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Ukrainian Materials Research Society (UMRS)
National Technological University of Ukraine "KPI"
Frantsevich Institute for Problems of Materials Science of NASU
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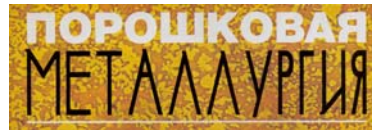
Informational partners,
journals:



"Bulletin of U-MRS" (Ukraine)

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Informational partners,
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Powder Metallurgy (Ukraine)



Nanostructure Materials
Science (Ukraine)

PRELIMINARY PROGRAMME

October 7-11, 2013

Kiev, Ukraine

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Organizing Committee Thanks to:

- National Academy of Science of Ukraine (NASU)
- Ukrainian Materials Research Society

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- Frantsevich Institute for Problems of
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ONRGlobal

Opening of the Conference and Plenary Sessions on Monday October 07 will be held in National Technical University of Ukraine “Kiev Polytechnical Institute” build. 1. Address: 37 Peremogy Ave., (Metro “Politekhnycheskyi Institute”)

Conference sessions on Tuesday – Friday –will be held in build. 9. Address: 35 Politekhnycheskaya Str., (Metro “Politekhnycheskyi Institute”).

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B. Metallic materials and technologies for production. High-entropy alloys.	oral	14-15
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ORDER OF FUNCTIONING

Sunday, 2013 October, 06

10⁰⁰-16⁰⁰ Registration of participants (Build 9, NTUU "KPI")

Monday, 2013 October, 07

9⁰⁰-12⁰⁰ Registration of participants (Build 1, NTUU "KPI")
10⁰⁰-10²⁰ Opening of the Conference
10²⁰-12⁰⁰ **First morning plenary session**
12⁰⁰-12³⁰ Coffee-brake
12³⁰-14⁰⁰ **Second morning plenary session**
14⁰⁰-15⁰⁰ Lunch
15⁰⁰-17³⁰ **Evening plenary session**
17³⁰-18⁰⁰ Discussion

Tuesday, 2013 October, 08

**Exposition of posters «A» from 9³⁰ till 14⁰⁰;
«B» and «C» from 15⁰⁰ till 18⁰⁰**

9³⁰-11³⁰ **A.** Physico-chemical fundamentals of the formation of inorganic materials, the study of phase equilibria, surface and contact phenomena in multi-component systems. Modeling of the technological processes for making materials and the properties of contemporary materials for various purposes.
11³⁰-12⁰⁰ Coffee-brake
12⁰⁰-14⁰⁰ **A.** Physico-chemical fundamentals of the formation of inorganic materials, the study of phase equilibria, surface and contact phenomena in multi-component systems. Modeling of the technological processes for making materials and the properties of contemporary materials for various purposes.
14⁰⁰-15⁰⁰ Lunch
15⁰⁰-17³⁰ **B.** Metallic materials and technologies for production. High-entropy alloys.
15⁰⁰-18⁰⁰ **C.** Powder metallurgy: current status of science and industry; modern materials based on fine powders, fibers, etc., technologies and properties.
In another classroom
18³⁰ Friendly-meeting

Wednesday, 2013 October, 09

Exposition of posters «D» from 9³⁰ till 15⁰⁰ and «E» from 15⁰⁰ till 18⁰⁰

9 ³⁰ -11 ³⁰	D. Nano-scale materials science: technologies and materials.
11 ³⁰ -12 ⁰⁰	Coffee-brake
12 ⁰⁰ -14 ⁰⁰	D. Nano-scale materials science: technologies and materials.
12 ⁰⁰ -14 ⁰⁰	Presentation of National Contact Point in Frantsevich Institute for Problems of Materials Science of NAS of Ukraine
In another classroom	Lunch
14 ⁰⁰ -15 ⁰⁰	E. Ceramics for functional and constructional purposes. High- temperature and heat-resistant materials.
15 ⁰⁰ -18 ⁰⁰	

Thursday, 2013 October, 10

Exposition of posters «G» from 9³⁰ till 15⁰⁰; «H» and «F» from 15⁰⁰ till 18⁰⁰

9 ³⁰ -11 ³⁰	G. Latest developments in the field of designing polymeric materials with improved characteristics.
11 ³⁰ -12 ⁰⁰	Coffee-brake
12 ⁰⁰ -14 ⁰⁰	G. Latest developments in the field of designing polymeric materials with improved characteristics.
14 ⁰⁰ -15 ⁰⁰	Lunch
15 ⁰⁰ -18 ⁰⁰	H. Engineering of surface. F. Latest developments in the field of designing polymeric materials with improved characteristics.

Friday, 2013 October, 11

Exposition of posters «I» and «K» from 9³⁰ till 12⁰⁰; «J» from 12⁰⁰ till 13⁰⁰

9 ³⁰ -11 ³⁰	I. Modern technologies of joining of materials. K. Scientific-organizational and commercial support of researches in contemporary materials science: international cooperation, forecasting, information provision of researches, practical realization of results, innovation policy, etc.
11 ³⁰ -12 ⁰⁰	Coffee-brake
12 ⁰⁰ -12 ⁴⁵	J. Equipments and methods for characterization materials.
13 ⁰⁰	Closing of the Conference

Monday, 2013 October, 07

10⁰⁰-10²⁰ Opening of the Conference
10²⁰-12⁰⁰ **First morning plenary session**

Coordinators: Skorokhod V.V.(Ukraine), Logunov A.V.(Russia)

PI 418 DEVELOPMENT OF PHYSICAL AND CHEMICAL HIGH-TECH NEW FUNCTIONAL MATERIALS

Skorokhod V.V.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

20 minutes

PI 14 NANOSTRUCTURED SILVER AND COPPER DEPOSITED FROM THE VAPOR PHASE IN A VACUUM ONTO POWDERS INORGANIC AND ORGANIC SUBSTANCES

Movchan B.A., Kovinskyi I.S.⁽¹⁾

"International Center for Electron Beam Technologies of Paton Electric Welding Institute", Kiev, Ukraine

⁽¹⁾Paton Electric Welding Institute of NAS of Ukraine, Kiev, Ukraine

20 minutes

PI 7 CONSOLIDATED NANOMATERIALS IN EXTREME CONDITIONS: NEW APPROACHES AND NON-RESOLVED PROBLEMS

Andrievski R.A.

Institute of Problems of Chemical Physics of RAS, Chernogolovka, Russia

20 minutes

PI 98 POWDER METALLURGY IN BELARUS:CURRENT STATUS AND DEVELOPMENT PROSPECTS

Ilyushchenko A.F., Savich V.V.

SSI PMI, Minsk, Belarus

20 minutes

PI 184 PROBLEMS OF CREATION OF HEAT RESISTANT NICKEL ALLOYS WITH SINGLE CRYSTAL STRUCTURE FOR GAS TURBINE ENGINE BLADES: SPARING ALLOY ADDITION OF HARD-TO-FIND AND EXPENSIVE ELEMENTS

Logunov A., Shmotin Yu., Danilov D.

Saturn Scientific-Production Association Open Joint-Stock Company, Rybinsk, Russia

20 minutes

12³⁰-14⁰⁰ **Second morning plenary session**

Coordinators: Firstov S.A.(Ukraine), Mileiko S.T.(Russia)

PI 318 SCIENTIFIC BASES OF MANAGEMENT OF A STRUCTURAL STATE AND PHYSICOMECHANICAL PROPERTIES OF CAST MULTICOMPONENT HIGH-ENTROPY ALLOYS

Firstov S.A., Gorban V.F., Krapivka N.A., Pechkovsky E.P.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

20 minutes

PI 180 HYDROGEN ENERGY AND FUEL CELLS: ACHIEVEMENTS AND PROBLEMS
Ivanchev S.S.

St-Petersburg Department of the Boreskov Institute of Catalysis of the SB of RAS, St-Petersburg, Russia

20 minutes

PI 124 PHASE TRANSITIONS OF SECOND KIND IN ENTROPY TERMS

Metlov L.S.

Galkin Donetsk Physical and Technical Institute of NAS of Ukraine, Donetsk, Ukraine

20 minutes

PI 4 MODERN PROBLEMS OF THIN FILM METAL SCIENCE

Sidorenko S.I., Pugachev A.T.⁽¹⁾

National Technical University of Ukraine "Kiev Polytechnic Institute", Kiev, Ukraine

⁽¹⁾National Technical University "Kharkiv Polytechnical Institute", Kharkov, Ukraine

20 minutes

PI 173 HIGH TEMPERATURE COMPOSITES BASED ON OXIDE FIBRES

Mileiko S.T.

Institute of Solid State Physics of RAS, Chernogolovka, Russia

20 minutes

15⁰⁰-17³⁰ **Evening plenary session**

*Coordinators: Sidorenko S.I.(Ukraine), Kolzunova L.G.(Russia),
Dmitrik V.V.(Ukraine)*

PL 170 PHYSICS OF HIGH PLASTIC DEFORMATION

Glezer A.M.

Kurdyumov Institute for Physical Metallurgy, Bardin State Scientific Center of
Ferrous Metallurgy, Moscow, Russia

20 minutes

PI 16 ROLE OF FATIGUE CRACKS IN THE STEAM LINE DAMAGEABILITY WELDS

Dmytryk V.V., Bartash S.N.⁽¹⁾

NTU "KPI", Kharkov, Ukraine

⁽¹⁾UEPA, Kharkov, Ukraine

20 minutes

**PI 24 INFLUENCE OF SUPERSTOICHIOMETRIC MANGANESE ON
FORMATION OF PROPERTIES OF $(La_{0,65}Sr_{0,35})_{1-x}Mn_{1+x}O_{3\pm\Delta}$ CERAMICS**

Akimov G.Ya., Novokhatska A.A., Zhebel A.V., Burkhovetsky V.V.

Galkin Donetsk Institute of Physics and Engineering of NAS of Ukraine, Donetsk,
83114, Ukraine

20 minutes

**PI 31 NANOSCALED MAGNETIC-HARD FePt FILMS FOR INCREASE
IN DENSITY RECORDING AND INFORMATION STORAGE**

**Makogon Iu.M., Pavlova O.P., Sidorenko S.I., Verbitskaya T.I.,
Vladymyrskyi I.A., Albrecht M.**⁽¹⁾

National Technical University of Ukraine "Kiev Polytechnic Institute", Kiev, Ukraine

⁽¹⁾Institute of Physics, Chemnitz University of Technology, Germany

20 minutes

**PI 78 EFFECT OF ELECTROCRYSTALLIZATION MODE OF THE
METALLIC ZINK ON STRUCTURE AND MORFOLOGY AND ABILITY
OF INITIATION OF ELECTROPOLYMERIZATION BY THIS METAL**

Kolzunova L.G., Karpenko M.A.

Institute of Chemistry of Far Eastern- Branch of RAS, Vladivostok, Russia

20 minutes

PI 121 NANOMATERIALS IN 6-th TECHNOLOGYCAL CYCLE

Smertenko P.S., Chernyshev L.I.⁽¹⁾

Lashkarev Institute of Semiconductor Physics of NAS of Ukraine,
Kiev, 03028, Ukraine

⁽¹⁾Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kiev,
Ukraine

20 minutes

**PI 135 FILM-FORMING MATERIALS AND THIN-LAYER COATINGS:
ACHIEVEMENTS AND PROSPECTS**

Zinchenko V.F., Antonovich V.P., Sobol' V.P.⁽¹⁾, Timukhin Ie.V.

Bogatsky Physico-Chemical Institute of NAS of Ukraine, Odessa, Ukraine

⁽¹⁾Central Design Office "Arsenal", Kiev, Ukraine

20 minutes

Discussion

Tuesday, 2013 October, 08

9³⁰-11³⁰ **A.** Physico-chemical fundamentals of the formation of inorganic materials, the study of phase equilibria, surface and contact phenomena in multi-component systems. Modeling of the technological processes for making materials and the properties of contemporary materials for various purposes.

Coordinators: Krasovsky V.P. (Ukraine), Shemet V. (Germany), Glezer A.M. (Russia), Andrievskaya E.R. (Ukraine)

A 11 MOTION OF ENERGI-ELEMENT-INFORMATIONAL UNITY OF THE MATTE Bobukh L.V.

National Metallurgical Academy of Ukraine, Dnepropetrovsk, Ukraine

15 minutes

A 90 MODELING OF THE INFILTRATION OF LIQUID PHASE IN THE PROCESS OF SINTERING OF CERAMIC COMPOSITES

Dutka V.A., Maystrenko A.L.

Bakul Institute for Superhard Materials of NAS of Ukraine, Kiev, Ukraine

15 minutes

A 127 THE SUBMICRON STRUCTURE AS A FACTOR OF ADAPTIVE BEHAVIOR AT LOADING OF STEELS HARDENED BY PLASTIC DEFORMATION WITH DIFFERENT SPEEDS

Yakovleva S.P.

Larionov Institute of Physical and Technical Problems of the North of SB of RAS, Yakutsk, Russia

15 minutes

A 132 3-PHASE REGIONS TRANSFORMATION IN Mo-Zr-V, Ti-C-V SYSTEMS

Lutsyk V.I., Vorobjeva V.P.

Institute of Physical Materials Science of SB of RAS, Buryat State University, Ulan-Ude, Russia

15 minutes

A 134 THE TEMPERATURE DEPENDENCE OF THE VACANCY FORMATION AND MIGRATION ENERGIES BY FIRST-PRINCIPLES CALCULATIONS

Zamulko S., Sidorenko S., Ruban A.⁽¹⁾

National Technical University of Ukraine "Kyiv Polytechnic Institute", Kiev, Ukraine

⁽¹⁾Royal Institute of Technology (KTH), Stockholm, Sweden

15 minutes

A 140 ISOTHERMAL SECTIONS OF THE Cu-Pd-In SYSTEM AT 800 AND 500°C

Ptashkina E.A., Zhmurko G.P., Kabanova E.G., Kuznetsov V.N.

Lomonosov Moscow State University, Moscow, Russia

15 minutes

A 141 FICTIVE MISCIBILITY GAPS IN CALCULATED T1-T2-M SYSTEMS (T1, T2 — TRANSITION METALS, M — SIMPLE METAL) AND WHAT TO DO ABOUT THOSE
Kuznetsov V.N., Kareva M.A., Ptashkina E.A., Kabanova E.G., Zhmurko G.P.
Lomonosov Moscow State University, Moscow, Russia

15 minutes

A 172 FEATURES OF STRUCTURE AND AUSTENITE RECRYSTALLIZATION KINETICS IN MULTIPASS HOT DEFORMATION SPECIAL STEELS AND ALLOYS
Kunitskaya I.N., Spector J.I., Olshanetsky V.E.⁽¹⁾

The State Enterprise "Ukrainian Scientific-Research Institute of Special Steels, Alloys and Ferroalloys GP" USSI ", Zaporozhye, Ukraine

⁽¹⁾Zaporozhye National Technical University, Zaporozhye, Ukraine

15 minutes

A 178 SOLID OXIDE FUEL CELL DEVELOPMENT AT FORSCHUNGSZENTRUM JUELICH

Shemet V., de Haart L.G.J., Vinke I.C., Tietz F., Remml J., Blum L.
Forschungszentrum Jülich GmbH, Jülich, Germany

15 minutes

Tuesday, 2013 October, 08

12⁰⁰-14⁰⁰ **A.** Physico-chemical fundamentals of the formation of inorganic materials, the study of phase equilibria, surface and contact phenomena in multi-component systems. Modeling of the technological processes for making materials and the properties of contemporary materials for various purposes.

Coordinators: Krasovsky V.P. (Ukraine), Shemet V. (Germany), Glezer A.M. (Russia), Andrievskaya E.R. (Ukraine)

A 183 DEVELOPMENT OF THE THEORETICAL BASIS AND CREATION OF A SINGLE CRYSTAL NICKEL HEAT RESISTANT ALLOY FOR BLADES OF GAS-TURBINE UNITS EXPOSED TO ACTIVE SEA SALT WATER CORROSION

Danilov D.V., Shmotin Yu.N., Logunov A.V.⁽¹⁾, Tsatryan E.O.⁽¹⁾, Zakharov Yu.N.⁽¹⁾

Saturn Scientific-Production Association Open Joint-Stock Company, Rybinsk, Russia

⁽¹⁾FGBOU VPO V.S. Chernomyrdin Moscow State Open University, Moscow, Russia

15 minutes

A 322 WETTABILITY AND CONTACT INTERACTION MATERIAL OXIDES OF SYSTEM AL₂O₃ - SiO₂ WITH EUTECTICUM ALLOYS Nb-Co AND Nb-Ni

Zhuravlev V.S., Koval' A. Ju., Karpets M.V., Naidich Ju.V.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

15 minutes

**A 356 MODELING OF ADHESIVE CONTACT BETWEEN ROUGH ELASTIC BODIES
Galanov B.A., Valeeva I.K.**

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv,
Ukraine

15 minutes

**A 359 INVESTIGATION OF PROCESSES OCCURRING AT ZrO₂- AND HfO₂ TO NOBLE
AND ACTIVE METALS INTERACTION**

Durov A.V., Naidich Y.V., Krasovskii V.P.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv,
Ukraine

15 minutes

**A 379 FLUORIDE REFRACTORIES and THEIR USE FOR STUDYING CAPILLARY
PROPERTIES OF CHEMICALLY ACTIVE MELTS WITH Ti, Zr LARGE CONTENTS**

Krasovskyy V., Krasovskaya N., Naidich Y.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv,
Ukraine

15 minutes

A 391 IN SITU COMPOSITES: ALLOYS BASED ON Ti-Si SYSTEM

Gorna I.D., Firstov S.O.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv,
Ukraine

15 minutes

A 405 INTERACTION CERIUM OXIDE WITH EUROPIA

Andrievskaya E.R., Kornienko O.A., Sameljuk A.V

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv,
Ukraine

15 minutes

**A 409 THERMODYNAMIC PROPERTIES OF MELTS OF THE TERNARY CE-IN-NI
SYSTEM**

Ivanov M.I., Berezutski V.V., Kudin V.G., Shevchenko M.A., Sudavtsova V.S.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv,
Ukraine

15 minutes

**A 421 THE ADHESIVE INTERACTION OF SILVER-COPPER MELTS WITH CERAMIC
MATERIALS BASED ON IONIC (BaTiO₃, AlPO₄, PbWO₄, CaF₂, Me_xO_y) IN AIR**

Sydorenko T.V., Durov A.V., Naidich Yu.V.

Frantsevich Institute for Materials Science Problems NAS of Ukraine, Kiev,
Ukraine

15 minutes

Discussion

Tuesday, 2013 October, 08

15⁰⁰-17³⁰ **B. Metallic materials and technologies for production.**
High-entropy alloys.

*Coordinators: Firstov S.A. (Ukraine), Brodnikovskiy N.P. (Ukraine),
Nokhnin A.V. (Russia)*

B 103 ABNORMAL HARDENING AFTER ANNEALING OF SUBMICROCRYSTALLINE METALLS AND ALLOYS, PRODUCED BY EQUAL CHANNEL ANGULAR PRESSING
**Nokhrin A.V., Chuvil'deev V.N., Kopylov V.I.⁽¹⁾, Pirozhnikova O.E.⁽²⁾,
Gryaznov M.Ju.⁽²⁾, Melekhin N.V., Kozlova N.A., Sakharov N.V., Lopatin Yu.G.**
Lobachevsky Physico-Technical Research Institute of State University of Nizhni Novgorod, Nizhni Novgorod, Russia

⁽¹⁾Physico-Technical Institute of the National Academy of Sciences of Belarus, Minsk, Belarus

⁽²⁾Institute for Mechanical Engineering Problems of the National Academy of Sciences, Nizhni Novgorod, Russia

15 minutes

B 105 RESEARCH OF COMPLEX INFLUENCE OF PHOSPHORUS AND SILICON ON THE EFFECT OF MECHANICAL DESCRIPTIONS
Polishko S.A., Sanin A.F., Nosova T.V.

Gonchar Dnepropetrovsk National University, Dnepropetrovsk, Ukraine

15 minutes

B 119 NEW TANTALUM AND VANADIUM BRONZES, SYNTHESIZED UNDER HIGH PRESSURES AND TEMPERATURES
Zibrov I.P., Filonenko V.P.

Institute for High Pressure Physics of RAS, Troitsk, Russia

15 minutes

B 139 RESEARCH OF EXPLOSIVE WELDING PROCESS FEATURE IN MARGINAL ZONES OF STEEL+TITANIUM BIMETAL
Pervukhina O.L., Denisov I.V., Shishkin T.A.

Institute of Structural Macrokinetics and Materials Science of RAS, Chernogolovka, Russia

15 minutes

B 160 LOW-MODULUS β -(Zr, Ti) ALLOY FOR OSTEOSYNTHESIS
**Fedorenko Yu.A., Pritula V.V., Astapenkov V.A., Skiba I.A.⁽¹⁾,
Bondarchuk V.I.⁽¹⁾, Matviychuk Yu.V.⁽¹⁾, Yukhimchuk O.A.⁽²⁾,
Kalashnikov A.V.⁽²⁾**

National Technical University of Ukraine "Kiev Polytechnic Institute", Kiev, Ukraine

⁽¹⁾Kurdyumov Institute for Metal Physics of NAS of Ukraine, Kiev, Ukraine

⁽²⁾Institute of Traumatology and Orthopedy of Academy of Medical Sciences of Ukraine, Kiev, Ukraine

15 minutes

B 161 INVESTIGATION POSSIBILITIES OF ZIRCONIUM ALLOY MICROSTRUCTURE FOR NUCLEAR ENERGETICS

Zuev L.B., Danilov V.I., Shlyakhova G.V., Zavodchikov S.U.⁽¹⁾

Institute of Strength Physics and Materials Science (ISPMS) of SB of RAS,
Tomsk, Russia

⁽¹⁾Chepetsky Mechanical Plant, Glazov, Russia

15 minutes

B 165 EFFECT OF PARTIAL REPLACEMENT OF Zr BY Hf IN LOW MODULUS β (Zr-Ti-Nb) ALLOY ON ITS PHYSICAL-MECHANICAL PROPERTIES

**Skiba I.A., Shyvaniuk V.M., Matviychuk Yu.V., Povar Ya.O.⁽¹⁾, Prytula V.V.⁽¹⁾,
Vyshnevetskaya O.A.⁽¹⁾, Proskurko V.G.⁽²⁾**

Kurdyumov Institute for Metal Physics of NAS of Ukraine, Kyiv, Ukraine

⁽¹⁾National Technical University of Ukraine "Kyiv Politechnic Institute", Kyiv,
Ukraine

⁽²⁾Wire Group, Vyshneve, Ukraine

15 minutes

B 362 FORMATION OF STRUCTURES AND PROPERTIES AT Zr-(0-2,5) Nb-(0-1) Cr-(0-1) Fe ALLOYS DEFORMATION IN THE TEMPERATURE INTERVAL OF THE PHASE TRANSFORMATION

**Brodnikovskiy M.P., Kulakov A.S., Brodnikovskiy D.M., Samelyuk A.V.,
Firstov S.O.**

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv,
Ukraine

15 minutes

Discussion

Tuesday, 2013 October, 08

15⁰⁰-18⁰⁰ **C.** Powder metallurgy: current status of science and industry; modern materials based on fine powders, fibers, etc., technologies and properties.

In another classroom

*Coordinators: Shumenko V.V. (Russia), Shtern M.B. (Ukraine),
Grigor'ev E.G. (Russia)*

C 17 EFFECT OF POROSITY ON RESIDUAL STRESSES AND STRAINS IN A THIN DISC SUBJECT TO THERMAL LOADING

Alexandrov S.E.

Ishlinskii Institute for Problems in Mechanics of RAS, Moscow, Russia

15 minutes

C 30 LYKOV'S THEORY IN POWDER METALLURGY

Shumenko V.V., Shumenko V.N.⁽¹⁾

The Russian Union of Insurers (RUI), Moscow, Russia ⁽¹⁾Federal State Institution State Technological University "Moscow Institute of Steel and Alloys", Moscow, Russia

15 minutes

C 112 THE INFLUENCE OF POWDERS PREPARATION FOR CONSOLIDATION BY HIGH VOLTAGE ELECTRIC DISCHARGES ON THE PROPERTIES OF CARBIDE-STEELS

**Sizonenko O.N., Grigoriev E.G.⁽¹⁾, Zaichenko A.D., Torpakov A.S.,
Lipyan E.V., Pristash N.S.**

Institute of Pulse Processes and Technologies of NAS of Ukraine, Mykolaiv, Ukraine

⁽¹⁾National Research Nuclear University "Moscow Engineering Physics Institute", Moscow, Russia

15 minutes

C 115 THE RESEARCH OF THE INFLUENCE OF THERMOBARIC EFFECT OF ELECTROCONSOLIDATION AND NANO-Al₂O₃ QUANTITY ON THE STRUCTURE AND PROPERTIES OF CERAMICS BASED ON NANO-ZrO₂

Gevorkyan E.S., Melnik O.M.

Ukrainian State Academy of Railway Transport, Kharkov, Ukraine

15 minutes

C 116 SOME PROBLEMS AND PROSPECTS OF HOT FORGING OF POROUS PREFORMS IN THE PRESENCE OF LIQUID PHASE

Dorofeyev V.Yu., Dorofeyev Yu.G., Batiyev R.V.⁽¹⁾, Vodolazhenko R.A.⁽²⁾

South-Russian State Technical University, Novocherkassk, Russia

⁽¹⁾Federal State Unitary Enterprise "Bardin Central Research Institute of Ferrous Metallurgy", Moscow, Russia

⁽²⁾Pyatigorsk Branch of State Budget Institution of Higher Professional Education "Volgograd State Medical University" of the Ministry of Health of Russia, Pyatigorsk, Russia

15 minutes

C 118 PROSPECTS OF APPLICATION OF HETERO-GRAPHENE MICROPOWDERS FOR SYNTHESIS OF DIAMOND-LIKE CERAMICS

Filonenko V.P., Zibrov I.P., Davydov V.A., Antanovich A.A.

Institute for High Pressure Physics of RAS, Troitsk, Russia

15 minutes

C 133 POWDER ALLOYS OF DOUBLE-PURPOSE

Lutsyk V.I., Sidorenko V.A.⁽¹⁾, Lutsik V.I.⁽²⁾

Institute of Physical Materials Science of SB of RAS, Buryat State University, Ulan-Ude, Russia

⁽¹⁾Centre of Expertizing & Consulting, Moscow, Russia

⁽²⁾Tver State Technical University, Tver, Russia

15 minutes

C 150 FEATURES OF THE FORMATION OF PHASE COMPOSITION IN OBTAINING PCBN COMPOSITES IN cBN-AISYSTEM

BezhenarM.P., KonovalS.M., GarbuzT.O., TkachV.N., Belyavina N.M.⁽¹⁾

Bakul Institute of Superhard Materials of NAS of Ukraine, Kiev, Ukraine

⁽¹⁾Shevchenko Kiev National University, Kiev, Ukraine

15 minutes

C 154 LOCATION OF THERMAL PROCESSES IN THE SPARK PLASMA SINTERING AND HIGH-VOLTAGE CONSOLIDATION OF THE POWDERS

Grigoryev E.G., Olevsky E.A.⁽¹⁾

National Research Nuclear University "MEPhI", Moscow, Russia

⁽¹⁾San Diego State University, San Diego, USA

15 minutes

C 378 INFLUENCE OF CHROMIUM CARBIDES ON STRUCTURE FORMATION AND MECHANICAL PROPERTIES OF ECONOMY ALLOYING CARBIDE STEEL PRODUCING BY PULSE HOT DEFORMATION

Yakovenko R.V., Maslyuk V.A., Tolochin A.I., Laptev A.V.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

15 minutes

C 399 FEATURES OF SHS THERMOKINETICS INITIATED BY THE DECOMPOSITION REACTION OF TITANIUM HYDRIDE

Solntsev V.P., Solntseva T.A., Skorokhod V.V., Ragulya A.V.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

15 minutes

C 410 ANALYSIS OF DENSIFICATION OF A POROUS POWDER COMPACT DURING ELECTRIC SINTERING

Raichenko A.I.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

15 minutes

C 411 ELECTRIC CURRENT DISPERSION OF PARTICLES IN EMULSION
Raichenko A.I., Syzonenko O.N.⁽¹⁾, Derevyanko A.V., Torpakov A.S.⁽¹⁾

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

⁽¹⁾Institute of Pulse Processes and Technologies of NAS of Ukraine, Mykolaiv, Ukraine

15 minutes

C 418 THE STATE OF ART IN CONSOLIDATION THEORY OF POWDER MATERIALS
Skorokhod V.V., Shtern M.B.

Frantsevich Institute for Problems of Materials Sciences of NAS of Ukraine, Kiev, Ukraine

15 minutes

Discussion

Tuesday, 2013 October, 08

**Exposition of posters «A» from 9³⁰ till 14⁰⁰;
«B» and «C» from 15⁰⁰ till 18⁰⁰**

A 12 MODEL AND FORMULA OF LIFE

Bobukh L.V.

National Metallurgical Academy of Ukraine, Dnepropetrovsk, Ukraine

A 34 MODELLING OF MIXING ENTHALPIES IN LIQUID TERNARY Al-Ge-Mn SYSTEM

Kotova N.V., Usenko N.I.

Shevchenko Kiev National University, Kiev, Ukraine

A 41 ON THERMAL CONDUCTIVITY OF BORON DOPED WITH METALS

Chkhartishvili L.S., Murusidze I.G.⁽¹⁾

Georgian Technical University, Tbilisi, Georgia

⁽¹⁾Ilia State University, Tbilisi, Georgia

A 66 INNOVATIVE SOLUTION OF SCIENTIFIC AND APPLIED MULTICRITERIA PROBLEMS OF MODERN MATERIAL AUTHORITY

Zhilinsky O.V., Laktyushina T.V.⁽¹⁾

SSI "Joint Institute of Mechanical Engineering" of NAS of Belarus, Minsk, Belarus

⁽¹⁾SSI "Lykov Heat- and Mass Transfer Institute" of NAS of Belarus, Minsk, Belarus

Belarus

A 72 COMPUTER MODELING OF HIGH-TEMPERATURE CREEP OF HARD ALLOY SINTERED UNDER A CONSTANT LOAD

Shestakov S.I.

Bakul Institute for Superhard Materials of NAS of Ukraine, Kiev, Ukraine

A 75 INFLUENCE OF MELT LAYER THICKNESS TO THE HOMOGENEOUS NUCLEATION KINETICS

Lysenko A.B., Zagorulko I.V., Gubarev S.V.

Dneprodzerzhinsk State Technical University, Dneprodzerzhinsk, Ukraine

A 76 ON CRITERIA OF DROPLET FORMATION AT ION SPUTTERING IN REGION OF ELASTIC LOSS DOMINATION

Kalinichenko A.I., Perepelkin S.S., Strel'nitskij V.E.

National Science Center "Kharkov Institute of Physics and Technology", Kharkov, Ukraine

A 82 KINETICS OF CRYSTAL GROWTH IN CRAMPED CONDITIONS OF THE LAYERS OF SMALL THICKNESS

Lysenko A.B., Kosinskaya O.L., Kazantseva A.A.

Dneprodzerzhinsk State Technical University, Dneprodzerzhinsk, Ukraine

A 87 NUMERICAL STUDY OF NON-ISOBARIC GAS PHASE PROCESS FOR PRODUCING CERAMIC SIC-COMPOSITES MATRIX

Kulik V.L., Kulik A.V., Demin S.E.

BSTU "VOENMECH", St. Petersburg, Russia

A 123 CLUSTERIZATION MECHANISMS IN MAGNETIC ALLOYS

Efros B.M.⁽¹⁾, Deryagin A.I., Metlov L.S.

Donetsk Institute for Physics and Engineering of NAS of Ukraine, Donetsk, Ukraine

⁽¹⁾Institute of Metal Physics of Ural Branch of RAS, Ekaterinburg, Russia

A 142 STRUCTURAL OUDERING IN LAVES'S PHASES

Kerimov E.Yu., Balykova Yu.V., Shaipov R. H., Nikolaev S.V.,

Kuznetsov V.N., Slyusarenko E.M.

Lomonosov Moscow State University, Moscow, Russia

A 144 MULTICOMPONENT PHASE DIAGRAMS AS BASIS FOR COMPLEX ALLOYING NICKEL-BASED SUPERALLOYS

Kerimov E.Yu., Nikolaev S.V., Kuznetsov V.N., Slyusarenko E.M.

Lomonosov Moscow State University, Moscow, Russia

A 307 X-RAR PHOTOELECTRON SPECTROSCOPY STUDY OF THE ELECTRONIC STRUCTURE OF Ti_3PbBr_5 SINGLE CRYSTAL

Denysyuk N.M., Khyzhun O.Y., Bekenev V.L., Parasyuk O.V.⁽¹⁾,

Danylchuk S.P.⁽¹⁾, Fedorchuk A.O.⁽²⁾

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kiev, Ukraine

⁽¹⁾Volyn National University, Lutsk, Ukraine

⁽²⁾Lviv National University of Veterinary Medicine and Biotechnologies, Lviv, Ukraine

A 334 DETERMINATION OF THE CHARACTERISTIC PARAMETERS OF THE EUTECTIC IN THE SYSTEM OF LaB_6 – $\text{Me}^{\text{IV-VI}}\text{B}_2$ BY THE TEMPERATURES OF COMPONENTS FUSION

Zakarian D.A., Kartuzov V.V., Khachatryan A.V.

Frantsevich Institute for Problems of Materials Science of NASU, Kyiv, Ukraine

A 22 MODELLING OF $\text{Mg}_{65}\text{Cu}_{25}\text{Y}_{10}$ ALLOY SOLIDIFICATION PROCESSES IN THE CONDITIONS OF MELT CASTING IN A MOULD

Lysenko A.B., Kravets A.L., Kosynska O.L.

Dneprodzerzhinsk State Technical University, Dneprodzerzhinsk, Ukraine

A 339 MECHANICAL ACTIVATION OF TITANIUM AND ALUMINUM POWDER MIXTURES IN A PLANETARY MILL

Ludvinskaya T.A., Uvarova I.V., Timofeeva I.I., Ivchenko V.I., Martynenko E.N., Neshpor I.P.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

A 341 WETTING AND SPREADING KINETICS OF LIQUIDS OVER SOLID SURFACES AND MOVEMENT OF THE INTERPHASE OF TWO IMMISCIBLE LIQUIDS ALONG SOLID SURFACE FOR MODEL SYSTEMS WITH PHYSICAL TYPE OF INTERACTION

Grigorenko N., Chernigovtsev E., Poluyanskaya V., Naidich Y.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

A 350 SPECTROSCOPIC PROPERTIES AND ELECTRONIC STRUCTURE OF LAYERED FERROELECTRIC HIGH- k TITANATE $\text{Pr}_2\text{Ti}_2\text{O}_7$

Khyzhun O.Yu., Atuchin V.V.⁽¹⁾, Gavrilova T.A.⁽¹⁾, Grivel J.-C.⁽²⁾, Kesler V.G.⁽¹⁾, Troitskaia I.B.⁽¹⁾

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine;

⁽¹⁾Institute of Semiconductor Physics of SB of RAS, Novosibirsk, Russia;

⁽²⁾Technical University of Denmark, Frederiksborgvej, Roskilde, Denmark

A 360 HfO_2 - AND TiO_2 -CERAMIC BRAZING

Durov A.V.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

A 361 COMPUTER SIMULATION AND STUDY OF THE MAGNETIC PROPERTIES OF GRAPHENE RIBBONS

Lisenko A.A., Kartuzov V.V.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

A 364 PHASE EQUILIBRIA IN THE Hf – Ru – Rh SYSTEM IN THE RANGE OF COMPOSITIONS 50–100 AT. % Hf AT SUBSOLIDUS TEMPERATURES

Kriklya L.S., Korniyenko K.Ye., Khorujaya V.G.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

A 380 PECULAIRITIES OF COMPOSITE MICROSTRUCTURE FORMATION IN THE SYSTEM DIAMOND (DIAMOND-LIKE BN PHASES)-SOLID SOLUTION B-N-C

Volkohon V.M., Oleinik H.S., Timofeeva I.I., Buzhanskaya I.A., Avramchuk S.K., Kotko A.V.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

A 394 SOLID AND LIQUID PHASE INTERACTION TiB_2 AND $TiSi_2$ AT HIGH PRESSURES

Bykov A.I., Timofeeva I.I., Vasilkovskaya M.A., Klochkov L.A., Korichev S.F.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

A 396 VELOCITY AND ENERGY CHARACTERISTICS OF DECOMPOSING REACTIONS NANO AND MICRO POWDERS OF GRAPHITE LIKE AND DENSE BORON NITRIDE PHASES WITH CARBON PRESES AT 2500 - 3700(K)

Garbuz V.V., Petrova V.A., Kherovymchuk L.S., Kuzmenko L.N., Shatskyh S.K.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

A 400 LIQUIDUS SURFACE of the Al_2O_3 - Y_2O_3 - Gd_2O_3 SYSTEM

Lakiza S.M., Dudka T.S.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

A 401 ELECTROCHEMICAL CORROSION OF DEFORMED ALUMINUM ALLOY OF Al-Zn-Mg-Cu, MICROALLOYED Sc IN THE NEUTRAL MEDIUM

Krasovskyi M.A., Lavrenko V.A.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

A 408 THERMODYNAMIC PROPERTIES OF MELTS OF THE QUATERNARY AL-CO-SC-SI SYSTEM

Kudin V.G., Mateiko I.V., Subotenko P.N., Shevchenko M.A., Sudavtsova V.S.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

A 412 THERMODYNAMICS PROPERTIES of TERNARY LIQUID Ga-Si-Mn(Ni) SYSTEMS

Romanova L. O., Shevchenko M.A., Subotenko P.N., Kudin V.G., Sudavtsova V.S.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

B 2 ELECTROCHEMICAL SYNTHESIS OF NiSi₂ FROM A NaCl-NaF-K₂SiF₆ MELT ON A Ni CATHODE

Devyatkin S.V.

Vernadsky Institute of General and Inorganic Chemistry of NASU, Kiev, Ukraine

B 35 LOW-TEMPERATURE ACOUSTIC PROPERTIES OF HIGH-ENTROPY ALLOY

Al_{0.5}CoCrCuFeNi

Bulatov A.S., Dolzhenko V.F., Klochko V.S., Korniets A.V., Kolodiy I.V.,

Rudycheva T.Y., Tikhonovsky M.A., Tortika A.S.

National Science Center Kharkiv Institute of Physics and Technology, Kharkov, Ukraine

B 45 INVESTIGATION OF STRUCTURE OF ELECTRODEPOSITED ALLOYS OF Fe-Zn SYSTEM IN THE RANGE OF HIGH IRON CONCENTRATIONS

Kolesnyk Ie.V.

SHEI "Ukrainian State University of Chemical Technology", Dnepropetrovsk, Ukraine

B 55 STRUCTURE AND PHASE COMPOSITION OF Al-Cu-Ni-Fe-Ti ALLOY RESULTED FROM MECHANICAL ALLOYING

Chernyavsky V.V., Yurkova A.I., Kravchenko O.I.

National Technical University of Ukraine "Kiev Polytechnic Institute", Kiev, Ukraine

B 59 FORMATION OF GRADIENT LAYER STRUCTURES IN THE TiNi SURFACE LAYERS DEPENDING ON THE TREATMENT PARAMETERS OF THE ELECTRON-BEAMS

Ostapenko M.G., Meisner L.L.⁽¹⁾, Lotkov A.I., Gudimova E.Yu.

Institute of Strength Physics and Materials Science of Siberian Branch, h of RAS, Tomsk, Russia

⁽¹⁾National Research Tomsk State University, Tomsk, Russia

B 74 SELF-PROPAGATING HIGH-TEMPERATURE SYNTHESIS (SHS) OF NITRIDED IRON

Barinova T.V., Borovinskaya I.P., Kovalev I.D., Alymov M.I.

Institute of Structural Macrokinetics and Materials Science of RAS, Chernogolovka, Russia

B 102 EFFECT OF SIMULTANEOUS STRENGTH AND CORROSION RESISTANCE INCREASE IN SUBMICROCRYSTALLINE ALLOYS AND STEELS

Chuvil'deev V.N., Nokhrin A.V., Kopylov V.I.⁽¹⁾, Bahmetiev A.M.⁽²⁾, Sandler N.G.⁽²⁾, Tryaev P.V.⁽²⁾, Kozlova N.A., Chegurov M.K., Melekhin N.V., Butusova E.N., Gryaznov M.Yu.⁽³⁾, Kuzin V.E.

Lobachevsky Physico-Technical Research Institute of State University of Nizhni Novgorod, Nizhni Novgorod, Russia

⁽¹⁾Physico-Technical Institute of the National Academy of Sciences of Belarus, Minsk, Belarus

⁽²⁾Joint Stock Company "Afrikantov Experimental Design Bureau for Mechanical Engineering", Nizhny Novgorod, Russia

⁽³⁾Institute for Mechanical Engineering Problems of the National Academy of Sciences, Nizhny Novgorod, Russia

B 174 AN IMPROVED PROCESSING TECHNIQUE FOR PREPARATION OF NON-ORIENTED ELECTRICAL STEELS WITH ENHANCED ROTATION TEXTURE

Petryshynets Ivan, Kovac Frantisek, Sopko Martin

Institute of Materials Research of Slovak Academy of Sciences, Kosice, Slovak Republic

B 320 INFLUENCE OF THE SOLID INTERMETALLIC PARTICLES ZrCr₂ ON STRUCTURE FORMATION, DEFORMATION AND FRACTURE OF ALLOY Zr-3, 2Cr

Brodnikovskiy D., Brodnikovskiy N., Okun I., Firstov S.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

B 342 MODULUS OF ELASTICITY VALUE FOR CAST MULTICOMPONENT HIGH-ENTROPY EQUIATOMIC SINGLE-PHASE ALLOYS WITH BCC CRYSTALLINE LATTICE

Firstov S.A, Gorban V.F, Krapivka N.A, Pechkovskiy E.P.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

B 344 CONSOLIDATION OF AL-BASED POWDERED ALLOY REINFORCED BY METASTABLE NANOQUASICRYSTALLINE PARTICLES

Byakova A.V., Yurkova A.I.⁽¹⁾, Vlasov A.A., Scheretskiy A.A.⁽²⁾, Byba E.G.⁽¹⁾

Institute for Problem of Material Science of NAS of Ukraine, Kyiv, Ukraine,

⁽¹⁾National Technical University of Ukraine "Kiev Polytechnic Institute", Kyiv, Ukraine

⁽²⁾Physical-Technological Institute of Metals and Alloys, National Academy of Sciences of Ukraine, Kiev, Ukraine

B 353 THE ADHESIVE AND COHESIVE PROPERTIES OF THE QUASICRYSTALLINE COATING OF Al-Cu-Fe SYSTEM

Evich I.I., Podrezov Yu.M., Iefimov M.O., Legka T.M.⁽¹⁾, Korzhova N.P., Kusil V.M., Evdokimenko Yu.I.

Frantsevich Institute for Problems of Materials Science of NASU, Kyiv, Ukraine

⁽¹⁾Kurdjumov Institute for Metal Physics of NAS of Ukraine, Kyiv, Ukraine

B 363 FORMATION OF COATINGS ON THE TITANIUM ALLOYS BY DIFFUSIONAL SATURATION WITH ALUMINIUM AND SILICON

Brodnikovskiy N.P., Baschenko O.A., Zdolnik S.N., Zykov, E.V, Umansky V.P., Firstov S.A.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

B 402 X-RAY ANALYSIS OF Ni₃₀Cr₁₅Fe₂₀Co₁₅Mo₁₀Ta₅Ti₅ HIGH-ENTROPY ALLOY

Karpets M.V., Firstov S.A., Gorban' V.F., Krapivka N.A., Makarenko E.S.,

Myslivchenko A.N

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

B 186 FORMATION OF THE STRUCTURE BY PLASTIC DEFORMATION AND ITS INFLUENCE ON PROPERTIES OF THE Ti-Nb-Mo-Zr SYSTEM ALLOY

Golosoza O.A.⁽¹⁾, Kolobov Yu.R.^(1,2), Torganchyk V.I.⁽¹⁾, Smolyakova M.Yu.⁽¹⁾

⁽¹⁾Belgorod State National Research University, Belgorod 308015, Russia

⁽²⁾Institute of Structural Macrokineics and Materials Science of RAS, Chernogolovka, 142432, Russia

C 27 LIQUID PRESSING NANOSCALE HARD ALLOY WC – Co

Levashov E.A., Shumenko V.N., Zaitsev A.A., Loginova T.V.

Federal State Institution "State Technological University "Moscow Institute of Steel and Alloys", Moscow, Russia

C 28 USE TREATED FOR FILING SLUDGE SINTERED PRODUCTS

Sudina S.S., Shumenko V.N., Shumenko V.V.⁽¹⁾

Federal State Institution State Technological University "Moscow Institute of Steel and Alloys", Moscow, Russia

⁽¹⁾The Russian Union of Insurers (RUI), Moscow, Russia

C 29 METHOD OF MEASUREMENT OF PRESSURE LOSS EXTERNAL FRICTION IN STEEL MOLDS

Shumenko V.N., Loginova T.V., Sudina S.S., Shumenko V.V.⁽¹⁾

Federal State Institution State Technological University "Moscow Institute of Steel and Alloys", Moscow, Russia

⁽¹⁾The Russian Union of Insurers (RUI), Moscow, Russia

C 32 SOLID-PHASE SINTERING TiC – Ni

Shumenko V.N., Loginova T.V., Shumenko V.V.⁽¹⁾

Federal State Institution State Technological University "Moscow Institute of Steel and Alloys", Moscow, Russia

⁽¹⁾The Russian Union of Insurers (RUI), Moscow, Russia

C 33 BEHAVIOR PARTICLES OF TITANIUM CARBIDE AFTER OF MELT

Shumenko V.N., Loginova T.V., Shumenko V.V.⁽¹⁾

Federal State Institution State Technological University "Moscow Institute of Steel and Alloys", Moscow, Russia

⁽¹⁾The Russian Union of Insurers (RUI), Moscow, Russia

C 48 RESEARCH OF STRESS INTENSITY FACTORS FOR INTERNAL CRACK IN FIBER

Borovyk O.V., Borovik V.G.⁽¹⁾

Pisarenko Institute for Problems of Strength of NAS of Ukraine, Kiev, Ukraine

⁽¹⁾Frantsevich Institute for Problems of Materials Science, Kiev, Ukraine

C 52 THE PRODUCTION TECHNOLOGY OF PARTS FROM ALUMINIUM POWDER

Ryabicheva L.A., Dobrydneva A.I.

Dahl East Ukrainian National University, Lugansk, Ukraine

C 70 ON THE OBTAINING MICROPOWDERS SYNTHETIC DIAMONDS WITH IMPROVED QUALITY

Sizonenko O.N., Oliinyk N.A.⁽¹⁾, Ilnitskaya G.D.⁽¹⁾, Bazaliy G.A., Lipyan E.V., Torpakov A.S.

Institute of Pulse Processes and Technologies of NAS of Ukraine, Nikolaev, Ukraine

⁽¹⁾Bakul Institute of Superhard Materials of NAS of Ukraine, Kiev, Ukraine

C 94 ELECTROCHEMICAL PRODUCTION OF ALLOYS AND INTERMETALLIC COMPOUNDS OF MOLYBDENUM (TUNGSTEN) WITH OTHER METALS FROM TUNGSTATE-MOLYBDATE MELTS

Malyshev V.V., Uskova N.N.⁽¹⁾, Gab A.I., Grabchikov S.S.⁽²⁾

Open International University of Human Development «Ukraine», Kiev, Ukraine

⁽¹⁾Vernadsky Institute of General and Inorganic Chemistry of NASU, Kiev, Ukraine

⁽²⁾Scientific-Practical Center for Material Sciences, Minsk, Belarus

C 108 THE ELECTROLESS NICKEL AND COBALT PLATING PROCESS PARAMETERS FOR PREPARATION OF COMPOSITE CLAD POWDERS

Mikutski V.A., Golodok R.P., Smorygo O.L., Ilyushchenko A.F., Sadykov V.⁽¹⁾, Stathopoulos V.⁽²⁾

Powder Metallurgy Institute, Minsk, Belarus

⁽¹⁾Institute of Catalysis of SB of RAS, Novosibirsk, Russia ⁽²⁾TEIC, Psahna, Evias, Greece

C 109 MODELING OF DEFORMATION OF THE POWDER PARTICLE BY STEEL PUNCH AND PUNCH WITH AN ELASTIC LINING

Savich V.V., Sheluhina A.I., Pronkevich S.A.⁽¹⁾, Gorohov V.M.

SSI «Powder Metallurgy Institute», Minsk, Belarus

⁽¹⁾Belarusian National Technical University, Minsk, Belarus

C 137 INFLUENCE OF THE PARTICLE SURFACE STATE ON STRUCTURE FORMATION OF POWDER-LIKE MATERIALS

Belousov N.N., Metlov L.S.

Galkin Donetsk Physical and Technical Institute of NAS of Ukraine, Donetsk, Ukraine

C 147 STRUCTURE AND PROPERTIES OF THE DIRECTION SOLIDIFIED COMPOSITE B₄C-TB₂-SiC DEPENDING ON THE CRYSTALLIZATION RATE

Zyma R., Bogomol I., Remizov D., Riabokon V.

National Technical University of Ukraine «Kiev Politechnic Institute», Kiev, Ukraine

C 149 BORON SUBOXIDE – A PERSPECTIVE FOR ADDITION SUPERHARD PCBN COMPOSITES

Garbuz T., Bezhenar N., Konoval S., Belyavina N.⁽¹⁾

Bakul Institute for Superhard Materials of the NAS of Ukraine, Kiev, Ukraine

⁽¹⁾Shevchenko Kyiv National University, Kiev, Ukraine

C 155 3D AFM ROUGHNESS OF SINTERED NANOMATERIALS PRODUCED BY HOT ISOSTATIC PRESSING (HIP)

Sayah T., Hamouda K.

USTHB, Laboratory of Materials Sciences and Engineering, Algeria

C 156 THE INFLUENCE OF THE COMPACTION METHOD ON THE STRUCTURE AND PROPERTIES OF POWDER MATERIALS BASED ON IRON AND SELF FLUXING ALLOYS

Demydenko A.A., Stepanchuk A.N.

National Technical University of Ukraine "KPI", Kiev, Ukraine

C 157 PRINCIPLES OF CREATION OF LIGATURE TO DISPERSION STRENGTHENING OF METALS AND ALLOYS

Stepanchuk A.N., Biryukovych L.O., Bogatov A.S.

National Technical University of Ukraine "KPI", Kiev, Ukraine

C 163 ELABORATION OF BULK TITANIUM NITRIDE FROM THE SPARK ERODED TI POWDER OBTAINED IN LIQUID NITROGEN

Gilchuk A.V., Ochin P.⁽¹⁾, Perrière L.⁽¹⁾, Monastyrsky G.E.⁽²⁾, Koval Yu.N.⁽²⁾

NTUU "KPI", Kiev, Ukraine

⁽¹⁾CMPE-CNRS, Thiais, France

⁽²⁾IMP of NASU, Kiev, Ukraine

C 309 ANALYSIS OF THE COMPETITIVITY OF AN ADSORPTIVE ELEMENTS ON THE DIFFUSION PROCESSES TYPE ON FORMING CONTROLLABLE HETEROPHASE STRUCTURE IN PSEUDOALLOYS

Grishchishyna L.N., Uskova N.A., Baglyuk G.A.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

C 314 TO SCELETAL HEAT CONDUCTIVITY CALCULATIONS FOR METAL FIBER MATERIALS

Kostornov A.G., Shapoval A.A., Moroz A.L., Shapoval I.V.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

C 315 EFFECT OF MICROWAVE HEATING ON HOMOGENIZATION OF EQUIMOLAR Al₂O₃-Cr₂O₃ POWDER MIXTURE

Getman O.I., Skorokhod V.V., Panichkina V.V., Radchenko P.Ya., Andreeva M.G., Yeremeyev A.G.⁽¹⁾, Plotnikov S.V.⁽¹⁾

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

⁽¹⁾Institute for Applied Physics of RAS, Nizhniy Novgorod, Russia,

C 324 THE POSSIBILITY OF NANODISPERSED SiO₂ PRODUCTION BY SILICON CARBIDE RECYCLING USING SOLAR THERMAL SYSTEM

Pasichny V., Sych O., Pinchuk N., Ostapenko S.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

C 85 PHYSICOCHEMICAL AND ELECTRICAL PROPERTIES OF POLYCRYSTALLINE COBALTATE La_{0.85}Li_{0.05}Sr_{0.1}CoO_{3-δ} INFLUENCED BY SYNTHESIS PROPERTIES

Nedilko S.A., Fesich I.V., Dzyazko A.G.

Shevchenko Kiev National University, Kiev, 01601, Ukraine

C 347 KINETIC OF NONISOTHERMAL OXIDATION OF TiFeSi₂ POWDER

Kovalev A.V., Koshelev M.V.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

C 369 PHYSICO-CHEMICAL BASES of REFINING the ZIRCONIUM AT ELECTRON BEAM SKULLED SMELTING with ELECTROMAGNETIC MIXING of MELTING

Kuznetsova T.L.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

C 406 THE ANALYSIS OF CHANGES OF DEGREE OF STRUCTURAL INSTABILITY IN HARD ALLOYS

Chernenko L.I., Ponomaryov S.S., Derev'yanko O.V., Kushnir O.V.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

Wednesday, 2013 October, 09

9³⁰-11³⁰ **D. Nano-scale materials science: technologies and materials.**

Coordinators: Ragulya A.V. (Ukraine), Freik D.M. (Ukraine), Golosov E.V. (Russia)

D 5 MICROALLOYED IN THE NANO-STRUCTURAL STATE CONSTRUCTIONAL STEELS OF THE FUTURE

Panfilova L.M., Smirnov L.A.

JSC "TheUralsMetalInstitute", Ekaterinburg, Russia

15 minutes

D 395 ZINC OXIDE AS MULTIFUNCTIONAL MATERIAL, PROPERTIES AND APPLICATIONS

Lashkarev G.V., Karpyna V.A., Ievtushenko A.I., Shteplyuk I.I., Myronyuk D.V., Khranovsky V.D., Lazorenko V.I., Dranchuk M.V., Popovych V.I.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

15 minutes

D 8 HARDENING OF THE SURFACE LAYER OF STEEL 40X LOW-TEMPERATURE CARBONITRIDING

Kostik V.O., Kostik E.A.

National Technical University «Kharkov Polytechnical Institute», Kharkov, Ukraine

15 minutes

D 44 PHYSICAL-MECHANICAL PROPERTIES OF SURFACE NANOCRYSTALLINE STRUCTURES FORMED BY MECHANICAL-PULSE TREATMENT

Kyryliv V.I., Nykyforchyn H.M., Maksymiv O.V.

Karpenko Physico-Mechanical Institute of NASU, Lviv, Ukraine

15 minutes

**D 47 FEATURES OF PHASE COMPOSITION, STRUCTURE AND MORPHOLOGY OF
NANOPOWDERS BASED ON $(Y_{1-x}Eu_x)_2O_3$ SUBMICROSPHERES PHOSPHOR
Bezkravnyi O.S., Yermolayeva Yu.V., Matveevskaya N.A., Vovk O.M.,
Tolmachev A.V.**

Institute for Single Crystals of NAS of Ukraine, Kharkov, Ukraine

15 minutes

**D 56 NANOOBJECTS OBTAINED IN IMPULSE HIGH-VOLTAGE DISCHARGE PLASM
Kuryavyi V.G.**

Institute of Chemistry of Far Eastern- Branch of RAS, Vladivostok, Russia

15 minutes

**D 60 MONO-SIZED NANOPOWDERS $(Lu_{1-x}Eu_x)_2O_3$ WITH THE CORE-SHELL STRUCTURE
Yermolayeva Yu.V., Tolmachev A.V.**

Institute for Single Crystals of NAS of Ukraine, Kharkov, Ukraine

15 minutes

**D 67 DIFFUSION IN THIN FILMS UNDER CONDITIONS OF "OXYGEN PUMP" ACTION ON A
FREE SURFACE**

Sidorenko S.I., Gusak A.M.⁽¹⁾, Voloshko S.M., Oleshkevych A.I.

National Technical University of Ukraine "Kiev Polytechnic Institute", Kiev, Ukraine

⁽¹⁾Khmelnitskyi Cherkassy National University of Ukraine, Cherkassy, Ukraine

15 minutes

D 92 NANOMATERIALS FOR APPLICATION IN THERMOELECTRICITY

Freik D.M., Nykyruy L.I., Mezhylovska L.Y., Yavorskiy Y.S.

Vasyl Stefanyk Precarpathian National University, Ivano-Frankivsk, Ukraine

15 minutes

**D 106 APPLYING OF CHEMICAL REACTIONS WITH OXALIC ACID FEATURES FOR
NANODISPERSED TITANIUM CARBIDES AND OXIDES SYNTHESIS**

Davydov D.A.

Institute of Solid State Chemistry of Ural Branch of RAS, Yekaterinburg, 620990,
Russia

15 minutes

Discussion

Wednesday, 2013 October, 09

12⁰⁰-14⁰⁰ **D. Nano-scale materials science: technologies and materials.**

*Coordinators: Ragulya A.V. (Ukraine), Freik D.M. (Ukraine),
Golosoov E.V. (Russia)*

D 113 FEATURES OF PHASE FORMATION IN Fe₂O₃-Y₂O₃ SYSTEM UNDER THE GLYCINE-NITRATE SYNTHESIS

Popkov V.I.

Saint Petersburg State Technological Institute (Technical University), Saint Petersburg, Russia

15 minutes

D 120 THE ELECTRODEPOSITION OF MULTYCOMPONENT COATINGS BASED ON Fe-Ni-Co-P SYSTEM AND CHARACTERISTICS OF IT'S PHASE AND ELEMENT COMPOSITIONS

**Fishgoit L.A., Safonov V.A., Dolov M.S., Kochergin V.K., Kukushkina T.S.,
Safonova O.V.⁽¹⁾, Glattzel P.⁽²⁾**

Lomonosov Moscow State University, Moscow, Russia

⁽¹⁾Paul Scherrer Institute, Switzerland

⁽²⁾European Synchrotron Radiation Faculty, Grenoble Cedex, France

15 minutes

D 126 METAL MATRIX COMPOSITES REINFORCED WITH NANOPARTICLES FOR THE NEEDS OF SPACE EXPLORATION

Agureev L.E., Kostikov V.I., Ereemeeva Zh.V.

National University of Science and Technology "MISIS", Moscow, Russia

15 minutes

D 136 NANO- AND MICROSTRUCTURAL FEATURES OF ISOTROPIC PYROLYTIC CARBON

Rumyantsev V., Osmakov A., Radtsig N., Kravchik A.

VIRIAL Ltd., Saint-Petersburg, Russia

15 minutes

D 151 INFLUENCE OF SYNTHESIS ON NANOCRYSTAL FORMATION IN ZrO₂-TiO₂ SYSTEM **Vasilevskaya A.K.**

Saint-Petersburg State Technological Institute (Technical University), Saint-Petersburg, Russia

15 minutes

D 168 INFLUENCE OF ISOTHERMAL MULTISTEP FORGING AND CRYOGENIC DEFORMATION BY ROLLING ON STRUCTURE, MECHANICAL AND DISSIPATIVE PROPERTIES OF THE ALLOY VT6

Sokolenko V.I., Imayev R.M.⁽¹⁾, Mats A.V., Okovit V.S., Kalinovskiy V.V.

NSC "Kharkiv Institute of Physics and Technology" of NAS of Ukraine, Kharkiv, Ukraine

⁽¹⁾Institute for Metals Superplasticity Problems of RAS, Ufa, 450001, Russia

15 minutes

D 182 PRESSURE AND TEMPERATURE SENSORS BASED ON ORIENTED CNT-COMPOSITE

Abdrakhimov R.R., Sapozhnikov S.B., Sinitsin V.V.
South Ural State University (NRU), Chelyabinsk, Russia

15 minutes

D 327 APPLICATION OF HIGH TEMPERATURE SHOCK COMPRESSION METHOD FOR SYNTHESIS OF NANOCRYSTALLINE POWDERS OF SILICON CARBIDE

Kurdyumov A.V., Britun V.F., Yarosh V.V., Danilenko A.I.
Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

15 minutes

D 376 USEFUL LONG-TERM STRENGTH OF METAL CRYSTALS: CONCEPT, DISLOCATION MODEL AND PHYSICAL THEORY

Tkachenko V.G.
Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

15 minutes

D 185 GRAIN BOUNDARY SLIDING IN SUBMICROCRYSTALLINE TITANIUM AT ROOM TEMPERATURE

GolosoV E.V.^(1,2), Kolobov Y.R.^(1,2), Torganchuk V.I.⁽¹⁾
⁽¹⁾Belgorod State National Research University, Belgorod 308015, Russia
⁽²⁾Institute of Structural MacrokineTics and Materials Science of RAS, Chernogolovka, Russia

15 minutes

Discussion

Wednesday, 2013 October, 09

12⁰⁰-14⁰⁰ Presentation of National Contact Point in Frantsevich Institute for Problems of Materials Science of NAS of Ukraine “*Nanotechnology, Nanosciences, New Materials Technology*”

In another classroom

Coordinators: Chernyshev L.I., Belan I.I.

Wednesday, 2013 October, 09

15⁰⁰-18⁰⁰ **E. Ceramics for functional and constructional purposes.
High-temperature and heat-resistant materials.**

*Coordinators: Bagliuk G.A. (Ukraine), Prikhna T.A. (Ukraine),
Tarasovsky V.P. (Russia)*

**E 26 HIGH PRESSURE SINTERING OF YTTERBIUM OXIDE CERAMICS FOR
BRACHYTHERAPY PURPOSES**

**Antanovich A.A., Brazhkin V.V., Filonenko V.P., Zibrov I.P., Akulinichev S.V.⁽¹⁾,
Derzhiyev V.I.⁽²⁾**

Vereshchagin Institute of High Pressure Physics of RAS, Troitsk, Moscow, Russia

⁽¹⁾Institute of Nuclear Research of RAS, Troitsk, Moscow, Russia

⁽²⁾Deliz LTD, Khimki, Moscow Region, Russia

15 minutes

**E 73 MINERAL-LIKE CERAMICS FOR IMMOBILIZATION OF NUCLEAR WASTES BY
FORCED SHS**

Barinova T.V., Borovinskaya I.P., Ratnikov V.I., Ignat'eva T.I., Belikova A.F.

Institute of Structural Macrokinetics and Materials Science of RAS, Chernogolovka,
Russia

15 minutes

**E 79 THE DIRECTIONS OF IMPROVEMENT MICROARC OXIDATION TECHNOLOGY
IN THE MANUFACTURING OF ENGINES AND POWER PLANTS**

Lesnevskiy L.N., Gavrilov P.V., Troshin A.E., Lyakhovetskiy M.A.

Moscow Aviation Institute (National Research University) "MAI", Moscow, Russia

15 minutes

**E 97 LOW-TEMPERATURE SYNTHESIS OF BORON SUBOXIDE (B₂O) POWDER AT
AMBIENT PRESSURE**

Solodkyi I., Shumao S.⁽²⁾, Sakka Y.⁽¹⁾, Badica P.⁽³⁾, Vasylykiv O.⁽¹⁾

National Technical University of Ukraine "KPI", Kyiv, Ukraine

⁽¹⁾National Institute for Materials Science, Japan

⁽²⁾Nanyang Technological University, Singapore

⁽³⁾National Institute of Materials Physics, Bucharest, Romania

15 minutes

**E 100 HIGH-RATE SPARK PLASMA SINTERING OF NANOSTRUCTURED TUNGSTEN
CARBIDE**

**Chuvil'deev V.N., Blagoveshchensky Yu.V.⁽¹⁾, Nokhrin A.V., Boldin M.S.,
Moskvicheva A.V., Sakharov N.V., Isaeva N.V.⁽¹⁾, Shotin S.V., Lopatin Yu.G.,
Pisklov A.V., Kotkov D.N.**

Lobachevsky Physico-Technical Research Institute of State University of Nizhni
Novgorod, Russia

⁽¹⁾Baikov Institute of Metallurgy and Materials Science, Moscow, Russia

15 minutes

E 117 QUANTITATIVE ANALYSIS OF STRUCTURE OF ALUMINUM CERAMICS SINTERING AT DIFFERENT TEMPERATURES WITH USING REM AND THE X-RAY MICROTOMOGRAPHY

Krasny B.L., Tarasovsky V.P., Krasny A.B., Galganova A.L., Matytsyn Y.G.
JSC «STC «BAKOR», Scherbinka, Russia

15 minutes

E 188 THERMODYNAMIC STABILITY OF MAX PHASES OF Ti-Al-C(N) SYSTEMS AND THEIR SOLID SOLUTIONS MANUFACTURED UNDER HIGH PRESSURE –HIGH TEMPERATURE CONDITIONS

Prikhna T., Litzkendorf D.⁽¹⁾, Cabioc'h T.⁽²⁾, Ch. Schmidt⁽¹⁾, Karpets M.⁽³⁾, Starostina A., Kozyrev A., Chartier P.⁽²⁾, Basyuk T., Turkevich D., Sverdun V., Tkach V., Moshchil V. Gawalek W.⁽¹⁾

Institute for Superhard Materials of the NAS of Ukraine, Kiev, Ukraine

⁽¹⁾Institut für Photonische Technologien, Jena, Germany

⁽²⁾Universite de Poitiers, Cedex, France

⁽³⁾Institute for Problems of Materials Science of the NAS of Ukraine, Kiev. Ukraine

15 minutes

E 189 UNCONVENTIONAL SUPERCONDUCTIVITY IN ULTRATHIN SUPERCONDUCTING NbN-FILMS USED FOR SINGLE PHOTON DETECTORS

Noat Y., Cherkez V., Brun C., Cren T., Carbillet C., Debontridder F., Ilin K.⁽¹⁾, Siegel M.⁽¹⁾, Semenov A.⁽²⁾, Hubers H.-W.⁽²⁾, Roditchev D.

Institut des Nanosciences de Paris, Paris, France

⁽¹⁾Institute of Micro- und Nano-electronic Systems, Karlsruhe Institute of Technology, Karlsruhe, Germany

⁽²⁾DLR Institute of Planetary Research, Berlin, Germany

15 minutes

E 190 MICROSTRUCTURE AND MECHANICAL PROPERTIES OF SPARK PLASMA DENSIFIED ZIRCONIUM DIBORIDE

Gocmez Hasan, Tuncer Mustafa, Kocak Muhammet, Bogomol Yuriy⁽¹⁾, Derev'yanko Oleksandr⁽²⁾, Raichenko Oleksandr⁽²⁾

Dumlupinar University, Kutahya, Turkey

⁽¹⁾Kiev Polytechnic Institute, Kiev, Ukraine

⁽²⁾Frantsevich Institute for Problems of Material Science of NASU, Kiev, Ukraine

15 minutes

E 301 EFFECT OF FURNACE FEED AND TECHNOLOGICAL MODE ON THERMAL CONDUCTIVITY OF SILICON NITRIDE CERAMICS

Brodnikovska I.V., Deriy A.I.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kiev. Ukraine

15 minutes

E 336 PECULIARITIES OF MECHANOSYNTHESIS CARBIDES AND BORIDES OF TRANSITION METALS

Saviak M.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

15 minutes

Discussion

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Exposition of posters «D» from 9³⁰ till 15⁰⁰
and «E» from 15⁰⁰ till 18⁰⁰

D 21 DIAMOND ELEMENTS AND THEIR USE IN HIGH-RADIATION AREAS

**Harutyunyan V.V., Hakopyan N.V, Hakhverdyan E.A., Baghdasaryan V.S.,
Saakyan A.A., Hovhanissyan A.S., Dallakyan R.K., Atoyán V.A.⁽¹⁾, Avagyan A.N.⁽²⁾,
Gevorgyan A.A.⁽³⁾**

Alikhanyan National Research Laboratory (YerPhI), Yerevan, Armenia

⁽¹⁾Armenian Nuclear Plant, Armenia

⁽²⁾LLC "Almaz-Synthesis", Yerevan, Armenia

⁽³⁾Ministry of Energy and Natural Resources, Yerevan, Armenia

**D 38 INNOVATION COMBINED TECHNOLOGY FOR OBTAINING, NANO-STRUCTURE
POWDERS AND COMPACT**

**Poladashvili M.D., Okrostsvaridze O.Sh., Tavadze G.F., Aslamazashvili A.G.,
Zakharov G.V.**

LEPL – Ferdinand Tavadze Institute of Metallurgy and Materials Science, Tbilisi,
Georgia

**D 51 NANOSIZED PORE CHANNELS IN LAVA-LIKE FUEL-CONTAINING MATERIALS OF
«SHELTER» OBJECT**

**Gabelkov S.V., Klyuchnikov A.A., Oleynik E.E., Parkhomchuk P.E.,
Chemerskoy G.F.**

Institute for Safety Problems of NPP of NAS of Ukraine, Chernobyl, Ukraine

**D 57 QUANTITATIVE PROCESSING OF THE NICKEL CATALYTIC CENTERS IMAGE FOR
GROW CARBON NANOTUBS**

Panarin V.E., Svavilny N.E., Hominich A.I., Ivashchenko E.V.⁽¹⁾

Kurdyumov Institute for Metal Physics of NAS of Ukraine, Kiev, Ukraine

⁽¹⁾National Technical University of Ukraine «KPI», Kiev, Ukraine

D 63 MAGNETIC DEFECTS IN THE LOW-SIZED POWDERS OF $\text{KNb}_{1-x}\text{Fe}_x\text{O}_3$

Golovina I.S., Shanina B.D., Kolesnik S.P.

Institute of Semiconductor Physics of NAS of Ukraine, Kiev, Ukraine

**D 64 EFFECT OF PARTICLE SIZE AND COMPOSITION ON THE PHASE TRANSITIONS IN
 $\text{KTa}_{1-x}\text{Nb}_x\text{O}_3$ NANOPOWDERS**

Golovina I.S., Lemishko S.V., Kolesnik S.P.

Institute of Semiconductor Physics of NASU, Kiev, Ukraine

**D 65 THE STRUCTURE AND PHYSICAL PROPERTIES OF THE Bi-BASED FILMS
DOPED WITH REFRACTORY COMPONENT**

Gusevik P.S., Ryabtsev S.I., Bashev V.F., Dotsenko F.F., Mamotenko A.A.

Dnepropetrovsk National University, Dnepropetrovsk, Ukraine

D 84 INFLUENCE OF ULTRAVIOLET IRRADIATION ON THE ELECTRIC BREAKDOWN IN NANOCRYSTALLINE SILICON CARBIDE FILMS

Kozlovskii A.A., Semenov A.V., Puzikov V.M.

Institute for Single Crystals of NAS of Ukraine, Stc "Institute For Single Crystals"
Kharkov, Ukraine

D 86 INFLUENCE OF THE CARBON COMPONENTON PROPERTIES NANODIAMOND OF POWDERS

Ilitskaya G.D., Shevchenko A.D.⁽¹⁾, Marinich M.A., Bazaliy G.A., Zaitseva I.N.

Bakul Institute for Superhard Materials of NAS of Ukraine, Kiev, Ukraine

⁽¹⁾Institute of Metal Physics of NAS of Ukraine, Kiev, Ukraine

D 95 PREPARATION OF FERROMAGNETIC NANOCOMPOSITES FOR VARIOUS PURPOSES BY CHEMICAL SYNTHESIS METHOD

Kushchevskaya N.F., Shakhnin D.B., Malyshev V.V., Le Thi Mai Huong⁽¹⁾

Open International University of Human Development «Ukraine», Kiev, Ukraine

⁽¹⁾Institute of Natural Products Chemistry of Vietnam Academy of Science and Technology, Ha Noi, Vietnam

D 99 NANOMATERIAL – ANODIC ALUMINA

Mukhurov N.I., Gasenkova I.V.

State Scientific Institution "Stepanov Institute of Physics of National Academy of Sciences of Belarus", Minsk, Belarus

D 114 STRUCTURAL-STRAINED STATE OF VACUUM-ARC Mo-N COATINGS

Sobol' O.V., Andreev A.A.⁽¹⁾, Stolbovoy V.A.⁽¹⁾, Fil'chikov V.Ye.

National Technical University "KhPI", Kharkov, Ukraine

⁽¹⁾National Scientific Centre «KhPTI», Kharkov, Ukraine

D 125 INFLUENCE OF ANNEALING IN VACUUM ON PHASE COMPOSITION CHANGE PROCESSES IN NANOSCALED CoSb_x(30 NM) (1.8 <x <4.1) FILMS

Makogon Iu.M., Albrecht M.⁽¹⁾, Pavlova O.P., Sidorenko S.I., Daniel M.⁽¹⁾,

Shkarban R.A., Figurna O.V.

National Technical University of Ukraine "Kiev Polytechnic Institute", Kiev, Ukraine

⁽¹⁾Institute of Physics, Chemnitz University of Technology, Germany

D 138 PROCESSING PARAMETERS FOR ELECTRON-BEAM DEPOSITION OF NANOSTRUCTURED FCC Fe_{100-x}Ni_x (31<x<40) CONDENSATES

Demchenkov S.A., Polishchuk S.S.⁽¹⁾, Telychko V.A., Ustinov A.I.

Paton Electric Welding Institute of the NAS of Ukraine, Kiev, Ukraine

⁽¹⁾Kurdyumov Institute for Metal Physics of the NAS of Ukraine, Kiev, Ukraine

D 148 INFLUENCE OF ULTRASONIC TREATMENT ON STRUCTURE AND MAGNETIC PROPERTIES OF FINE POWDERS OF Cu-Co AND Cu-Fe ALLOYS

Perekos A.O., Morduk B.N., Voynash V.Z., Efimova T.V., Zalutskiy V.P., Rud N.D.

Kurdyumov Institute for Metal Physics of NAS of Ukraine, Kiev, Ukraine

D 300 ELECTRONIC STRUCTURE OF SILICON NITRIDE NANOFIBRES

**Silenko P.M., Solonin Yu.M., Petrovskaja S.S., Khyzhun O.Yu., Shlapak A.N.,
Ragulia A.V.**

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

D 302 ORDERING OF MAGNETIC STRUCTURE IN THE THIN FILMS OF MAGNETITE Fe₃O₄

Andreeva A.F., Kasumov A.M., Khrinovskiy V.Z.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

D 313 SYNTHESIS OF MONOLITHIC NANOSTRUCTURAL COMPOSITES ON THE BASE OF TITANIUM HYDRIDE BY DESTRUCTIVE HYDROGENATION OF Ti-Cu SYSTEM INTERMETALLIC COMPOUNDS

**Kucheriyav O.V., Bratanich T.I., Skorokhod V.V., Kopylova L.I., Krapivka N.A.,
Kotko A.V.**

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

D 321 FERROMAGNETIC NANOPOWDERS OBTAINED BY LOW TEMPERATURE SYNTHESIS FROM IRON OXALATES FOR MEDICINE APPLICATION

**Boshytska N.V., Kurovskiy V.Ya., Kushchevska N.F.⁽¹⁾, Malyshev V.V.⁽¹⁾,
Uvarova I.V., Honcharuk D.A.**

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

⁽¹⁾Open International University of Man Evolution "Ukraine", Kyiv, Ukraine,

D 329 SYNTHESIS OF NANOSTRUCTURED SILICON CARBIDE FROM LIGNINO-CELLULOSE RAW MATERIAL

Vishnyakov L.R., Vishnyakova K.L., Pereselentseva L.N.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

D 332 DEPOSITION AND CHARACTERIZATION OF Ti-Al-Si-B-N NANOCOMPOSITE FILMS

**Onoprienko A.A., Ivashchenko V.I., Podchernyaeva I.A., Khyzhun O.Yu.,
Timofeyeva I.I., Butenko O.A.**

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

D 335 PECULIARITIES OF MECHANOSYNTHESIS OF NANOCRYSTALLINE SOLUTIONS (Ti₅₀Cr₅₀)C

Savyak M., Ivchenko B., Dubchak C., Uvarova I.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

D 128 SURFACE TRANSFORMATION OF NANOSTRUCTURED SAPPHIRE SUBSTRATES AT THE THERMOCHEMICAL NITRIDATION

**Kryvonogov S.I., Krukhmalev A.A., Vovk E.A., Nizhankovskiy S.V.,
Sidelnikova N.S., Budnikov A.T.**

Institute for Single Crystals, STC «Institute for Single Crystals» of NAS of Ukraine, Kharkiv, Ukraine

D 345 PREPARATION OF HIGHLY DISPERSE BORIDES OF VI GROUP TRANSITION METALS

Krushinskaya L.A., Makarenko G.N., Timofeeva I.I., Matsera V.E., Vasilkovskaya M.A.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

D 348 OPTICAL PARAMETERS OF ZrON/Si THIN FILMS PREPARED BY OXIDATION/NITRIDATION OF ZIRCONIUM METAL

Khyzhun O.Yu., Atuchin V.V.⁽¹⁾, Kruchinin V.N.⁽¹⁾, Wong Yew Hoong⁽²⁾, Cheong Kuan Yew⁽³⁾

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

⁽¹⁾Institute of Semiconductor Physics of SB of RAS, Novosibirsk, Russia

⁽²⁾University of Malaya, Kuala Lumpur, Malaysia

⁽³⁾University Sains Malaysia, Seberang Perai Selatan, Penang, Malaysia

D 351 EFFECT OF DISCHARGE POWER ON THE PROPERTIES OF NANOSTRUCTURED NbN AND Nb-Si-N COATINGS

Ivashchenko V.I., Scrynskyy P.L., Kuzmichev A.I., Ivashchenko L.A., Lytvyn P.M., Timofeyeva I.I., Butenko O.O., Dub S.N.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

D 354 CINETICS OF DISPERGATION AT ANNEALING IN VACUUM COPPER NANOFILMS DEPOSITED ONTO SAPPHIRE

Gab I.I., Stetsyuk T.V., Kostyuk B.D., Naidich Yu.V.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

D 366 SYNTHESIS BARIUM TITANATE NANOPOWDERS VIA PEROXIDE ROUTE

Kotlyarchuk A.V., Lobunets T.F., Ragulya A.V.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

D 370 STRUCTURAL DEPENDANCE OF THE THERMODYNAMIC PROPERTIES OF CARBON NANOFORMS

Vasiliev O.O.⁽¹⁾, Muratov V.B., Garbuz V.V., Duda T.I.⁽¹⁾

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

⁽¹⁾National Technical University of Ukraine "Kyiv Polytechnic Institute", Kyiv, Ukraine

D 371 CHARACTERIZATIONS OF EXFOLIATION AND SELF-ASSEMBLY OF GRAPHENE-LIKE 2H-Nb_{1+y}Se₂ AT ELECTROCHEMICAL INTERCALATION / DELAMINATION PROCESSES

Chepyha L.M., Kulikov L.M., Akselrud L.G.⁽¹⁾

Frantsevich Institute of Problems of Materials Science of NAS of Ukraine, Kiev, Ukraine

⁽¹⁾Franko Lviv National University, Lviv, Ukraine

D 377 SHORT-RANGE ORDERED CLUSTER-FORMING STRUCTURES IN METALLIC MELTS

Tkachenko V.G., Abramov A.A., Malka A.N., Vovchok A.S., Shcheretskiy A.A.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

D 383 TiAlN SYNTHESIZED NANOSTRUCTURED COMPOSITE POWDERS FOR MAGNETRON TARGETS

Ludvinskaya T.A., Ivashchenko V.I., Uvarova I.V., Neshpor I.P.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

D 403 EFFECT OF SYNTHESIS CONDITIONS ON MORPHOLOGY AND PROPERTIES OF BN NANOSTRUCTURES

Sartinska L.L., Voynich Y.V., Frolov A.A., Koval' A.Y., Andreeva A.F.,

Kasumov A.M., Timofeeva I.I.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

D 404 STRUCTURE FORMATION IN THE PROCESS OF SYNTHESIS OF BARIUM TITANATE UNDER PILOT-COMMERCIAL CONDITIONS

Ragulya A.V., Lobunets T.F., Tomila T.V., Frankfurt V.M., Shirokov O.V.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

D 331 ABOUT THE PHASE EVOLUTION MECHANISMS OF THE d-METAL POWDERS SYSTEMS DURING A MECHANICAL ACTIVATION PROCESS

Lyudvinskaya T.A., Uvarova I.V., Grishchishyna L.N.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

D 414 STABILITY AND ELECTRONIC STRUCTURE OF NANODIAMOND

Ovsianikova L.I., Kartuzov V.V.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

D 417 DIRECT-TO-INDIRECT BAND GAP TRANSITION IN 2D InSe NANOLAYERS DUE TO QUANTUM CONFINEMENT

Mudd G.W., Svatek S.A., Ren T.H., Patané A., Makarovskiy O., Eaves L.,

Beton P.H., Kovalyuk Z.D.⁽¹⁾, Lashkarev G.V.⁽¹⁾, Dmitriev A.I.⁽¹⁾, Kudrynskiy Z.R.⁽¹⁾

School of Physics and Astronomy, The University of Nottingham, Nottingham NG7 2RD, UK,

⁽¹⁾Frantsevich Institute for Problems of Material Science. NAS of Ukraine
Kiev, Ukraine

E 9 ULTRAFINE AND NANOSIZED MoSi₂ POWDERS: SYNTHESIS AND SEPARATION

Ignat'eva T.I., Vershinnikov V.I., Semenova V.N., Kovalev I.D., Borovinskaya I.P.

Institute of Structural Macrokinetics and Materials Science of RAS, Chernogolovka, Russia

E 23 THE RELATIONSHIP OF THE MICROSTRUCTURE AND MAGNETORESISTIVE PROPERTIES OF (La_{0.65}Sr_{0.35})_{0.8}Mn_{1.2}O_{3±Δ} CERAMICS SINTERED AT DIFFERENT TEMPERATURES

Novokhatska A.A., Akimov G.Ya., Prylypko S.Yu., Revenko Yu.F.

Galkin Donetsk Institute of Physics and Engineering of NAS of Ukraine, Donetsk, Ukraine

E 37 SHS-PRODUCED TRANSITION METAL SILICIDES: SYNTHESIS AND SINTERING

Miloserdov P.A., Gorshkov V.A., Yukhvid V.I.

Institute of Structural Macrokinetics and Materials Science of RAS, Chernogolovka, Russia

E 46 WEAR RESISTANT MATERIALS BASED ON BORON CARBIDE WITH INCREASED ELECTRICAL CONDUCTIVITY

Ivzhenko V.V., Kaidash O.N., Sarnavskaya G.F.

Bakul Institute for Superhard Materials of NAS of Ukraine, Kiev, Ukraine

E 93 FORMATION OF CHROMIUM DISILICIDE COATINGS ON THE CHROMIUM SURFACE BY ELECTROLESS DEPOSITION METHOD

Molotovskaya L.A., Shakhnin D.B., Malyshev V.V., Schuster J.C.⁽¹⁾

Vernadsky Institute of General and Inorganic Chemistry of the NAS of Ukraine, Kiev, Ukraine

⁽¹⁾University of Vienna, Vienna, Austria

E 101 NANOSTRUCTURED HEAVY TUNGSTEN ALLOYS, PRODUCED BY SPARK PLASMA SINTERING METHOD

Chuvil'deev V.N., Nokhrin A.V., Boldin M.S., Moskvicheva A.V., Sakharov N.V., Melekhin N.V., Shotin S.V., Lopatin Yu.G., Kozlova N.A., Baranov G.V.⁽¹⁾, Belov V.Yu.⁽¹⁾

Lobachevsky Physico-Technical Research Institute of State University of Nizhni Novgorod, Russia

⁽¹⁾Russian Federal Nuclear Center - The All-Russian Research Institute of Experimental Physics, Sarov, Russia

E 107 SILICON CARBIDE BASED CERAMIC MATERIAL FOR THE CATALYST SUPPORTS MANUFACTURE

Marukovich A.I., Smorygo O.L., Ilyushchenko A.Ph., Sadykov V.A.⁽¹⁾

Powder Metallurgy Institute, Minsk, 220005, Belarus

⁽¹⁾Institute of Catalysis of SB of RAS, Novosibirsk, 630090, Russia

E 130 MANUFACTURE OF CERAMIC PRODUCTS WITH COMPLEX SHAPE USING ISOSTATIC PRESSING

Chayka E.V., Chayka V.A.

Galkin Donetsk Physical & Technical Institute of NAS of Ukraine, Donetsk, Ukraine

E 131 CRYSTALLIZATION PATHS WITHIN SiO_2^{cr} , SiO_2^{tr} , A_3S_2 LIQUIDUS FIELDS AND A CUPOLA OF MELT IMMISCIBILITY FOR $\text{CaO-Al}_2\text{O}_3\text{-SiO}_2$ SYSTEM

Lutsyk V.I., Zelenaya A.E.

Institute of Physical Materials Science of SB of RAS, Buryat State University, Ulan-Ude, Russia

E 146 THE POSSIBILITY OF SOLID REFRACTORY CELLULAR MATERIAL TO ABSORB THE ENERGY OF THE EXPLOSION

Kapustin R.D., Nikolaenko P.A., Pervukhin L.B., Kazantsev A.G.⁽¹⁾, Smolianinov S.S.⁽¹⁾

FGBUN Institute of Structural Macrokinetics Academy of Sciences, Chernogolovka, Russia

⁽¹⁾NPO "Central Research Institute of Mechanical Engineering"

E 187 NANOSTRUCTURAL INHOMOGENITIES IN MgB_2 RESPONSIBLE FOR ITS HIGH SUPERCONDUCTIVE CHARACTERISTICS

Prikhna T.A., Eisterer M.⁽¹⁾, Gawalek W.⁽²⁾, Kozyrev A.V., Moshchil V.E., Kovylaev V.V.⁽³⁾, Sverdun V.B., Karpets M.V.⁽³⁾, Basyuk T.B., Schmidt Ch.⁽²⁾, Chaud X.⁽⁴⁾ Shaternik A.B.

Institute for Superhard Materials of the NAS of Ukraine, Kiev, Ukraine

⁽¹⁾Atomic Institute of the Austrian Universities, Vienna, Austria

⁽²⁾Institut für Photonische Technologien, Jena, Germany

⁽³⁾Institute for Problems in Material Science of the NAS of Ukraine, Kiev, Ukraine

⁽⁴⁾CNRS/LNMP, Grenoble, France

E 310 EVALUATION OF GRINDING WHEELS USE WITH COBALT TUNGSTATE OBTAINED IN SOLAR FURNACE BY THERMAL PROCESSING OF HARD ALLOYS WASTE

Pasichny V.V., Talantsev L.L.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

E 319 TRIBOLOGICAL CHARACTERISTICS OF MATERIALS BASED ON BORON NITRIDE UNDER DRY FRICTION

Naiditsch Y., Kostornov A., Adamovskiy A., Bohco A., Kostenko A., Varchenko V.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

E 338 THE BEHAVIOR OF NANOSTRUCTURED COMPOSITE TI (AL, CR) N, TI (AL, MO) N, TI (AL, NI) N CERAMICS UNDER CONCENTRATED SOLAR RADIATION

Ludvinskaya T.A., Grigoriev O.N., Neshpor I.P., Panashenko V.M.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

E 340 ME7C3 CARBIDES OBTAINING BY MECHANOSYNTHESIS OF CR-C AND FE-CR-C SYSTEMS MIXTURES

Masljuk V.A., Ludvinskaya T.A., Mamonova A.A., Budilina O.A., Protsenko L.S.,

Ivchenko V.I., Martynenko E.N., Neshpor I.P.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

E 346 DRESSER, EQUIPPED WITH THE NEW-CARBIDE DIAMOND MATERIAL GRADE AVKM

Adamovskiy A.A., Zyukin N.S.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

E 357 Si₃N₄ BASED COMPOSITES OF IRREGULAR SHAPE CONSOLIDATED BY ELECTRIC DISCHARGE SINTERING

Zamula M.V., Derevyanko A.V., Kolesnichenko V.G., Varchenko V.T.,

Zgalat-Lozynskyy O.B., Ragulya A.V.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

E 365 TITANIUM NITRIDE BASED NANOCOMPOSITES ENHANCED BY SILICON NITRIDE NANOWHISKERS FOR WEARPROOF APPLICATION

Kolesnichenko V.G., Zgalat-Lozynskyy O.B., Varchenko V.T., Ragulya A.V.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

E 367 THE SOLIDUS SURFACE OF THE Al₂O₃-HfO₂-Gd₂O₃ PHASE DIAGRAM

Tyschenko Ja.S., Lakiza S.M., Lopato L.M.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

E 368 CONSTRUCTION OF HfO₂-TiO₂-Al₂O₃ PHASE DIAGRAM ELEMENTS

Shevchenko A.V., Red'ko V.P., Lakiza S.M., Tyschenko Ya.S., Dudnik E.V.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

E 372 INVESTIGATION OF THE COMPOSITES AGING PROCESS IN THE ZrO₂-Y₂O₃-CeO₂-CoO-Al₂O₃ system

Tsukrenko V.V., Ruban A.K., Red'ko V.P., Yevich Ya.I., Dudnik E.V.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

E 382 SINTERED BORON CARBIDE BASED COMPOSITES DOPED WITH B_4C-TiB_2 EUTECTIC POWDER

Bogomol Yu., Loboda P., Marych M., Vasylykiv O.⁽¹⁾

National Technical University of Ukraine «Kyiv Politechnical Institute», Kyiv, Ukraine

⁽¹⁾National Institute for Materials Science, Tsukuba, Japan

E 387 HEAT RESISTANCE OF THE SOLID SOLUTIONS $Mo_xCr_yTa_zSi_2$ UNDER SOLAR RADIATION

Kud I.V., Pasichnyi V.V., Ostapenko S.A., Ieremenko L.I., Likhodid L.S., Zaytkevich D.P.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

E 388 PECULAIRITIES OF THE SOLID SOLUTION $Mo_xCr_yTa_zSi_2$ OXIDATION UNDER CYCLIC CONDITIONS

Kud I.V., Ieremenko L.I., Likhodid L.S., Zaytkevich D.P., Uvarova I.V.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

E 389 CONTACT INTERACTION IN $ZrB_2 - Cr_3C_2$ SYSTEM

Grigoriev O.N., Vinokurov V.B., Klimenko L.I., Bega N.D., Danilenko N.I.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

E 337 INFLUENCE OF ELECTRODE MATERIAL MADE OF TRINICKEL BORIDE - BASED CURRENT- CONDUCTING PASTES ON PROPERTIES OF TIN DIOXIDE-BASED THICK FILMS

Gonchar A.G., Rud` B.M., Siman N.I., Fialka L.I., Telnikov E.Ya, Marchuk A.K.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

E 415 HIGH-PRESSURE APPARATUS FOR SINTERING LARGE BLANKS FROM CUBIC BORON NITRIDE-BASED POLYCRYSTALLINE SUPERHARD MATERIALS

Borimsky A.I.

Bakul Institute for Superhard Materials of NAS of Ukraine, Kiev, Ukraine

E 416 GRANULOMETRIC COMPOSITION OF CUBIC BORON NITRIDE POWDERS SYNTHESIZED WITH WURTZITIC BORON NITRIDE POWDER PRESENT

Borimsky A.I.

Bakul Institute for Superhard Materials of NAS of Ukraine, Kiev, Ukraine

Thursday, 2013 October, 10

9³⁰-11³⁰ **G.** Latest developments in the field of designing polymeric materials with improved characteristics.

Coordinators: Lisovsky A.F. (Ukraine), Gabunia D.L. (Georgia), Solonin Yu.M. (Ukraine)

G 1 SOME FEATURES OF DEGRADATION OF WC-Co CEMENTED CARBIDE STRUCTURE UNDER DYNAMIC LOADS

Lisovsky A.F.

Bakul Institute for Superhard Materials of NAS of Ukraine, Kiev, Ukraine

15 minutes

G 15 PRODUCTION OF B-B₄C COMPOSITE POWDERS BY HIGH-VOLTAGE ELECTRIC DISCHARGE DISPERSION OF β-BORON CRYSTALLINE POWDERS

Gabunia D.L., **Sizonenko O.N.**⁽¹⁾, **Tsagareishvili O.A.**, **Torpakov A.S.**⁽¹⁾, **Pristash N.S.**⁽¹⁾, **Zhdanov A.A.**⁽¹⁾, **Mikeladze A.G.**

Tavadze Institute of Metallurgy and Materials Science, Tbilisi, Georgia

⁽¹⁾Institute of Pulse Processes and Technologies of NAS of Ukraine, Nikolaev, Ukraine

15 minutes

G 53 DISTINCTIVE FEATURES OF THE HIGH POROSITY CELLULAR MATERIALS' STRUCTURE AND PROPERTIES

Smorygo O.L.

Powder Metallurgy Institute, Minsk, Belarus

15 minutes

G 69 FORMATION OF COMPOSITE COATINGS WITH USE NANOSIZED MATERIAL PARTICLES

Mashtalyar D.V., **Sinebryukhov S.L.**, **Egorkin V.S.**, **Imshinetskiy I.M.**, **Gnedekov S.V.**

Institute of Chemistry of Far Eastern Branch of the RAS, Vladivostok, Russia

15 minutes

G 83 COMPOSITE FILMS ON THE BASED ACRYLAMIDE AND CHITOSAN WITH THE INCLUSION OF NANOSIZED PARTICLES OF PLATINUM, WHICH WAS FORMED BY ELECTROPOLYMERIZATION METHOD

Kolzunova L.G., **Shchitovskaya E.V.**, **Grigor'eva E.D.**

Institute of Chemistry of Far Eastern Branch of the RAS, Vladivostok, Russia

15 minutes

G 88 STUDY OF TRIBOLOGICAL PROPERTIES OF SIC CERAMIC MATRIX COMPOSITES

Nilov A.V., **Kulik V.I.**, **Garshin A.P.**⁽¹⁾, **Savich V.V.**⁽²⁾, **Dmitrovich A.A.**⁽²⁾, **Saroka D.I.**⁽²⁾

BSTU "VOENMECH", St. Petersburg, Russia

⁽¹⁾SPGTU, Saint-Petersburg, Russia

⁽²⁾SSI "Powder Metallurgy Institute", Minsk, Belarus

15 minutes

Thursday, 2013 October, 10

12⁰⁰-14⁰⁰ **G.** Latest developments in the field of designing polymeric materials with improved characteristics.

Coordinators: Lisovsky A.F. (Ukraine), Gabunia D.L. (Georgia), Solonin Yu.M. (Ukraine)

G 122 ELECTRIC CURRENT INFLUENCE ON FORMATION OF INTERMETALLICS IN A LAMINATE SYSTEM Al-Ti

Sinchuk A.V., Tsurkin V.N., Dmitrishina Ya.Yu.

Institute of Pulse Processes and Technologies of NAS of Ukraine, Nikolaev, Ukraine

15 minutes

G 166 INVESTIGATION OF GAS-ABRASIVE WEAR RESISTANCE COMPOSITES USING SELF-FLUXING ALLOYS BASED ON IRON

Shevchuk M.B., Stepanchuk A.N.

National Technical University of Ukraine "KPI", Kiev, Ukraine

15 minutes

G 171 STRUCTURE AND BEHAVIORS OF COMPOSITE FOAMS

Ashikhmin P.I., Ignatova A.V., Sapozhnikov S.B.

South Ural State University (NRU), Chelyabinsk, Russia

15 minutes

G 175 ELASTIC MODULI OF GFRP LAYERS OF SLIDING BEARING MADE WITH TENSION WINDING

Bezmelnitsyn A.V., Sapozhnikov S.B.

South Ural State University (National Research University), Chelyabinsk, 454080, Russia

15 minutes

G 176 STRENGTH ESTIMATION OF ADVANCED CERAMIC THINGS

Kudryavtsev O.A., Sapozhnikov S.B.

South Ural State University (NRU), Chelyabinsk, 454080, Russia

15 minutes

G 177 STRUCTURAL STRENGTH OF HYBRID COMPOSITE BASED ON GLASS AND CARBON FIBER

Abdrakhimov R.R., Sapozhnikov S.B., Shakirov A.A.

South Ural State University (NRU), Chelyabinsk, 454080, Russia

15 minutes

G 179 ELASTIC AND DISSIPATIVE PROPERTIES ESTIMATION FOR A WOVEN COMPOSITE

Shcherbakova A.O.

South Ural State University (NRU), Cheliabinsk, Russia

15 minutes

Discussion

Thursday, 2013 October, 10

15⁰⁰-18⁰⁰ **H. Engineering of surface. F. Latest developments in the field of designing polymeric materials with improved characteristics.**

Coordinators: Kharchenko E.V. (Ukraine), Gringolts M.L.(Russia), Melnichuk O.V.(Ukraine)

H 36 ULTRASONIC IMPACT TREATMENT OF D16 ALUMINIUM ALLOY IN CHEMICALLY ACTIVE AND NEUTRAL AMBIENT

Sidorenko S.I., Voloshko S.M., Kotenko I.E., Burmak A.P.

National Technical University of Ukraine "Kyiv Polytechnic Institute", Kiev, Ukraine

15 minutes

H 39 WAVEGUIDE POLARITONS IN ZnO/6H-SiC STRUCTURES UNDER THE INFLUENCE OF MAGNETIC FIELD

Venger E.F., Melnichuk L.Yu.⁽¹⁾, Melnichuk O.V.⁽¹⁾

Institute of Semiconductor Physics of NAS of Ukraine, Kiev, Ukraine

⁽¹⁾Gogol State Pedagogic University, Nezhin, Ukraine

15 minutes

H 71 HIGH-TEMPERATURE COATINGS FOR HEAT PROOF CARBON COMPOSITE MATERIALS

Terentieva V.S., Astapov A.N.

Moscow Aviation Institute (State University of Aerospace Technologies), Moscow, Russia

15 minutes

H 110 STRUCTURE FORMATION OF DETONATION COATINGS FORMATION IN Zr-Al-B SYSTEM

Kharchenko E.V.

National Aviation University, Kyiv, Ukraine

15 minutes

H 111 EFFECT OF ADDITIVES ON THE PROCESS OF FRICTION AND WEAR OF DETONATION COATINGS FORMATION IN Cr-Si-B SYSTEM

Nedayborsch S.

State enterprise PLANT 410 CIVIL AVIATION, Kyiv, Ukraine

15 minutes

F 40 NEW POLYMER MEMBRANE MATERIALS ON THE BASE OF SILICON CONTAINING NORBORNENES

Gringolts M.L., Bermeshev M.V., Starannikova L.E., Finkelshtein E.Sh., Yampolskii Yu.P.

Topchiev Institute of Petrochemical Synthesis of RAS, Moscow, Russia

15 minutes

Discussion

Thursday, 2013 October, 10

Exposition of posters «G» from 9³⁰ till 15⁰⁰;
«H» and «F» from 15⁰⁰ till 18⁰⁰

G 3 GRADIENT STRUCTURES IMPROVE SERVICE LIFE OF WC-Co CEMENTED CARBIDE ARTICLES

Lisovsky A.F., Davidenko S.A.

Bakul Institute for Superhard Materials of NAS of Ukraine, Kiev, Ukraine

G 6 CREATION OF POLYMERIC COMPOSITE MATERIALS WITH IMPROVED CHARACTERISTICS UNDER CONSTANT MAGNETIC FIELD

Unrod V.I., Demchenko V.L.

Cherkassy State Technological University, Cherkassy, Ukraine

G 20 STRUCTURAL EFFECTS OF IONIZATION IN WIDE-BAND DIELECTRICS

Harutyunyan V.V., Aleksanyan E.M., Hakhverdyan E.A., Baghdasaryan V.S.,

Yeritsyan G.N., Nikoghossyan S.K., Saakyan A.A., Grigorian N.E.

Alikhanyan National Research Laboratory (YerPhI), Yerevan, Armenia

G 25 ABRASIVE-CONTAINING COMPOSITES BASED ON MULTIGLASS-FORMING MELTS

Kukharenko S.A.

Bakul Institute for Superhard Materials NAS of Ukraine, Kiev, Ukraine

G 49 CARBON-REINFORCED POLYMER COMPOSITES FOR TRIBOLOGICAL APPLICATIONS

Biryukova M.I., Yurkov G.Yu., Buznik B.M.

Baikov Institute of Metallurgy and Material Sciences of RAS, Moscow, Russia

G 80 PHASE MORPHOLOGY AND MECHANICAL PROPERTIES OF NEW RECYCLED POLYAMIDE-POLYETHYLENE BLENDS

Bus'ko N., Barantsova A., Grishchenko V., Zanoaga M.⁽¹⁾, Tanasa F.⁽¹⁾

Institute of Macromolecular Chemistry of NAS of Ukraine

⁽¹⁾"Petru Poni", Institute of Macromolecular Chemistry, Iasi, Romania

G 81 PHOTOCURED ELASTOMERIC MATERIALS BASED ON POLY-(DIENE URETHANE ACRYLATES)

Barantsova A.V., Grishchenko V.K., Bus'ko N.A., Gudzenko N.V., Filipovych A.Y.

Institute of Macromolecular Chemistry of NAS of Ukraine, Kyiv, Ukraine

G 91 EFFECT OF TREATMENT IN HYDROGEN ON THE ACTIVATION CHARACTERISTICS OF METAL-HYDRIDE ELECTRODES ON THE BASE OF ZrCrNi ALLOY

Basaraba Yu.B.

Ivano-Frankivs'k National Technical University of Oil and Gas, Ivano-Frankivs'k, Ukraine

G 96 DIAMOND/NiAl COMPOSITES PRODUCED BY THE PULSE PLASMA METHOD WITH THE PARTICIPATION OF THE SHS REACTION

Michalski A., Cymerman K.

Warsaw University of Technology, Warsaw, Poland

G 104 ANTICORROSIVE COMPOSITE COATINGS FOR ALUMINIUM ALLOYS

Lyga R.I., Lugova G.O., Mikhal'chuk V.M.

Donetsk National University, Donetsk, Ukraine

G 143 MAGNETORESISTIVE COMPOSITES $\text{La}_{1-x}\text{Sr}_x\text{MnO}_3$ – PMMA

Vasiliev A.V., Eliseev A.A., Trusov L.A.

Lomonosov Moscow State University, Moscow, Russia

G 167 HIGH-TEMPERATURE OXIDATION OF COMPOSITE MATERIALS ON THE BASIS OF COPPER WITH REFRACTORY COMPONENTS

Chornovol V.O., Grechanyuk V.G.

Kiev National University of Engineering and Architecture, Kiev, Ukraine

G 325 HYDROTHERMAL SYNTHESIS OF CARBON-CONTAINING PARTICLES FROM VEGETABLE RAW MATERIALS

Vishnyakov L.R., Korablev S.F., Zubkova I.V.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

⁽¹⁾SE «Antonov», Kyiv, Ukraine

G 326 CARBON FIBER PLASTICS REINFORCED WITH MODIFIED CARBON NANOPARTICLES

Vishnyakov L.R., Petropolskiy V.S.⁽¹⁾, Haidukova S.M.⁽¹⁾, Chebotareva K.A.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

⁽¹⁾SE «Antonov», Kyiv, Ukraine

G 328 POWDER COMPOSITES MADE OF Al-SiC GRANULES

Vishnyakov L.R., Moroz V.P., Romashko I.M.⁽¹⁾

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

⁽¹⁾SE «Antonov», Kyiv, Ukraine

G 330 POWDER SYNTHESIS AND FABRICATION OF THE HALF-CELLS BY SPARK PLASMA SINTERING FOR SOLID OXIDE FUEL CELLS WITH RESISTANCE TO THERMAL CYCLING

Bezdorozhev O.V., Vasylykiv O.O.^(1,2)

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

⁽¹⁾National Institute for Materials Science, Tsukuba, Japan

⁽²⁾Nanyang Technological University, Singapore, Singapore

G 349 MICROWAVE SYNTHESIS OF SPION/BaMoO₄: Er³⁺, Yb³⁺ NANOCOMPOSITE AND ITS VIBRATIONAL PROPERTIES

Lim C.S., Khyzhun O.Yu.⁽¹⁾, Atuchin V.V.⁽²⁾

Department of Advanced Materials Science & Engineering, Hanseo University, Seosan, Republic of Korea

⁽¹⁾Frantsevich Institute for Problems of Materials Science of NASU, Kyiv, Ukraine

⁽²⁾Institute of Semiconductor Physics of SB of RAS, Novosibirsk, Russia

G 352 PHASE COMPOSITION AND PROPERTIES OF ALUMINUM NITRIDE BASED MATERIAL

Kovalchenko M.S., Dubovik T.V., Grebenok T.P., Itsenko A.I., Rogozinskaya A.A., Subbotin V.I., Portnov A.P.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

G 375 FORMATION OF WEAR-RESISTANT PLASMA-SPRAY COATINGS OF TIB₂-(FE-MO) SYSTEM

Akopyan V., Storozhenko M.⁽¹⁾

Institute for Problems of Material Science, Kiev, Ukraine,

⁽¹⁾National Aviation University, Airspace Institute, Kiev, Ukraine

G 390 PREPARATION AND PROPERTIES OF CERAMIC COMPOSITE BASED ON ZIRCONIA FOR MEDICINE

Lashneva V.V., Shevchenko A.V., Dudnik E.V., Ruban A.K., Red'ko V.P., Tsukrenko V.V., Verbylo D.G., Podzorova L.I.⁽¹⁾

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

⁽¹⁾Institute of Metallurgy and Materials Science. Baikov Russian Academy of Sciences, Moscow, Russia

G 392 MECHANICAL PROPERTIES OF EUTECTIC ALLOYS OF Ti-Si-Sn SYSTEM (TITANIUM CORNER) WITH ENHANCED Sn CONTENT

Gorna I.D., Valuiska K.O., Danilenko V.I., Kotko A.V., Koval O.Yu., Firstov S.O.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

G 413 STRUCTURE AND PHYSICAL MECHANICAL PROPERTIES INVESTIGATIONS OF TUNGSTEN-FREE HARD ALLOYS ON THE BASE OF COMPOSITE CARBIDES

Hrebenok T.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

G 393 OXIDATION RESISTANCE of CHROMIUM INTERMETALLIC COMPOUNDS Cr₂Ti, Cr₂Hf and Cr₂Zr

Poryadchenko N.E., Oryshich I.V., Brodnikovskiy N.P., Rokitskaya E.A., Bezverhiy V.I., Bega N.D

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

G 420 INFLUENCE OF GLASS INCLUDING ON WEARPROOFNESS IRON - GLASS MATERIAL

Petrova A.M., Shtern M.B.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kiev, Ukraine

H 50 ELECTROCHEMICAL COATINGS FROM TIN-BASED WHITE METALS FOR SLIDING BEARINGS

Valeeva A.Kh., Valeev I.Sh., Fazlyahmetov R.F.

Institute for Metals Superplasticity Problems, Ufa, Russia

H 58 STRUCTURE AND PROPERTIES OF FUNCTIONAL COATINGS ON STEEL AT TWO-STAGE ELECTRIC-SPARK ALLOYING IN A SATURATING ENVIRONMENT

Lobachova G.G., Ivashchenko E.V.

National Technical University of Ukraine "Kyiv Polytechnic Institute", Kiev, Ukraine

H 61 POLYMER COATING FOR POWDERS OF SUPERHARD MATERIALS

Pashchenko E., Lazhevskaya O., Chernenko A., Savchenko D.

Bakul Institute for Superhard Materials of NAS of Ukraine, Kiev, Ukraine

H 152 CORROSION-DAMAGED STRUCTURAL ELEMENTS, MADE OF AN ALLOY D16T

Abolichina E.V., Chernega S.M.⁽¹⁾

SA "Antonov", Kiev, Ukraine

⁽¹⁾National Technical University of Ukraine "KPI", Kiev, Ukraine

H 153 STRUCTURE AND PROPERTIES OF ALLOYED SILICON BORIDE COATINGS ON STEEL 45

Chernega S.M., Medova I.Y., Poliakov I.A.

National Technical University of Ukraine "KPI", Kiev, Ukraine

H 164 VOLATILE CORROSION INHIBITOR FILM FORMATION ON CARBON STEEL SURFACE

Vorobyova V.I., Chygyrynets' O.E., Vorobyova M.I.⁽¹⁾

National Technical University of Ukraine "Kiev Polytechnic Institute", Kiev, Ukraine

⁽¹⁾Ukrainian State University of Chemical Technology, Kiev, Ukraine

H 303 DETONATION COATINGS BASED ON TITANIUM AND IRON ALUMINIDES

Sirovatka V.L., Yakovleva M.S., Bondarenko A.A., Hal'tsov K.N., Chernatska V.Y.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

H 308 THEORETICAL AND EXPERIMENTAL APPROACHES TO THE FORMATION OF B4C-FeTi EUTECTIC COATINGS BASED ON Fe-C SYSTEM

Uskova N.A., Baglyuk G.A., Bezdorozhev A.V.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

H 311 THE STRUCTURE OF BORIDES COATINGS ON SINTERED POWDER STEELS

Pyatachuk S., Baglyuk G., Mamonova A.A., Uskova N., Tikhonova I.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

H 316 FEATURES OF THE PHASE COMPOSITION FORMATION LIGATURE TiH₂-Mn-Si-Fe-C DURING THERMAL SYNTHESIS

Bahlyuk G.A., Mamonova A.A., Bogacheva A.G., Tikhonova I.B.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

H 317 FORMATION OF BORIDE COATINGS ON POWDER CARBON STEEL

Baglyuk G., Mamonova A., Pyatachuk S.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

H 323 STRUCTURE AND PROPERTIES OF DETONATION COATINGS MADE OF CERMET WITH TITANIUM-CHROMIUM CARBIDE MAIN INGREDIENT

Konoval V.P., Dovgal' A.G., Galtsov K.N., Bondarenko A.A., Umanskyi A.P.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

H 333 INVESTIGATION OF THE PROPERTIES OF ELECTRIC-SPARK COATINGS OF WC-COLMONOY SYSTEM

Paustovsky A.V., Khristov V.G., Alfintseva R.A., Tereshchenko V.S., Timofeeva I.I., Kostenko A.D.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

H 355 SELF-ORGANIZATION OF CARBON NANOSTRUCTURES ON VAN DER WAALS SURFACE OF THE A3B6 LAYERED CRYSTALS

Bakhtinov A.P., Vodopyanov V.N., Kovalyuk Z.D., Kudrynskyi Z.R., Netyaga V.V., Karbivskyy V.L.⁽¹⁾, Vishniak V.V.⁽¹⁾, Lytvyn O.S.⁽²⁾

Frantsevich Institute for Problems of Materials Science NASU, Chernivtsi, Ukraine

⁽¹⁾Kurdyumov Institute of Metallophysics NAS of Ukraine, Kyiv, Ukraine

⁽²⁾Lashkaryov Institute of Semiconductor Physics NAS of Ukraine, Kyiv, Ukraine

H 358 INFLUENCE OF LASER IRRADIATION ON THICK FILM RESISTORS SURFACE MORPHOLOGY

Paustovsky A.V., Rud B.M., Sheludko V.E., Gonchar A.G., Telnikov E.Y., Kremenitsky V.V.⁽¹⁾, Zakharchenko I.V.⁽²⁾

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kiev, Ukraine

⁽¹⁾Technical Center of NAS of Ukraine, Kiev, Ukraine

⁽²⁾Taras Shevchenko Kiev National University, Kiev, Ukraine

H 374 THE MECHANICAL AND TRIBOLOGICAL PROPERTIES of WELDING JOINT of the Ni3Al INTERMETALLIC

Mordel L., Chugunova S., Grinkevych K., Kozyrev D., Tkachenko I., Shurygina Z

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

H 381 INFLUENCE OF PARAMETERS ION-PLASMA COATING ON STRUCTURE AND PROPERTIES OF CHROMIUM CARBIDE STEELS COATED WITH TITANIUM NITRIDE

Maslyuk V.A., Bilyk I.I.⁽¹⁾, Sytnyk I.A.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

⁽¹⁾National Technical University of Ukraine "KPI" Kyiv, Ukraine

H 398 PREPARATION OF ALUMINUM-BASED INTERMETALLICS USING A TECHNOLOGY OF FAST QUENCHING FROM THE LIQUID STATE

Efimov N.A., Chugunova S.I., Kozyrev D.V., Kuprin V.V.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

H 304 WEAR DETONATION COATINGS BASED MECHANICALLY SYNTHESIZED IRON ALUMINIDE POWDERS

Sirovatka V.L., Yakovleva M.S., Bondarenko A.A., Hal'tsov K.N., Chernatska V.Y.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

H 305 THE ADMIXTURE ENGEENIRING: TO THE MECHANISM FOR AN INTERGROWTH STRUCTURES BY A COMPENSATIVE ATOMIC-ISOMORPHICAL SUBSTITUTIONS IN THE POWDER PSEUDOALLOYS

Grishchishyna L.N.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

H 312 EFFECT OF CHEMICAL AND HEAT TREATMENT ON THE FORMATION OF STRENGTHENING PHASE OF POWDER IRON CARBON COATING MATERIALS
Baglyuk G.A., Mamonova A.A., Piatachuk S.G., Uskova N.A., Tikhonova I.B.
Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

F 10 NONISOCYANATE EPOXYPOLYURETHANES FOR POLYMERIC COMPOSITE MATERIALS

Filipovych A.Y., Grishchenko V.K., Ermolchuk L.V., Barantsova A.V.
Institute of Macromolecular Chemistry of NAS of Ukraine, Kiev, Ukraine

F 19 NEW METHODS OF SOLID-PHASE STRUCTURAL MODIFICATION OF SEMICRYSTALLINE POLYMERS

Beloshenko V.A., Varyukhin V.N., Voznyak Yu.V.
Galkin Donetsk Institute for Physics and Engineering of NASU, Donetsk, Ukraine

F 62 THERMAL STRESS DECREASE WHILE MACHINE GRINDING

Pashchenko E., Lazhevskaya O., Chernenko A., Nekoval N.
Bakul Institute for Superhard Materials of NAS of Ukraine, Kiev, Ukraine

F 68 DEPOSITION OF MULTIFUNCTIONAL POLYMERIC COATINGS BASED ON DIPHENYLAMINE

Vishnevskaya Yu.P., Brazhnyk I.V.
National Technical University of Ukraine "KPI", Kiev, Ukraine

F 158 INVESTIGATION OF PECULIARITIES OF MECHANICAL PROPERTIES OF SOME POLYMERIC MATERIALS IN THE 4.2-300 K TEMPERATURES INTERVAL

Abraimov V.V., Lototskaya V.A., Zaritskiy I.P.
Verkin Institute for Low Temperature Physics and Engineering of NAS of Ukraine, Kharkov, Ukraine

F 159 MECHANICAL AND TRIBOTECHNICAL PARAMETERS OF NEORGANIC ultrafine POWDER-MODIFIED CFRPS

Mitrofanova E., Studentseva A., Rumyantsev V.
VIRIAL Ltd., Saint-Petersburg, Russia

F 397 PREPARATION OF CARBON FIBER MATERIALS FOR DETERMINATION OF CARBON NANOFORMS AMOUNT

**Kherovymchuk L.S., Garbuz V.V., Petrova V.A., Kuzmenko L.N.,
Scherbytska O.V., Shatskyh S.K.**
Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

Friday, 2013 October, 11

9³⁰-11³⁰ **I. Modern technologies of joining of materials.**

K. Scientific-organizational and commercial support of researches in contemporary materials science: international cooperation, forecasting, information provision of researches, practical realization of results, innovation policy, etc.

Coordinators: Lyushinsky A.V. (Russia), Passerone A. (Italy), Maslov V.P. (Ukraine)

I 13 DIFFUSION WELDING OF HIGH-TEMPERATURE ALLOYS

Lyushinskiy A.V., Lopatina E.S.

JSC «Ramenskoye Design Company», Ramenskoye, Russia

15 minutes

I 77 UNDERWATER WELDING IN ALTERNATING MAGNETIC FIELD AT INCREASED HYDROSTATIC PRESSURE

Maksimov S.Yu., Prilipko E.A., Zakharov S.M.⁽¹⁾, Zaitseva N.V.⁽¹⁾

Paton Electric Welding Institute of the NAS of Ukraine, Kiev, Ukraine

⁽¹⁾Kurdyumov Institute of Metal Physics of the NAS of Ukraine, Kiev, Ukraine

15 minutes

I 145 WELDING BY EXPLOSION NICKEL-COBALT AND NIOBIUM ALLOYS WITH HIGH-STRENGTH STEEL

Malahov A.Yu., Pervuhin L.B., Sayikov I.V., Vikhman V.B.⁽¹⁾

Federal State Budgetary Institution Science Institute of Structural Macrokinetics and Materials Science of RAS, Chernogolonka, Russia

⁽¹⁾JSC «Central Research Institute of materials», St.-Petersburg, Russia

15 minutes

I 169 WETTING AND REACTIVITY: THE CRITICAL ISSUES FOR PRODUCING UHTC BRAZED JOINTS

Passerone A., Valenza F., Artini C., Muolo M.L.

National Research Council - Institute for Energetics and Interphases (IENI-CNR), Genoa, Italy

15 minutes

I 384 DEVELOPMENT OF DESIGN AND MANUFACTURING TECHNOLOGY GEOLOGICAL DRILL BITS, EQUIPPED WITH THE NEW DIAMOND-HARD-ALLOY COMPOSITE MATERIALS (AVKM) WITH ADHESIVE FASTENING OF DIAMONDS

Naidich Y.V., Bugaev A.A., Evdokimov V.A., Umansky V.P.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

15 minutes

I 385 DIAMOND-CARBIDE MACROCOMPOSITE MATERIAL (AVKM)

**Naidich Y.V., Bugaev A.A., Evdokimov V.A., Adamovskiy A.A., Umansky V.P.,
Zyukin N.S.**

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

15 minutes

**K 43 LOGISTIC APPROACH TO THE DEPENDENCE OF EFFICIENCY
OF SCIENTIFIC-AND-TECHNICAL PROJECTS ON RESOURCES**

Maslov V., Androsyuk G., Kachur N.

Lashkaryov Institute of Semiconductor Physics of NAS of Ukraine, Kiev, Ukraine

15 minutes

K 181 FEA-SIMULATION OF VEHICLES COMPOSITE SANDWICH PANELS

Shakirov A.A., Abdrahimov R.R., Sapozhnikov S.B.

South Ural State University (NRU), Chelyabinsk, Russia

15 minutes

Discussion

Friday, 2013 October, 11

12⁰⁰-12⁴⁵ **J. Equipments and methods for characterization materials.**

Coordinators: Fekeshgazi I.V.(Ukraine), Maslov V.P. (Ukraine)

J 54 ELASTIC HYSTERESIS AND HARDENING OF D16 ALLOY AT SMALL (IN THE BEGINNING OF THE HOOKE'S REGION) MECHANICAL STRESSES

Mytsyk B.G., Kost' Ya.P., Demyanyshyn N.M.

Karpenko Physico-Mechanical Institute, Lviv, Ukraine

15 minutes

J 162 TRANSFORMATION of MONOCHROMATIC LIGHT BEAMS SPECTRA by CADMIUM DIPHOSPHIDE CRYSTALS with DEVIATION from STOICHIOMETRY
**Fekeshgazi I.V., Sidenko T.S., Liptuga A.I., Czitrovsky A.⁽¹⁾, Veresh² M.⁽¹⁾,
Trukhan V.M.⁽²⁾, Shoukavaya T.V.⁽²⁾**

Lashkaryov Institute of Semiconductor Physics of NAS of Ukraine, Kiev, Ukraine

⁽¹⁾Research Institute for Solid State Physics and Optics of the Hungarian

Academy of Sciences, Budapest, Hungary

⁽²⁾State amalgamation "Scientific-practical Center of NAS of Belarus on Materials Science", Minsk, Belarus

15 minutes

Discussion

13⁰⁰ Closing the Conference

Friday, 2013 October, 11

Exposition of posters «I» and «K» from 9³⁰ till 12⁰⁰;
«J» from 12⁰⁰ till 14⁰⁰

I 18 FORMATION OF BRAZED SEAMS ON THIN-SHEET STEEL BY USING PLASMA-ARC HEATING

Khorunov V.F., Maksymova S.V., Zvolinsky I.V.

Paton Electric Welding Institute of NAS of Ukraine, Kiev, Ukraine

I 42 USE OF RADIATION FROM PC SCREEN FOR NON-DESTRUCTIVE CONTROLLING THE INTERNAL STRAINS IN TRANSPARENT PARTS AND THEIR BONDING

Maslov V., Kachur N.

Lashkaryov Institute of Semiconductor Physics of NAS of Ukraine, Kiev, Ukraine

I 129 THE USE SURFACE PLASMON RESONANCE TO DETERMINE THE OPTICAL PARAMETERS OF UV-ADHESIVE AND CONTROL POLYMERIZATION PROCESS

Dorozhynsky G., Maslov V.

Lashkaryov Institute of Semiconductor Physics of NAS of Ukraine, Kiev, Ukraine

I 386 ADHESION AND MECHANICAL PROPERTIES OF CONTACT IN THE SYSTEM (SILVER-GOLD)-DIAMOND

Umansky V.P., Taranets N.Y., Naidich Y.V.

Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kyiv, Ukraine

K 306 WHAT IS PROFITABLE: TRANSFER OF TECHNOLOGIES OR PROVIDING OF INNOVATION PRODUCTS FROM INNOVATION CLUSTER OF ACADEMICAL TYPE (ICAT)

Grishchishyn D.A.

Frantsevich Institute for Problems of Materials Science of NASU, Kyiv, Ukraine

J 373 STANDARD TEST METHODS FOR AEROSPACE THERMAL PROTECTIVE MATERIALS

Udovyk O.O., Frolov G.O.

Frantsevich Institute for Problems of Materials Science of NASU, Kyiv, Ukraine

J 407 COMPARATIVE ANALYSIS OF ACTION OF MAGNETIC FIELDS, LOW TEMPERATURES AND THEIR COMBINATION ON BACTERIAL GROWTH

Raichenko O.I., Mosienko V.S.⁽¹⁾, Yanish Yu.V.⁽¹⁾,

Derev'yanko O.V., Chernenko L.I., Karnaushenko O.V.⁽¹⁾

Frantsevich Institute for Problems of Materials Science of NASU, Kyiv, Ukraine

⁽¹⁾Kavetsky Institute of Experimental Pathology, Oncology and Radiobiology of NAS of Ukraine, Kiev, Ukraine

13⁰⁰ Closing the Conference