Program of the

V International Conference and School

"Advanced High Entropy Materials"

October 09-13, 2023

Belgorod State National Research University
State Marine Technical University
Siberian State Industrial University

St. Petersburg, Marshal Zhukov Ave., 44, Congress Center
of St. Petersburg State Marine Technical University

09.10.2023 MONDAY
(Time: GMT+3)
14:00-18:00 REGISTRATION
16:00-17:00 Round tables supported by the "Priority 2030" program of St. Petersburg State Marine Technical University; project: “Digital Industrial Technologies”.
17:00 BUFFET RECEPTION (Lobby)

10.10.2023 TUESDAY
(Time: GMT+3)

Chairmen: G.A. Turichin, Salishchev G.A.

9:00	**REGISTRATION (Lobby)**		
9:45	**Opening. Welcome speech (Conference Hall)**		
10:15 (Online)	**Popova V. S.**	**Complex Effect of Mn, Al and V on Hardness and Microhardness of High-Entropy CrCoFeNi Alloy**	Pacific National University, Khabarovsk, Russian Federation
10:30	**Turichin G.A.**	**Laser and Additive Technologies for Industry**	State Marine Technical University, St. Petersburg, Russian Federation
11:00	**Salishchev G.A.**	**High Entropy Materials and Their Practical Applications**	Belgorod State University, Belgorod, Russian Federation
11:30	**Rempel A.A.**	**Synthesis, Structure and Functional Properties of High-Entropy Alloys**	Institute of Metallurgy of the Ural Branch of the Russian Academy of Sciences, Ekaterinburg, Russian Federation
12:00-12:30 Coffee-break			
High-entropy metallic materials: structure, mechanical, and functional properties (Conference Hall)			
Chairman: Moskovskikh D.O.			
12:30	**Konovalov S.V.**	**Influence of electron-beam processing on the structure and properties of high-entropy alloys obtained by additive technologies**	Siberian State Industrial University, Novokuznetsk, Russian Federation
13:00	**Yurchenko N.Yu.**	**Al-Containing Refractory Medium-Entropy Alloys: Structure, Mechanical Properties, Deformation Behaviour and Mechanisms**	Belgorod State University, Belgorod, Russian Federation

13:30	**Pervikov A.V.**	**Structure and Mechanical Properties of Multicomponent Alloys Obtained by Magnetic Pulse Compaction of Nanoparticles**	Institute of Strength Physics and Materials Science of Siberian Branch Russian Academy of Sciences, Tomsk, Russian Federation
Additive and laser technologies, and other methods for processing of advanced materials (Room 207)			
			Chairman: O.G. Klimova-Korsmik
12:30	**Zemlyakov E.V.**	**Direct Laser Deposition: Technology, Equipment, and Implementation Examples**	State Marine Technical University, St. Petersburg, Russian Federation
13:00	**Enikeev N.A.**	**Engineering Bioactive Porous Titanium Scaffolds by Additive Manufacturing: the Future of Biomimetic Orthopedic Implants**	Ufa University of Science and Technology, Ufa, Russian Federation
13:30	**Babkin K.D.**	**Quality Assurance In Laser Metal Deposition**	State Marine Technical University, St. Petersburg, Russian Federation
13:55 Photographing of participants			
14:00-15:00 Lunch			
			Chairman: Pervikov A.V.
High-entropy metallic materials: structure, mechanical, and functional properties (Conference Hall)			
15:00	*Ganeev A.V.*	**The Influence of the Temperature of High Pressure Torsion on the Structure and Mechanical Properties of a High-Entropy Alloy FeMnCrNiCo Alloyed with Carbon**	Ufa University of Science and Technology, Ufa, Russian Federation
15:15	*Reunova K. A.*	**The Effect of Solid Solution Hardening with Nitrogen and Carbon on the Temperature Dependence of the Mechanical Properties and Deformation Mechanisms of FeMnCrNiCo Alloy**	Institute of Strength Physics and Materials Science of Siberian Branch Russian Academy of Sciences, Tomsk, Russian Federation
15:30	*Semenyuk A. O.*	**Effect of Nitrogen on Structure and Mechanical Behavior of High Entropy Alloys with FCC Structure**	Belgorod State University, Belgorod, Russian Federation

15:45	*Nafikov R.K.*	**Formation of Nanodispersed Particles Under Dynamic Aging During High Pressure Torsion in the High-Entropy Alloy FeMnCrNiCo**	Ufa University of Science and Technology, Ufa, Russian Federation
16:00	*Panina E. S.*	**Oxidation Behaviour of Refractory High-Entropy Alloys with a BCC+B2 Structure**	Belgorod State University, Belgorod, Russian Federation
16:15	*Uporov S.A.*	**Magnetic Properties and Electric Resistivity of Refractory High-Entropy Alloys**	Institute of Metallurgy of the Ural Branch of the Russian Academy of Sciences, Ekaterinburg, Russian Federation
16:30	*Klimenko D.N.*	**Machine Learning-Based Prediction of the Plasticity of High-Entropy Alloys**	Belgorod State University, Belgorod, Russian Federation
			Chairman: Enikeev N.A.
Additive and laser technologies, and other methods for processing of advanced materials (Room 207)			
15:00	*Permyakov G.L.*	**Investigation of Structure and Mechanical Properties of Magnesium Alloy AZ31 Billets Obtained by Wire-Arc Deposition**	Perm National Research Polytechnic University, Perm, Russian Federation
15:15	*Nikolaeva A.V.*	**Effect of Copper Concentration on Grain Structure and Properties of Hypo-, Hyper- and Eutectoid Ti6Al4V-Cu Alloys in Electron-Beam Additive Manufacturing**	Institute of Strength Physics and Materials Science of Siberian Branch Russian Academy of Sciences, Tomsk, Russian Federation
15:30	*Dmitrieva A. V.*	**Influence of Powder on the Properties of Materials Obtained by Laser-Direct Energy Deposition**	State Marine Technical University, St. Petersburg, Russian Federation
15:45	*Shaysultanov D. G.*	**Structure and Mechanical Properties of a Medium-Entropy Alloy Produced by Additive Technology**	Belgorod State University, Belgorod, Russian Federation

16:00	*Mendagaliev R. V.*	**Direct Energy Deposition of Nb/Cu Gradient Layers for Dissimilar Materials Joining**	State Marine Technical University, St. Petersburg, Russian Federation
16:15	*Volosevich D.V.*	**Aluminum Alloys in Additive Manufacturing. Heat Treatment of Aluminum Alloys**	State Marine Technical University, St. Petersburg, Russian Federation
16:30 **(Online)**	*Chernyshev B. D.*	**Production of Permanent Magnets Based on Hard Magnetic Materials Fe-Cr-Co and Fe-Sr-O by PIM-Technology**	JSC "VNIIHT", Moscow, Russian Federation
16:45-17:00 Break			
			Chairman: Zherebtsov S.V.
High-entropy metallic materials: structure, mechanical, and functional properties (Conference Hall)			
17:00	*Kotenkov P.V.*	**Synthesis, Structure, and Thermal Stability of Alloys of the TiZrHfNbTa System**	Institute of Metallurgy of the Ural Branch of the Russian Academy of Sciences, Ekaterinburg, Russian Federation
17:15	*Povolyaeva E. A.*	**Heat Treatment of Medium-Entropy Alloy Obtained by Selective Laser Sintering**	Belgorod State University, Belgorod, Russian Federation
17:30	*Russkih A. S.*	**Interfacial Tension and Density of the AlTiZrVNb Alloys, Obtained by Aluminothermic Reduction Method**	Institute of Metallurgy of the Ural Branch of the Russian Academy of Sciences, Ekaterinburg, Russian Federation
17:45 **(Online)**	*Vyrodova A.V.*	**Orientation Dependence Of Mechanical Behavior Of The (CoCrFeNi)96MO4 High-Entropy Alloy Single Crystals**	National Research Tomsk State University, Tomsk, Russian Federation
18:00 **(Online)**	*Saraeva A. A.*	**Orientation Dependence of the Shape Memory Effect of $Cr_{20}Mn_{20}Fe_{20}Co_{34.5}Ni_{5.5}$ High-Entropy Alloy Single Crystals with the FCC-HCP Martensite Transformation**	Tomsk State University, Tomsk, Russian Federation
18:15 **(Online)**	*Veselkov S. N.*	**An insight into oxidation resistance of high-entropy alloys**	South Ural State University, Chelyabinsk, Russian Federation
			Chairman: Zemlyakov E.V.

Additive and laser technologies, and other methods for processing of advanced materials (Room 207)			
17:00	*Knyazyuk T. V.*	**The Effect of Heat Treatment on the Structure and Properties of Austenitic Steels and Alloys Manufactured by Additive Methods**	NRC "Kurchatov Institute" - CRISM "Prometey", St. Petersburg, Russian Federation
17:15	*Gushchina M. O.*	**Electrochemical Properties of the Multilayer Composite Ti-6Al-4 V/Cp-Ti Alloy Produced by Laser Direct Energy Deposition**	State Marine Technical University, St. Petersburg, Russian Federation
17:30	*Neulybin S. D.*	**Control of the Microstructure, Properties, and Chemical Composition of Blanks During Layered Growth by WAAM**	NRC "Kurchatov Institute" - CRISM "Prometey", St. Petersburg, Russian Federation
17:45	*Zadykyan G.G.*	**Peculiarities of Repair of Gas Turbine Components by Laser Powder Cladding Method**	State Marine Technical University, St. Petersburg, Russian Federation
18:00 **(Online)**	*Gudkov I.S.*	**Aluminum Alloy Wire for Additive Technologies from Long-Length Billets Obtained by Electromagnetic Crystallization**	Siberian Federal University, Krasnoyarsk, Russian Federation
18:15 **(Online)**	*Belov E. G.*	**Metal-Polymer Materials Produced by Solid-Phase Method of Modification**	Kazan National Research Technological University, Kazan, Russian Federation
18:30 -19:00 Poster session			

11.10.2023 WEDNESDAY (Time: GMT+3)			
(Conference Hall)		***Chairmen: Rempel A.A., Makarov A.V.***	
9:30	**Sanin. V.N.**	**High-Entropic Materials: from Alloys to High-Temperature Ceramic / Compounds**	Merzhanov Institute of Structural Macrokinetics and Materials Science Russian Academy of Sciences, Chernogolovka, Russian Federation
10:00	**Makarov A.V.**	**Features Of Coatings Formation Using Nanoscale Powder Of High-Entropy $Ni_{29}Fe_{29}Mo_{20}Cu_{13}Co_9$ Alloy By Pulse Laser Cladding With Micro- And Nanosecond Pulses**	M.N. Mikheev Institute of Metal Physics of the UB RAS, Ekaterinburg, Russian Federation
10:30	**Valiev R.Z.**	**High-Strength States In Ultrafine-Grained High-Entropy Alloys Processed By Severe Plastic Deformation**	Ufa University of Science and Technology, Ufa, Russian Federation
11:00	**Astafurova E.G.**	**Hydrogen-Related Phenomena In High-Entropy Cantor Alloy Doped With Nitrogen**	Institute of Strength Physics and Materials Science of Siberian Branch Russian Academy of Sciences, Tomsk, Russian Federation
11:30	**Stepanov N.D.**	**Structure And Mechanical Properties Of Co-Cr-Fe-Mn-Ni-(Al, C) and Nb-Ti-Zr-(Al, Cr, Hf, Ta, V) High Entropy Alloys**	Belgorod State University, Belgorod, Russian Federation
12:00-12:30 Coffee break			
			Chairman: Stepanov N.D.
Structure and properties of non-metallic high-entropy materials: ceramics, coatings, etc. (Conference Hall)			
12:30	*Trofimov E.A.*	**Promising research directions in the field of high-entropy materials**	South Ural State University, Chelyabinsk, Russian Federation
13:00 **(Online)**	*Pak A.Ya.*	**The Way of Increasing Production of High-Entropy Carbide TiZrNbHfTaC5 by Vacuum-Free Electric ARC Method**	Tomsk Polytechnic University, Tomsk, Russian Federation

13:30	*Vinnik D.A.*	**Synthesis, Phase Stability, and Magnetization Behavior of New High-Entropy Hexaferrites**	South Ural State University, Chelyabinsk, Russian Federation
			Chairman: Valiev R.Z.
Additive and laser technologies, and other methods for processing of advanced materials (Room 207)			
12:30	*Klimova-Korsmik O. G.*	**Peculiarities of functionally-graded materials production using direct laser deposition technology**	State Marine Technical University, St. Petersburg, Russian Federation
13:00	*Panin P.V.*	**Electron beam additive manufacturing of a new gamma titanium aluminide alloy: composition, microstructure, porosity**	NRC «Kurchatov institute» – VIAM, Moscow, Russian Federation
13:30	*Korsmik R.S.*	**Additive technologies based on direct energy deposition for maintenance, repair and overhaul**	State Marine Technical University, St. Petersburg, Russian Federation
14:00-15:00 Lunch			
			Chairman: Sanin V.N.
Advanced metallic and non-metallic materials and their applications (Conference Hall)			
15:00	*Illarionov A.G.*	**Effect of Hafnium Alloying on the Stability to Deformation-Induced Phase Transformations and the Formation of Properties in a Bi-Compatible Alloy of the Zr-Ti-Nb System Subjected to Quenching and Cold Deformation**	Ural Federal University named after the first President of Russia B.N. Yeltsin, Ekaterinburg, Russian Federation
15:15	*Akopyan T.K.*	**Influence of Mn and Zr Additions on Strengthening and Structure at Aging of Al-Cu-Sn Alloys**	National University of Science and Technology MISiS, Moscow, Russian Federation
15:30	*Sokolovsky V. S.*	**Deformation Behavior and Evolution Structure Below the Eutectoid Transformation Temperature of** $(\alpha2+\gamma)/(\alpha2+\beta+\gamma)$ γ-TiAl **Based Alloys with a Metastable Structure**	Belgorod State University, Belgorod, Russian Federation
15:45	*Polyakova V. V.*	**Nanostructured Beta Titanium Alloys for Medical Applications**	Ufa University of Science and Technology, Ufa, Russian Federation

16:00	*Ryzhkin A. A.*	**Development of the Geometry of Porous Structures to be Produced by Additive Manufacturing for Medical Applications**	Ufa University of Science and Technology, Ufa, Russian Federation
16:15	*Nozdracheva E. I.*	**Effect of Heat Treatment on Microstructure and Mechanical Properties of the VIT1 Alloy**	Belgorod State University, Belgorod, Russian Federation
16:30 **(online)**	*Rakhmatullina E.R.*	**Amorphous Glass-Metal Composite as Element of a Cement Mortar Reinforcing**	Moscow State University of Civil Engineering (National Research University), Moscow, Russian Federation
			Chairman: Panin P.V.
Additive and laser technologies, and other methods for processing of advanced materials (Room 207)			
15:00	*Naumov S.V.*	**Keyhole Plasma Arc Welding of a Ti_2AlNb-Based Alloy**	Belgorod State University, Belgorod, Russian Federation
15:15	*Nesterova E.D.*	**Formation of Coatings with Equiatom Ratio from Composite Powders of the Al-Ni-Co-Fe-Cr System**	NRC "Kurchatov Institute" - CRISM "Prometey", St. Petersburg, Russian Federation
15:30	*Churikov A.S.*	**Production of High-Emission Coatings by Detonation Spray Coating Method**	Belgorod State Technological University named after V.G. Shukhov, Belgorod, Russian Federation
15:45	*Yurgin A.B.*	**Structure And Properties of a Composite Coating Based on a High-Entropy Alloy Reinforced with CrB Particles**	Novosibirsk State Technical University, Novosibirsk, Russian Federation
16:00	*Lukyanov V.V.*	**Development of an Anti-Diffusion Coating for the Production of Hollow Structures by the DB/SPF Method**	SIA "Technopark AT", Ufa, Russian Federation

16:15	*Kuzminov E.D.*	**Influence of Silicon Doping on the Properties of Ti-Al-Ta-N Coatings**	Institute of Strength Physics and Materials Science of Siberian Branch Russian Academy of Sciences, Tomsk, Russian Federation
16:30	*Podgorny D.S.*	**Highly Efficient Photocatalytic Coatings Produced by Detonation Spray Coating Method on Building Materials**	Belgorod State Technological University named after V.G.Shukhov, Belgorod, Russian Federation
16:45-17:00 Break			
Tour to laboratories of State Marine Technical University			

12.10.2023 THURSDAY (Time: GMT+3)			
(Conference Hall)			***Chairmen: Plekhov O.A., Popov A.A.***
9:30	*Plekhov O.A.*	**An Optimisition of the Effect of Laser Shock Peening on Fatigue Properties of Metals**	Institute of continuous media mechanics Ural Branch Russian Academy of Sciences, Perm, Russian Federation
10:00	*Ramazanov K.N.*	**Investigation of ceramics coatings of YALO system obtained by vacuum-arc deposition method**	Ufa University of Science and Technology, Ufa, Russia
10:30	*Popov A.A.*	**Phase Transformations in Multicomponent Titanium Alloys**	Ural Federal University named after the first President of Russia B.N. Yeltsin, Ekaterinburg, Russian Federation
11:00	*Evlashin S.A.*	**Direct Energy Deposition of Gradient Magnetic Materials**	Skolkovo Institute of Science and Technology, Moscow, Russian Federation
11:30	*Moskovskikh D.O.*	**Processing and Properties of High-Entropy Ultra-High Temperature Carbides (TaTiNbZr)C and (TaTiNbZrx)C (X= Hf, W, Mo)**	National University of Science and Technology MISiS, Moscow, Russian Federation
12:00-12:30 Coffee break			
			Chairman: Konovalov S.V.
Advanced metallic and non-metallic materials and their applications (Conference Hall)			
12:30	*Belov N.A.*	**Structure and Hardening of the Al–7.1Zn–2.8Mg–1.4Ni–1.1Fe (Wt.%) Alloy Manufactured Via Electromagnetic Casting**	National University of Science and Technology MISiS, Moscow, Russian Federation
13:00	*Zherebtsov S.V.*	**Deformation of Ti-based metal-matrix composites**	Belgorod State University, Belgorod, Russian Federation

13:30	*Raab G.I.*	**Mechanics and Structural Features of Asymmetric Rolling**	Nosov Magnitogorsk State Technical University, Magnitogorsk, Russian Federation
			Chairman: Ramazanov K.N.
Theoretic and computational prediction of structure and properties of advanced materials (Room 207)			
12:30	*Kvashnin A.G.*	**Simulation of Multicomponent and High-Entropy Carbides with Subsequent Synthesis**	Skolkovo Institute of Science and Technology, Moscow, Russian Federation
13:00	*Promakhov V.V.*	**CAD/CAM Technologies for Ceramic Materials in Dentistry**	Tomsk State University, Tomsk, Russian Federation
13:30	*Kvashnin D.G.*	**Simulations of Properties of Composite Materials Based on Light Metals and Low-Dimensional Nanomaterials**	Emanuel Institute of Biochemical Physics RAS, Moscow, Russian Federation
14:00-15:00 Lunch			
			Chairman: Kvashnin A.G.
High-entropy metallic materials: structure, mechanical, and functional properties (Conference Hall)			
15:00	*Kovalev D.Yu.*	**Evolution of the phase composition of the Cantor CoCrFeMnNi alloy during the prolonged annealing**	Merzhanov Institute of Structural Macrokinetics and Materials Science Russian Academy of Sciences, Chernogolovka, Russian Federation
15:15	*Kuznetsova V.A.*	**Ab Initio Study of Elastic Properties of CoCrFe(40-x)Mn_xNi (x = 5, 10, 15, 20) High-Entropy Alloys**	Siberian State Industrial University, Novokuznetsk, Russian Federation
15:30	*Yudin S. N.*	**Quasi-High-Entropy Alloys for Hydrogen Absorption**	Moscow Polytechnic University, Moscow, Russian Federation
15:45	*Varaksin A.V.*	**Low-Temperature Synthesis of High-Entropy Carbide in Molten Salts**	Institute of Metallurgy of the Ural Branch of the Russian Academy of Sciences,

			Ekaterinburg, Russian Federation
16:00 **(online)**	*Oleinik K.I.*	**Surfacing Specifics in Multi Component Alloys Containing Refractory Metals**	Institute of Metallurgy of the Ural Branch of the Russian Academy of Sciences, Ekaterinburg, Russian Federation
16:15 **(online)**	*Pugacheva E. V.*	**Multifunctional Catalysts Based on SHS-HEA**	Merzhanov Institute of Structural Macrokinetics and Materials Science Russian Academy of Sciences, Chernogolovka, Russian Federation
16:30 **(online)**	*Mikhailov D.V.*	**Experimental Screening of New Single-Phase High-Entropy Stannids**	South Ural State University, Chelyabinsk, Russian Federation
			Chairman: Astafurova E.G.
Advanced metallic and non-metallic materials and their applications (Room 207)			
15:00	*Naumova E. A.*	**Effect of Ni, Mn, Fe and Si Additives on the Phase Composition and Structure of the Hypereutectic Aluminum-Calcium Alloys**	National University of Science and Technology MISiS, Moscow, Russian Federation
15:15	*Panov D.O.*	**Structure, Texture and Mechanical Properties of Metastable Gradient Materials**	Belgorod State University, Belgorod, Russian Federation
15:30	*Tsydenov K. A.*	**Investigation of the Effect of Magnesium and Zinc on the Structure and Mechanical Properties of Al–2%Cu–1.5%Mn Alloy Sheets**	National University of Science and Technology MISiS, Moscow, Russian Federation
15:45 **(online)**	*Doroshenko V.V.*	**Structure and Mechanical Properties of Deformable Alloy Sheets in Al-Mg-Ca-Mn System**	Moscow Polytechnic University, Moscow, Russian Federation
16:00	*Ozerov M.S.*	**Microstructure, Mechanical Properties and Biocompatibility of Medium-Entropy TiNbZr Alloy-Based Composites, Reinforced with Borides**	Belgorod State University, Belgorod, Russian Federation

16:15	*Kremena M.V.*	**Development of Technologies for Manufacturing Parts of a Hollow Structure from V95pch Aluminum Alloy**	SIA "Technopark AT", Ufa, Russian Federation
16:30 **(online)**	*Vassilyeva Y. Z.*	**The Way of Increasing Production of High-Entropy Carbide $TiZrNbHfTaC_5$ by Vacuum-Free Electric ARC Method**	Tomsk Polytechnic University, Tomsk, Russian Federation
16:45-17:00 Break			
			Chairman: Evlashin S.A.
Additive and laser technologies, and other methods for processing of advanced materials (Conference Hall)			
17:00	*Popova E. A.*	**Investigation of a Melt Bath During Obtaining Intermetallic Coating of the Fe-Al System on Steel to Protect Against Liquid Metallic Lead Corrosion**	NRC "Kurchatov Institute" - CRISM "Prometey", St. Petersburg, Russian Federation
17:15	*Ivannikov A. Yu.*	**Heat Strength of High-Entropy 30Fe-30Cr-20Ni-10Mo-10W Alloy**	Baikov Institute of Metallurgy and Materials Science of the Russian Academy of Sciences, Moscow, Russian Federation
17:30	*Nikitin D.S.*	**Plasma Dynamic Synthesis of High Entropy Carbides and Carbinitrides Ti-Zr-Nb-Hf-Ta-C-(N)**	Tomsk Polytechnic University, Tomsk, Russian Federation
17:45	*Dyakov A.A.*	**Vectorization of HEA's structure and composition**	South Ural State University, Chelyabinsk, Russian Federation
			Chairman: Yurchenko N.Yu.
Structure and properties of non-metallic high entropy materials and their applications (Room 207)			
17:00 **(online)**	*Mikhasik E.I.*	**Calculation of the Characteristics of the Structure of Refractory Nonmetallic Materials with a Rigid Transport Pore System Formed by Sintering Fibers**	Belarusian National Technical University, Minsk, Belarus
17:15 **(online)**	*Ostovari M. A.*	**An Insight into Synthesis of High Entropy Heusler Intermetallics Nanoparticles**	South Ural State University, Chelyabinsk, Russian Federation
17:30 **(online)**	*Mariappan A.*	**Photocatalytic Degradation of Methylene Blue Dye Using High-Entropy (CeGdHfPrZr)O2 Oxide Nanoparticles**	South Ural State University, Chelyabinsk, Russian Federation

17:45	*Manabayeva A.M.*	**Ni-Al-Based Catalysts Prepared By Solution Combustion Synthesis for Dry Reforming of Methane**	"D.V.Sokolsky Institute of Fuel, Catalysis and Electrochemistry" JSC /Kazakh-British Technical University, Almaty, Kazakhstan
18:00 Closing Ceremony. Review of poster reports. Awarding of the best oral and poster presentations of young scientists. (Conference Hall)			
19:00 Banquet			
13.10.2023 FRIDAY **(Time: GMT+3)** **11:00-13:00 Round tables "Advanced alloys and technologies for the aerospace industry"** **13:00-13:30 Coffee break** **Tour to Peterhof**			

POSTER SESSION			
1.	*Bakhteeva N. D.*	THE MICROTRUCTURE HIGH-SPEED QUENCHED ALLOY OF SYSTEM Al-Cu-Fe	Baikov Institute of Metallurgy and Materials Science of the Russian Academy of Sciences, Moscow, Russian Federation
2.	*Galkina M. E.*	CORROSION-RESISTANT CHROMIUM-BASED COATINGS OBTAINED BY VACUUM-ARC METHOD	Belgorod State University, Belgorod, Russian Federation
3.	*Ivannikov A. Yu.*	CORROSION RESISTANCE OF HIGH-ENTROPY 30Fe-30Cr-20Ni-10Mo-10W ALLOY	Baikov Institute of Metallurgy and Materials Science of the Russian Academy of Sciences, Moscow, Russian Federation
4.	*Ivannikov A. Yu.*	THE EFFECT OF THE HIGHENERGY DEFORMATION TREATMENT ON THE COLD SPARAYED Ni COATING	Baikov Institute of Metallurgy and Materials Science of the Russian Academy of Sciences, Moscow, Russian Federation
5.	*Ilyinykh N.I.*	POSSIBILITY OF USING Al_2O_3 AND Al-Zn AS CORROSION PROTECTIVE COATINGS IN THE SALT MIST CHAMBER FOR HIGH-ENTROPY ALLOYS GdTbDyHoSc AND GdTbDyHoY	Institute of Metallurgy of the Ural Branch of the Russian Academy of Sciences, Ekaterinburg, Russian Federation
6.	*Lukina E. A.*	CORROSION RESISTANCE OF PEDICLE SCREW DEVICE COMPONENTS IN BIOLOGICAL ENVIRONMENT	Moscow Aviation Institute, Moscow, Russian Federation
7.	*Novoselova A.V.*	ELECTROCHEMICAL SYNTHESIS AND THERMODINAMIC PROPERTIES OF Pr-Ga-Pb ALLOYS IN LIQUID METAL/MOLTEN SALT SYSTEM	Institute of High-Temperature Electrochemistry UB RAS, Ekaterinburg, Russian Federation
8.	*Sanin V. N*	SHS OF CAST REFRACTORY COMPOUNDS FOR REPROCESSING INTO MICRO GRANULES USED IN 3D ADDITIVE TECHNOLOGIES	Merzhanov Institute of Structural Macrokinetics and Materials Science Russian Academy of Sciences, Chernogolovka, Russian Federation
9.	*Skachkov V. M..*	DIFFUSION-HARDENING COMPOSITE MATERIAL Ga-Sn-Zn-Cu-W	Institute of Solid State Chemistry UB RAS, Ekaterinburg, Russian Federation
10.	*Astapov D.O.*	TEMPERATURE DEPENDENCE OF MECHANICAL PROPERTIES IN CARBON- AND NITROGEN-ALLOYED FeMnCrNiCo ALLOY	Tomsk State University, Tomsk, Russian Federation

11.	*Astakhov I.I.*	EFFECT OF THERMOMECHANICAL TREATMENT ON STRUCTURE AND MECHANICAL PROPERTIES OF MEDIUM ENTROPY ALLOYS DOPED WITH CARBON	Belgorod State University, Belgorod, Russian Federation
12.	*Biryukova E. N.*	HIGH-ENTROPY CANTOR ALLOYS CoCrFeNiMn AND CoCrFeNiAr: METHODS FOR IMPROVING PROPERTIES	Siberian State Industrial University, Novokuznetsk, Russian Federation
13.	*Valiev R. R.*	USE OF THE MONTE-CARLO METHOD TO CALCULATE THE PERCENTAGE RATIO OF METALS IN ION-PLASMA COATINGS OF THE TiAlVZrCr SYSTEM DEPOSITED ON Ti-6Al-4V TITANIUM ALLOY WITH UFG STRUCTURE	Ufa University of Science and Technology, Ufa, Russian Federation
14.	*Gurtova D. Yu.*	THE EFFECT OF Cr2N PRECIPITATES ON HYDROGEN EMBRITTLEMENT IN CoCrFeMnNi(N) ALLOY	Tomsk State University, Tomsk, Russian Federation
15.	*Zhilina M. A.*	INVESTIGATION OF THE EFFECT OF OXYGEN ON THE MECHANICAL PROPERTIES OF THE REFRACTORY $Al_{7.5}(NbTiZr)_{92.5}$ MEDIUM-ENTROPY ALLOY	Belgorod State University, Belgorod, Russian Federation
16.	*Zaitseva O. V.*	NEW INTERMETALLIC COMPOUNDS WITH ONE MEDIUM- OR HIGH-ENTROPY SUBLATTICE OCCUPIED BY P-BLOCK ELEMENTS	South Ural State University, Chelyabinsk, Russian Federation
17.	*Kalinenko A. A.*	FORMATION OF AN INTERMETALLIC LAYER DURING DISSIMILAR FRICTION STIR WELDING OF ALUMINUM AND TITANIUM	Belgorod State University, Belgorod, Russian Federation
18.	*Kapustin A.V.*	DESIGN OF POROUS TITANIUM MATERIALS AND NUMERICAL ANALYSIS OF THEIR MECHANICAL CHARACTERISTICS	Ufa University of Science and Technology, Ufa, Russian Federation
19.	*Kapustin D.O.*	OXIDATION BEHAVIOUR OF A DUCTILE REFRACTORY $Al_{7.5}(NbTiZr)_{92.5}$ MEDIUM-ENTROPY ALLOY	Belgorod State University, Belgorod, Russian Federation
20.	*Karelin R. D.*	THERMOMECHANICAL TREATMENT OF TiNiHf ALLOY WITH HIGH-TEMPERATURE SHAPE MEMORY EFFECT	Baikov Institute of Metallurgy and Materials Science of the Russian Academy of Sciences, Moscow, Russian Federation
21.	*Krasanov I.V.*	DIRECT ENERGY DEPOSITION OF FeCoNiCrAl HIGH-ENTROPY ALLOY FROM PURE POWDERS	State Marine Technical University, St. Petersburg, Russian Federation

22.	*Litvinyuk K. S.*	THE REINFORCED WITH CERAMIC PARTICLES HIGH-ENTROPY ALLOYS COATINGS SYNTHESIS BY LASER CLADDING	South Ural State University, Chelyabinsk, Russian Federation
23.	*Luchin A.V.*	THE EFFECT OF A THERMAL-MECHANICAL TREATMENT ON PHASE COMPOSITION AND GRAIN STRUCTURE OF A Fe40Mn40Co10Cr10 MEDIUM-ENTROPY ALLOY	Institute of Strength Physics and Materials Science of Siberian Branch Russian Academy of Sciences, Tomsk, Russian Federation
24.	*Lantsev E. A.*	HIGH-TEMPERATURE DEFORMATION OF PURE TUNGSTEN CARBIDE CERAMICS WITH DIFFERENT GRAIN SIZES	Lobachevsky State University of Nizhny Novgorod, Nizhny Novgorod, Russian Federation
25.	*Mamalat A.I.*	INVESTIGATION OF THE STRUCTURE AND PROPERTIES OF THE CERMETS BASED ON INCONEL 625 WITH $Co[Al_2O_4]$ OBTAINED BY DIRECT LASER DEPOSITION	State Marine Technical University, St. Petersburg, Russian Federation
26.	*Murashov A. A.*	STUDY OF THE EFFECT OF HIGH-TEMPERATURE ANNEALING ON THE CORROSION-FATIGUE STRENGTH OF FINE-GRAINED TITANIUM ALLOY PT-7M	Lobachevsky State University of Nizhny Novgorod, Nizhny Novgorod, Russian Federation
27.	*Naumov S.V.*	KEYHOLE PLASMA ARC WELDING OF A Ti_2AlNb-BASED ALLOY	Belgorod State University, Belgorod, Russian Federation
28.	*Nifontov A. S.*	THE EFFECT OF MICROSTRUCTURE ON HYDROGEN EMBRITTLEMENT OF HIGH ENTROPY CANTOR ALLOY	Institute of Strength Physics and Materials Science of Siberian Branch Russian Academy of Sciences, Tomsk, Russian Federation
29.	*Nozdracheva E. I.*	TENSILE PROPERTIES OF Ti-Zr-Nb ALLOY-BASED METAL-MATRIX COMPOSITES, REINFORCED WITH BORIDES	Belgorod State University, Belgorod, Russian Federation
30.	*Ozerov M.S.*	MICROSTRUCTURE EVOLUTION AND MECHANICAL BEHAVIOR OF THE BORIDE-REINFORCED $Al_5Nb_{24}Ti_{40}V_5Zr_{26}$-BASED METAL-MATRIX COMPOSITES DURING HOT DEFORMATION	Belgorod State University, Belgorod, Russian Federation
31.	*Ozerov M.S.*	MICROSTRUCTURE AND MECHANICAL BEHAVIOR OF THE BORIDE-REINFORCED $Al_5Nb_{24}Ti_{40}V_5Zr_{26}$-BASED METAL-MATRIX COMPOSITES	Belgorod State University, Belgorod, Russian Federation

32.	*Ozerov M.S.*	STRUCTURE AND PROPERTIES OF THE BORIDE-REINFORCED $Al_5Nb_{24}Ti_{40}V_5Zr_{26}$-BASED METAL-MATRIX COMPOSITES AFTER ISOTHERMAL MULTIAXIAL FORGING	Belgorod State University, Belgorod, Russian Federation
33.	*Povolyaeva E. A.*	DEVELOPMENT OF A BRIDGE FRAMEWORK FROM Co-Cr-BASED ALLOY ON MULTI-UNITS WITH SCREW FIXATION PRODUCED BY SELECTIVE LASER SINTERING	Belgorod State University, Belgorod, Russian Federation
34.	*Povolyaeva E. A.*	FABRICATION OF BIOCOMPATIBLE Co-Cr-BASED ALLOY POWDER BY ULTRASONIC ATOMIZATION METHOD	Belgorod State University, Belgorod, Russian Federation
35.	*Mikhno A.R.*	STUDIES OF HIGH-ENTROPY ELECTRIC ARC COATING OF THE Al-Co-Cr-Fe-Mn SYSTEM	Siberian State Industrial University, Novokuznetsk, Russian Federation
36.	*Polyakov M.V.*	HIGH ENTROPY THIN FILM ALLOY $CoCrFeNiTi_x$ FOR ELECTRORESISTIVE ELEMENTS IN MICROELECTRONICS	Institute of Nanotechnology of Microelectronics of the Russian Academy of Sciences, Moscow, Russian Federation
37.	*Rusanov B.A.*	DENSITY, ELECTRICAL RESISTIVITY AND MAGNETIC SUSCEPTIBILITY OF AlNiCoCuZr HIGH-ENTROPY ALLOYS IN SOLID AND LIQUID STATES	Ural State Pedagogical University, Ekaterinburg, Russian Federation
38.	*Semikolenov A. A.*	INVESTIGATION OF THE INFLUENCE OF ELEMENT CONCENTRATION ON THE STRUCTURE AND PROPERTIES OF Fe-Ni-Co-Cr-$Mo_{0.5}$-Al_2 HIGH ENTROPY ALLOY	Peter the Great St.Petersburg Polytechnic University, St. Petersburg, Russian Federation
39.	*Semikolenov A. A.*	ALUMINIZING OF Fe-Ni-Co-Cr-$Mo_{0.5}$ HIGH ENTROPY ALLOY	Peter the Great St.Petersburg Polytechnic University, St. Petersburg, Russian Federation
40.	*Smirnov S. A.*	STRENGTHENING TITANIUM ALLOYS VIA IN-SITU ALLOYING IN A NITROGEN ENVIRONMENT	Skolkovo Institute of Science and Technology, Moscow, Russian Federation
41.	*Sokolovsky V. S.*	HOT DEFORMATION BEHAVIOR AND MICROSTRUCTURE EVOLUTION OF Ti-6.5Al-2Zr-1Mo-1V/TiB METAL-MATRIX COMPOSITES	Belgorod State University, Belgorod, Russian Federation
42.	*Sonar T. M.*	MINIMIZING LAVES PHASE EVOLUTION AND ENHANCING PRECIPITATION STRENGTHENING OF SUPERALLOY-718 JOINTS	South Ural State University, Chelyabinsk, Russian Federation

43.	*Stepanenko N. Yu.*	THE MANUFACTURING TECHNOLOGY OF THE LEADING PROTECTIVE EDGE BY DIFFUSION WELDING AND SUPERPLASTIC FORMING	SIA "Technopark AT", Ufa, Russian Federation
44.	*Suvorova V.S.*	HIGH-ENTROPY CARBONITRIDE CERAMICS: POWDER SYNTHESIS AND SPARK PLASMA SINTERING	National University of Science and Technology MISiS, Moscow, Russian Federation
45.	*Tikhonova M.S.*	INFLUENCE OF SI ON STRUCTURE AND MECHANICAL PROPERTIES OF CO-CR-BASED ALLOY	Belgorod State University, Belgorod, Russian Federation
46.	*Tuchina K. S.*	THERMAL STABILITY OF A REFRACTORY Al7.5(NbTiZr)92.5 MEDIUM-ENTROPY ALLOY WITH A BCC+B2 STRUCTURE	Belgorod State University, Belgorod, Russian Federation
47.	*Shadrina Ya. S.*	INVESTIGATION OF MECHANICAL PROPERTIES OF ALUMINUM ALLOYS WIRE Al-0.25Zr-(Si,Er,Hf,Nb)	Lobachevsky State University of Nizhny Novgorod, Nizhny Novgorod, Russian Federation
48.	*Shanmugavel S.*	SYNTHESIS OF Cu/MoS2 COMPOSITE FROM WASTE PRINTED CIRCUIT BOARDS AS CATALYST FOR EFFECTIVE DEGRADATION OF ORGANIC POLLUTANTS	South Ural State University, Chelyabinsk, Russian Federation
49.	*Shlyarov V.V.*	FATIGUE FAILURE OF A5M, VT-1, M1 ALLOYS SUBJECTED TO MAGNETIC TREATMENT	Siberian State Industrial University, Novokuznetsk, Russian Federation
50.	*Shlyarov V.V.*	HIGH-ENTROPY CANTOR ALLOYS CoCrFeNiMn AND CoCrFeNiAr: METHODS FOR IMPROVING PROPERTIES	Siberian State Industrial University, Novokuznetsk, Russian Federation
51.	*Shlyarov V.V.*	HIGH-ENTROPY FeCoCrNiMn AND FeCoNiCrAl ALLOYS COATINGS: STRUCTURE AND PROPERTIES	Siberian State Industrial University, Novokuznetsk, Russian Federation
52.	*Shustov V. S.*	A POROUS MATERIAL BASED ON TITANIUM CARBIDE POWDERS WITH A LAYERED STRUCTURE PRODUCED WITH THE USE OF A POROGEN	Baikov Institute of Metallurgy and Materials Science of the Russian Academy of Sciences, Moscow, Russian Federation
53.	*Yurchenko N. Yu.*	EFFECT OF CHEMICAL COMPLEXITY ON THE STRUCTURE, MECHANICAL PROPERTIES, AND OXIDATION RESISTANCE OF REFRACTORY Nb-Ti-Zr-Cr ALLOYS	Belgorod State University, Belgorod, Russian Federation

54.	*Filippova A.V.*	INVESTIGATION OF THE STRUCTURE AND THERMAL PROPERTIES OF 3D PRINTED COPPER ALLOY	Skolkovo Institute of Science and Technology, Moscow, Russian Federation
55.	*Nechvoglod O. V.*	ELECTRODEPOSITION OF FeNiCoVW(Cr,Zr) AND FeNiCoVW(Cr,Zr)/WC COATINGS	South Ural State University, Chelyabinsk, Russian Federation
56.	*Naseri M.*	ENHANCED STRENGTH-DUCTILITY SYNERGY OF FeCoNiMnV HIGH-ENTROPY ALLOYS VIA ULTRAFINE LAMELLAR STRUCTURES	South Ural State University, Chelyabinsk, Russian Federation
57.	*Bodyakova A. I.*	EFFECT OF THERMAL TREATMENT ON PROPERTIES OF THE COPPER ALLOY AFTER FRICTION STIR PROCESSING	Belgorod State University, Belgorod, Russian Federation
58.	*Mirontsov V.V.*	HEAT TREATMENT OF INCONEL 718 OBTAINED BY WIRE ARC ADDITIVE MANUFACTURING WITH INTERLAYER FORGING	Belgorod State University, Belgorod, Russian Federation
59.	*Magidov I. S.*	PREDICTION AND VALIDATION OF PHYSICAL AND MECHANICAL PROPERTIES OF A PARTICLE-REINFORCED COMPOSITE MATERIALS OBTAINED BY LASER DIRECT ENERGY DEPOSITION FOR SPACECRAFT ENGINEERING	Bauman Moscow State Technical University, Moscow, Russian Federation
60.	*Nasonovskiy K.S.*	POSSIBILITIES OF WIRE ARC ADDITIVE MANUFACTURING OF ALUMINUM ALLOYS	State Marine Technical University, St. Petersburg, Russian Federation
61.	*Sidorenko A.O.*	ADDITIVE MANUFACTURING OF BIMETALLIC JOINT WITH HIGH CORROSION RESISTANCE	State Marine Technical University, St. Petersburg, Russian Federation
62.	*Resnina N.N.*	HIGH TEMPERATURE MARTENSITIC TRANSFORMATION AND SHAPE MEMORY EFFECT IN HIGH-ENTROPY $Ti_9Hf_{39}Zr_4Ni_{30}Cu_9Co_9$ ALLOY	Saint-Petersburg State University St. Petersburg, Russian Federation
63.	*Kalnitskaya M. V*	DEFORMATION OF MULTI-COMPONENT $Ti_{40}Hf_5Zr_5Ni_{40}Co_5Cu_5$ ALLOY AT DIFFERENT TEMPERATURES	Saint-Petersburg State University St. Petersburg, Russian Federation
64.	*Belyaev S.P.*	VARIATION IN STRUCTURE, MARTENSITIC TRANSFORMATION AND MECHANICAL BEHAVIOR ON A RISE IN MIXING ENTROPY IN Ti-Hf-Zr-Ni-Cu-Co SHAPE MEMORY ALLOYS	Saint-Petersburg State University St. Petersburg, Russian Federation

65.	*Ivanov A. M.*	MECHANICAL AND FUNCTIONAL PROPERTIES OF THE MULTICOMPONENT $Ti_{49-2x}Hf_xZr_xNi_{51-2x}Cu_xCo_x$ ALLOYS	Saint-Petersburg State University St. Petersburg, Russian Federation
66.	*Berezovskaia S.V.*	INFLUENCE OF DEFORMATION TEMPERATURE ON MECHANICAL PROPERTIES OF THE HIGH-ENTROPY $Ti_{30}Hf_{10}Zr_{10}Ni_{30}Cu_{10}Co_{10}$ ALLOY	Saint-Petersburg State University St. Petersburg, Russian Federation
67.	*Ivanov O. N.*	FEATURES IN LOW-TEMPERATURE ELECTRICAL PROPERTIES OF THE HIGH-ENTROPY $(Bi_{2/3}Sb_{1/3})_2(Te_{2/5}Se_{2/5}S_{1/5})_3$ ALLOY	Belgorod State University, Belgorod, Russian Federation
68.	*Zakharov K.V.*	PRODUCTION OF NEW CAST COBALT-BASED ALLOYS WITH DIFFERENT Cr AND Nb RATIO IN THE COMPOSITION	Merzhanov Institute of Structural Macrokinetics and Materials Science Russian Academy of Sciences, Chernogolovka, Russian Federation
69.	*Abramova M.M.*	EFFECT OF PORE GEOMETRY ON THE MECHANICAL PROPERTIES OF POROUS SCAFFOLDS	Ufa University of Science and Technology, Ufa, Russian Federation
70.	*Kudryashova E.S.*	INFLUENCE OF CELL GEOMETRY ON THE MECHANICAL BEHAVIOR OF POROUS SCAFFOLDS	Ufa University of Science and Technology, Ufa, Russian Federation
71.	*Promakhov V.V.*	CAD/CAM TECHNOLOGY OF ADVANCED CERAMIC MATERIALS IN DENTISTRY	Tomsk State University, Tomsk, Russian Federation
72.	*Shakirov I.V.*	PECULIARITIES STRUCTURE FORMATION AUSTENITIC STEELS IN THE PROCESSES OF LASER POWDER BED FUSION AND DIRECT LASER DEPOSITION	NRC "Kurchatov Institute" - CRISM "Prometey", St. Petersburg, Russian Federation
73.	*Vereshchak M.V.*	PREDICTION OF ELONGATION TO FRACTURE OF HIGH-ENTROPY ALLOYS USING NEURAL NETWORK	Belgorod State University, Belgorod, Russian Federation
74.	*Gnedovets A. G.*	CYCLIC REDOX MICRO- AND NANOMODIFICATION OF SINTERED BIPOROUS NICKEL	Baikov Institute of Metallurgy and Materials Science of the Russian Academy of Sciences, Moscow, Russian Federation
75.	*Motaylo E.S.*	SYNTHESIS OF HIGH-ENTROPY BORIDES OF TRANSITION METALS IV AND VI GROUP	St. Petersburg State Institute of Technology, St. Petersburg, Russian Federation
76.	*Povolyaeva E. A.*	HEAT TREATMENT OF MEDIUM-ENTROPY ALLOY OBTAINED BY SELECTIVE LASER SINTERING	Belgorod State University, Belgorod, Russian Federation