelson B.A., Solovieva S.N.

EXPERIMENTAL DATA FOR CHARACTERIZING TYPOLOGY OF METAL OXIDE NANOPARTICLES COMBINED TOXICITY AND ON ITS ATTENUATION WITH BIO-PROTECTORS

Yekaterinburg Medical Research Center for Prophylaxis and Health Protection in Industrial Workers, Yekaterinburg, Russia

PP-13

Yunusov M.P.[1], Nasullaev Kh.A.[1,2], Mamatkulov Sh.I.[1], Ruzimuradov O.[3]

STUDYING THE POSSIBILITY OF APPLYING THE Ni AND Mo HYDROGENATING ELEMENTS IN A GIVEN RATIO TO ALUMINA PREPARED BY ELECTRO-CHEMICAL ANODIZING

[1]Uzbek Chemical-Pharmaceutical Research Institute after A. Sultanov (UzCPRI), Tashkent, Uzbekistan
[2]National University of Uzbekistan named after M. Ulugbek, Tashkent, Uzbekistan

PP-14

Bryzhin A.A.[1], Golubina E.V.[1], Tarkhanova I.G.[1], Lokteva E.S.[1], Gurevich S.A.[2], Kozhevin V.M.[2], Yavsin D.A.[2], Lukiyanchuk I.V.[3], Rudnev V.S.[3],
Rostovshchikova T.N.[1]

NEW METHODS OF SYNTHESIS OF BIMETALLIC COATINGS FOR THE CATALYTIC APPLICATION IN ENVIRONMENTALLY IMPORTANT REDOX REACTIONS

[1]Lomonosov Moscow State University, Moscow, Russia
[2]Ioffe Physico-Technical Institute of RAS, Saint Petersburg, Russia
[3]Institute of Chemistry, Far Eastern Branch of RAS, Vladivostok, Russia

PP-15

Shcherbashina A.V.[1,2], Agazhanov A.Sh.[3], Koskin A.P.[1]

THE DEVELOPING OF COMPOSITIONS AND THERMAL CONDUCTIVITY OF ZINC OXIDE NANOFLUIDS

[1]Boreskov Institute of Catalysis, Novosibirsk, Russia
[2]Novosibirsk State Technical University, Novosibirsk, Russia
[3]Kutateladze Institute of Thermophysics SB RAS, Novosibirsk, Russia

PP-16

Shur V.Ya., Gunina E.V., Pryakhina V.I., Kuznetsov D.K., Shishkina E.V., Greshnyakov E.D., Esin A.A., Linker E.A.

SHAPE CONTROL OF PbO NANOPARTICLES PRODUCED BY LASER ABLATION IN LIQUID

School of Natural Sciences and Mathematics, Ural Federal University, Ekaterinburg, Russia

PP-17

Shur V.Ya., Mingaliev E.A., Makaev A.V., Chezganov D.S., Kozheletova I.Y.

CREATION OF NANOPARTICLES AND SURFACE NANOSTRUCTURES OF METAL OXIDES BY HOT WATER TREATMENT

School of Natural Science and Mathematics, Ural Federal University, Ekaterinburg, Russia

PP-18

Gimaldinova M.A.[1,2], Maslov M.M.[1,2], Katin K.P.[1,2], Grishakov K.S.[1,2]

HIGH KINETIC STABILITY OF SILICON PRISMANES: DENSITY FUNCTIONAL THEORY STUDY

[1]National Research Nuclear University MEPhI, Moscow, Russia
[2]Research Institute for the Development of Scientific and Educational Potential of Youth, Moscow, Russia