

Frantsevich Ukrainian Materials Research Society
National Academy of Sciences of Ukraine
Frantsevich Institute for Problems of Materials Science
Ministry of Education and Science of Ukraine
National Technical University of Ukraine
“Igor Sikorsky Kyiv Polytechnic Institute”

PROGRAM

**7TH INTERNATIONAL SAMSONOV CONFERENCE
“MATERIALS SCIENCE OF REFRACTORY COMPOUNDS” (MSRC)**

May 25-27, 2021

Kyiv, Ukraine

INTERNATIONAL ORGANIZING COMMITTEE

Chairman Prof. Ragulya Andrey

Vice Chairmen Dr. Ivashchenko Volodymyr and Dr. Bogomol Yury

Scientific Secretaries

Dr. Storozhenko Maryna, PhD Bilan Iryna, Prof. Yurkova Oksana

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CONFERENCE SCHEDULE

Frantsevich Institute for Problems of Materials Science
3 Krzhyzhanivsky Street, Kyiv, Ukraine

Tuesday, May 25	9:00-10:30	Registration of Participants
	10:30-12:30	Opening Session
	13:00-16:20	Symposium A. Low-dimensional nanostructures of refractory compounds
Wednesday, May 26	8:00-9:00	Registration of Participants
	9:00-12:20	Symposium B. Ceramics and composites based on refractory compounds
	13:00-14:30	Poster session I
	14:30-16:00	Symposium C. Films and coatings based on refractory compounds
Thursday, May 27	8:00-9:00	Registration of Participants
	9:00-12:00	Symposium D. Synthesis and properties of refractory compounds
	13:00-14:30	Poster session II
	14:30-16:10	Symposium D. Synthesis and properties of refractory compounds

CONFERENCE OPENING

Tuesday, May 25

- 9:00 - 10:30 Registration of Participants
- 10:30 **Greetings from Organizers:**
- Chairman Prof. Ragulya Andrey
 Frantsevich Ukrainian Materials Research Society
- Vice Chairman Dr. Ivashchenko Volodymyr
 Frantsevich Institute for Problems of Materials Science, National Academy of
 Sciences of Ukraine
- Vice Chairman Dr. Bogomol Yury
 National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic
 Institute”
- 11:00 Conference Technical Details
- 11:15 **GRIGORII SAMSONOV – SCIENTIST, ORGANIZER, TEACHER**
- Prof. Kovalchenko Mykhail
 Frantsevich Institute for Problems of Materials Science, National Academy of
 Sciences of Ukraine
- 11:45 **PERSPECTIVES OF INTERNATIONAL COOPERATION IN THE
FRAMEWORK OF HORIZONT EUROPE**
- Dr. Bilan Irina
 Frantsevich Institute for Problems of Materials Science, National Academy of
 Sciences of Ukraine
- 12:00 - 13:00 **Lunch**

SYMPOSIUM A. LOW-DIMENSIONAL NANOSTRUCTURES OF REFRACTORY COMPOUNDS

Tuesday, May 25

Chairwoman: **Dr. Sci. Borodianska Hanna**

ORAL SESSION

13:00-13:40

Keynote

CARBIDES AND NITRIDES OF TRANSITION METALS - FROM SAMSONOV TO OUR DAYS

Gogotsi Yu.

Drexel University, Department of Materials Science and Engineering

13:40-14:20

Keynote

VAN DER WAALS NANOHETEROSTRUCTURES ON 2D TRANSITION METAL DICHALCOGENIDES BASIS: TRENDS, PROBLEMS AND PERSPECTIVES

Kulikov L.M.

Frantsevich Institute for Problems of Materials Science, National Academy of
Sciences of Ukraine

14:30-15:00

Break

15:00-15:20

THE PROPERTIES OF PURE AND Ag-DOPED ZnO NANOCOMPOSITES

Ievtushenko A., Karpyna V., Shtepliuk I., Ericksson J.⁽¹⁾, Yakimova R.⁽¹⁾,
Khranovskyy V.⁽¹⁾

⁽¹⁾ Frantsevich Institute for Problems of Materials Science, National Academy
of Sciences of Ukraine

⁽²⁾ Department of Physics, Chemistry and Biology

15:20-15:40

TRANSPORT PROPERTIES AND LOW TEMPERATURE DAMPING OF FERROMAGNETIC RESONANCE IN Co/Al₂O₃ AND Co/SiO₂ FERROMAGNETIC NANOCOMPOSITES

Baibara O.E., Radchenko M.V., Dmitriev A.I., Bugaiova M.E.,
Ievtushenko A.I., Krushynskaya L.A.⁽¹⁾, Stelmakh Y.A.⁽¹⁾, Foltyn M.⁽²⁾,
Przybylinska H.⁽²⁾, Story T.⁽²⁾

Frantsevich Institute for Problems of Materials Science, National Academy of
Sciences of Ukraine

⁽¹⁾ E.O. Paton Electric Welding Institute, National Academy of Sciences of
Ukraine

⁽²⁾ Institute of Physics, Polish Academy of Sciences

- 15:40-16:00 **TWO-DIMENSIONAL(2D) MOLYBDENUM DISULFIDE HIGHLY SENSITIVE HUMIDITY SENSOR**
Kulikov L.M., Ragulya A. V., Poznij A.P., Shevchuk M.V., Konih-Ettel N.B.
Frantsevich Institute for Problems of Materials Science, National Academy of Sciences of Ukraine
- 16:00-16:20 **REGULARITIES OF DECOMPOSITION OF TRANSITION METAL DISELENIDES OF IV-VIA GROUPS AND MECHANISMS FOR THE FORMATION OF DISSIPATIVE STRUCTURES AND OBJECTS**
Solntsev V.P., Solntseva T.A.
Frantsevich Institute for Problems of Materials Science, National Academy of Sciences of Ukraine

SYMPOSIUM B. CERAMICS AND COMPOSITES BASED ON REFRACTORY COMPOUNDS

Wednesday, May 26

Registration 8:00 – 9:00

Chairman: **Dr. Sci. Bogomol Yurii**

ORAL SESSION

- 9:00-9:40 **Keynote**
- HIGH-SPEED ELECTRON-BEAM SINTERING AS ALTERNATIVE TO SPARK PLASMA SINTERING AND 3D PRINTING**
Loboda P., Bogomol Yu., Solodkyi I.
National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute”
- 9:40-10:00 **ULTRA-HIGH TEMPERATURE CERAMIC BASED ON ZrB₂ OBTAIN BY PRESSURELESS SINTERING**
Mazur P., Grigoriev O., Vedel D.
Frantsevich Institute for Problems of Materials Science, National Academy of Sciences of Ukraine
- 10:00-10:20 **MECHANICAL PROPERTIES AND THERMAL STABILITY OF MAX-PHASES OF Ti(Nb)-Al-C(N) SYSTEM**
Prikhna T.A.⁽¹⁾, T.B. Serbenyuk⁽¹⁾, Ostash O.P.⁽²⁾, Podhurska V.Ya.⁽²⁾, Sverdun V.B.⁽¹⁾, Matsenko A.V.⁽¹⁾, M.V. Karpets⁽¹⁾
⁽¹⁾ V. Bakul Institute for Superhard Materials
⁽²⁾ Karpenko Physical-Mechanical Institute of the National Academy of Sciences of Ukraine
- 10:20-10:40 **BORON CARBIDE BASED CERAMICS: SYNTHESIS, PROPERTIES, APPLICATIONS**
Solodkyi I., Vterkovskiy M., Husarova I.⁽¹⁾, Bogomol I., Badica P.⁽²⁾, Loboda P.
National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute”
⁽¹⁾ Yuzhnoye State Design Office
⁽²⁾ National Institute of Materials Physics
- 10:40-11:00 **MECHANISMS OF HIGH TECHNOLOGICAL PLASTICITY AND FORMATION OF STRUCTURE AND PROPERTIES DURING THERMOMECHANICAL PROCESSING OF NANO DISPERSION STRENGTHENED NICKEL ALLOYS**
Solntsev V.P., Vasylykivska M.A., Nazarenko V.A., Lugovskiy Y.F., Brodnikovskiy N.P., Solntseva T.A.
Frantsevich Institute for Problems of Materials Science, National Academy of Sciences of Ukraine
- 11:00-11:20 **Break**

- 11:20-11:40 **OPTICAL PROPERTIES AND STRUCTURE OF REFRACTORY MATERIAL ZnS-B₂O₃**
Zinchenko V.F.⁽¹⁾, Magunov I.R.⁽¹⁾, Mozkova .V.⁽²⁾,Sadkovska L.V.⁽¹⁾,
Kuleshov S.V.⁽³⁾
⁽¹⁾ A. V. Bogatsky Physico-Chemical Institute (PCI) of NAS of Ukraine
⁽²⁾ State Enterprise for Special Instrument Making "Arsenal"
⁽³⁾ V.I. Vernadsky Institute of General and Inorganic Chemistry of NAS of Ukraine
- 11:40-12:00 **DEVELOPMENT OF PRESSURE SINTERING METHODS FOR CERAMIC AND CERMET BASED ON REFRACTORY COMPOUNDS**
Kovalchenko M. S.
Frantsevich Institute for Problems of Materials Science, National Academy of Sciences of Ukraine
- 12:00-12:20 **DISPERSION-STRENGTHED COMPOSITES OF Ti – TiC SYSTEM, OBTAINED BY SPARK PLASMA SINTERING OF POWDERS AFTER HIGH VOLTAGE ELECTRIC DISCHARGE TREATMENT**
Syzonenko O.M.⁽¹⁾, Tashev P. ⁽²⁾, Prystash M. S.⁽¹⁾, Torpakov A. S. ⁽¹⁾,
Lypian Ye.V.⁽¹⁾
⁽¹⁾Institute of Pulse Processes and Technologies of NAS of Ukraine
⁽²⁾Institute of Metal Science, Equipment and Technologies "Acad. A. Balevsci" with Hydroaerodynamics centre of the BAS
- 12:20-13:00 **Lunch**

SYMPOSIUM C. FILMS AND COATINGS BASED ON REFRACTORY COMPOUNDS

Wednesday, May 26

Chairwoman: **Dr. Sci. Storozhenko Maryna**

ORAL SESSIONS

14:30-14:50

Keynote

NANOSCALE MULTILAYER ZrN/CrN COATINGS CURRENT AND FUTURE STUDY TRENDS

Pogrebnyak A.D., Maksakova O.V.
Sumy State University

14:50-15:10

ON THE TARGET SURFACE TEMPERATURE DURING DC MAGNETRON SPUTTERING

Shaginyan L.R.,⁽¹⁾ Kuzmichev A.I.,⁽²⁾ Mironov M.I.⁽¹⁾

⁽¹⁾ Frantsevich Institute for Problems of Materials Science, National Academy of Sciences of Ukraine

⁽²⁾ Igor Sikorsky Kyiv Polytechnic Institute.

15:10-15:20

THE PROPERTIES OF HIGH ENTROPY ALLOY FILMS DEPOSITED BY MAGNETRON SPUTTERING

Shaginyan L.R., Krapivka N.A., Kotko A.V., Britun V.F., Gorban' V.F., Mironov M.I.

Frantsevich Institute for Problems of Materials Science, National Academy of Sciences of Ukraine

15:20-15:40

INFLUENCE OF VACUUM-ARC DEPOSITION CONDITIONS ON THE STRUCTURAL-PHASE STATE AND MECHANICAL CHARACTERISTICS OF (TiSi)N/NbN COATINGS

V.M. Beresnev⁽¹⁾, S.V. Lytovchenko⁽¹⁾, V.A. Chishkala⁽¹⁾, O.V. Maksakova⁽²⁾, V.A. Stolbovov^(1,3), B.O. Mazylin⁽¹⁾, D.V. Horokh⁽¹⁾

⁽¹⁾ V. N. Karazin Kharkiv National University

⁽²⁾ Sumy State University

⁽³⁾ National Science Center Kharkov Institute of Physics and Technology

15:40-16:00

STRUCTURE AND WEAR-RESISTANCE OF TiCrC(Ni) THERMAL-SPRAYED COATINGS

Umanskyi O.⁽¹⁾, Storozhenko M.⁽¹⁾, Chevychelova T.⁽¹⁾, Varchenko V.⁽¹⁾, Brazhevsky V.⁽²⁾, Chernyshov O.⁽²⁾, Terentiev O.⁽¹⁾, Martsenyuk I.⁽¹⁾, Haltsov K.⁽¹⁾, Bondarenko O.⁽¹⁾

⁽¹⁾ Frantsevich Institute for Problems of Materials Science, National Academy of Sciences of Ukraine

⁽²⁾ LTD "Composite Systems"

SYMPOSIUM D. SYNTHESIS AND PROPERTIES OF REFRACTORY COMPOUNDS

Thursday, May 27

Registration 8:00 – 9:00

Chairman: **Dr. Sci. Zgalat-Lozynskyi Ostap**

ORAL SESSION

9:00-9:40

Keynote

MULTICOMPONENT HIGH ENTROPY INTERMETALLICS AND COMPOUNDS

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

Frantsevich Institute for Problems of Materials Science, National Academy of
Sciences of Ukraine

9:40-10:00

ELECTRONIC STRUCTURE OF HIGH MELTING TaC_xN_{1-x} and $Ta_xHf_{1-x}C$ COMPOUNDS: FIRST-PRINCIPLES CALCULATIONS AND X-RAY SPECTROSCOPY MEASUREMENTS

Khyzhun O.Y.⁽¹⁾, Lavrentyev A.A.⁽²⁾, Gabrelian B.V.⁽³⁾, Tuan V. Vu⁽⁴⁾,
Kopylova K.I.⁽¹⁾

⁽¹⁾ Frantsevich Institute for Problems of Materials Science, National Academy
of Sciences of Ukraine

⁽²⁾ Department of Electrical Engineering and Electronics, Don State Technical
University

⁽³⁾ Department of Computational Technique and Automated System Software,
Don State Technical University

⁽⁴⁾ Division of Computational Physics, Institute for Computational Science,
Ton Duc Thang University

10:00-10:20

STABILITY, PHASE DIAGRAMS AND PROPERTIES OF SOLID SOLUTIONS BASED ON TRANSITION METAL COMPOUNDS: AN AB-INITIO STUDY

Ivashchenko V.I.

Frantsevich Institute for Problems of Materials Science, National Academy of
Sciences of Ukraine

10:20-10:40

GENERALIZED TEMPERATURE DEPENDENCE OF THE YUNG'S MODULE OF METALS AND TITANIUM ALLOYS

Firststov S.A., Lugovskoi Y.F., Kuz'menko N.N., Kulak L.D.

Frantsevich Institute for Problems of Materials Science, National Academy of
Sciences of Ukraine

- 10:40-11:00 **INFLUENCE OF HEATING TO HIGH TEMPERATURES ON MECHANICAL PROPERTIES OF BORIDE-BASED REFRACTORY MATERIALS**
Lokatkina A.S.⁽¹⁾, Prikhna T.A.⁽¹⁾, Moshchil V.E.⁽¹⁾, Barvitskiy P.P.⁽¹⁾, Karpets M.V.⁽²⁾, Borimsky O.I.⁽¹⁾, Devin L.M.⁽¹⁾, Ponomaryov S.⁽¹⁾, Bondar A.A.⁽²⁾
⁽¹⁾ Institute for Superhard Materials of the National Academy of Sciences of Ukraine
⁽²⁾ Frantsevich Institute for Problems of Materials Science, National Academy of Sciences of Ukraine
- 11:00-11:20 **Break**
- 11:20-11:40 **THE MECHANICAL BEHAVIOUR OF THE DIRECTIONALLY SOLIDIFIED CERAMIC EUTECTICS IN WIDE TEMPERATURE RANGE**
Bogomol Yu., Upatov M., Loboda P.
National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute
- 11:40-12:00 **COMPOSITES BASED ON HIGH-MELTING POINT COMPOUNDS: SYNTHESIS, CONSOLIDATION, AND PROMISING DEVELOPMENTS**
Zgalat-Lozynskiy O.B., Kud I.V., Zyatkevych D.P., Ieremenko L.I., Krushinska L.A.
Frantsevich Institute for Problems of Materials Science, National Academy of Sciences of Ukraine
- 12:00 – 13:00 **Lunch**

**SYMPOSIUM D. SYNTHESIS AND PROPERTIES OF
REFRACTORY COMPOUNDS**

Thursday, May 27

Chairman: Dr. Vasiliev Oleksandr

ORAL SESSION

14:30-14:50

Keynote

**SYNTHESIS OF NANOSIZED CARBIDES AS A RESULT OF
ELECTROEXPLOSIVE DESTRUCTION OF REFRACTORY
METAL CONDUCTORS**

Sinchuk A. V., Boguslavsky L. Z., Adamchuk Yu. O., Chushchak S. V.
Institute of Pulse Processes and Technologies, NAS of Ukraine

14:50-15:10

**PLASMA-ELECTROLYTIC PROCESSING OF ZIRCONIUM
ALLOYS**

Imbirovych N.Yu.⁽¹⁾, Povstyanoy O.Yu.⁽¹⁾, Posuvailo V.M.⁽²⁾

⁽¹⁾ Lutsk National Technical University

⁽²⁾ Karpenko Physico-Mechanical Institute of the NAS of Ukraine

15:10-15:30

**ELECTROCHEMICAL PROPERTIES OF MOLYBDENUM
DISULFIDE / MOLYBDENUM NANOHETEROSTRUCTURES**

Kulikov L.M., Talash V.M., Rudenko Yu.B., Shevchuk M.V., Konih-
Ettel N.B., Sidorenko T.V.

Frantsevich Institute for Problems of Materials Science, National
Academy of Sciences of Ukraine

15:30-15:50

**KINETIC CHARACTERISTICS ON INTERACTION OF TWO-
DIMENSIONAL MOLYBDEN DISULPHIDE MICRONIC
POWDERS WITH ENVIRONMENT - OXYGEN AND WATER
VAPOR**

Zenkov V.S., Kulikov L.M., Konih-Ettel N.B.

Frantsevich Institute for Problems of Materials Science, National
Academy of Sciences of Ukraine

15:50-16:10

**MECHANICAL PROPERTIES AND THERMODYNAMICS OF
SYNTHESIS OF ZrB_2 - HfB_2 SOLID SOLUTIONS FROM DFT
CALCULATIONS**

Vasiliev O.O., Bekenev V. L., Kartuzov V. V.

Frantsevich Institute for Problems of Materials Science, National
Academy of Sciences of Ukraine

POSTER SESSION I
Wednesday, May 26
13:00-14:30

FLUID CATALYTIC CRACKING CATALYST WASTE AS A COMPOUND FOR REFRACTORY MATERIALS

Malaiskiene J.⁽¹⁾, Antonovic V.⁽¹⁾, Loboda P.⁽²⁾, Boris R.⁽¹⁾, Bogomol I.⁽²⁾

⁽¹⁾ Vilnius Gediminas Technical University

⁽²⁾ National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute"

BYPRODUCT FROM THERMAL POWER PLANTS AS A PROMISING MICROAGGREGATE FOR REFRACTORY MATERIALS

Škamat J.⁽¹⁾, Antonovič V.⁽¹⁾, Loboda P.⁽²⁾, Stonys R.⁽¹⁾, Bogomol I.⁽²⁾

⁽¹⁾ Vilnius Gediminas Technical University

⁽²⁾ National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute"

TO THE QUESTION ABOUT THE MECHANISM OF WEAR OF COMPOSITE DIAMOND-CONTAINING MATERIAL DURING THE INTERACTION WITH A ROCK

Vynohradova O.P., Vasylichuk O.S., Zakora A.P., Garashchenko V.V., Bilorusets V.V., Bologova L.M.

N. Bakul Institute for Superhard Materials National Academy of Sciences of Ukraine

WORKING CAPABILITY OF THE TOOL FOR THE PROCESSING OF NON-USEFUL MATERIALS MANUFACTURED BY SPARK PLASMA SINTERING (SPS)

Derev'yanko O.V., Istomina T.I., Vasylykivska M.A., Karpets M.V.

Frantsevich Institute for Problems of Materials Science, National Academy of Sciences of Ukraine

COMPONENTS FOR BALL BEARINGS BASED ON Si₃N₄-ZrN WITH THE SELF-HEALING EFFECT

Zgalat-Lozynskyi O.B.⁽¹⁾, Zyatkevych D.P.⁽¹⁾, Sokhan' S.V.⁽²⁾, Kud I.V.⁽¹⁾, Ieremenko L.I.⁽¹⁾, Krushynska L.A.⁽¹⁾, Verbylo D.G.⁽¹⁾, Vasylykivska M.A.⁽¹⁾, Ragulya A.V.⁽¹⁾, Zyatkevych N.S.⁽¹⁾

⁽¹⁾ Frantsevich Institute for Problems of Materials Science, National Academy of Sciences of Ukraine

⁽²⁾ Bakul Institute of Superhard Materials, National Academy of Sciences of Ukraine

INFLUENCE OF THE POROUS AND MICROCRYSTALLINE STRUCTURE ON THE OPTICAL PROPERTIES OF MgAl₂O₄ OBTAINED BY SPARK PLASMA SINTERING

Kolesnichenko V. G., Zamula M. V., Tyschenko N. I., Tomila T. V., Shyrovkov O. V., Stepanenko A. V., Ragulya A. V.

Frantsevych Institute for Problems of Materials Science of NASU

COMPLEX ZrO₂ STABILIZERS FOR CREATING MODERN THERMAL BARRIER COATINGS FOR GAS TURBINE ENGINE BLADES OF VARIOUS APPLICATIONS

Lakiza S. M., Dudnik O. V., Grachniuk M. I., Ruban O. K., Red'ko V. P., Makudera A. O., Shmybelskii V. B.

Frantsevich Institute for Problems of Materials Science, National Academy of Sciences of Ukraine

POLYMER MATERIALS ENHANCED WITH CERAMICS PARTICLES FOR 3D-PRINTING

Matviichuk O.O.⁽¹⁾, Zakiev V.I.⁽²⁾, Tolochin O.I.⁽³⁾, Ievdokymova O.V.⁽¹⁾,
Zgalat-Lozynskiy O.B.⁽³⁾

⁽¹⁾ V. Bakul Institute for Superhard Materials, National Academy of Sciences of Ukraine

⁽²⁾ National Aviation University

⁽³⁾ Frantsevich Institute for Problems of Materials Science, National Academy of Sciences of Ukraine

THE EFFECT OF MODIFICATION OF CHROMIUM CARBIDE ON THE MODULUS OF ELASTICITY OF REACTIVE SINTERED SILICON CARBIDE

Pinchuk N.A., Gadzyra N.F.

Frantsevich Institute for Problems of Materials Science, National Academy of Sciences of Ukraine

SPARK PLASMA SINTERING OF COPPER MATRIX COMPOSITES REINFORCED WITH LaB₆-TiB₂ EUTECTIC PARTICLES

Solodkyi I., Trosnikova I., Kolesnichenko V., Loboda P.

National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute"

SPARK PLASMA SINTERING OF COPPER MATRIX COMPOSITES REINFORCED WITH LaB₆-TiB₂ EUTECTIC PARTICLES

Solodkyi I., Trosnikova I., Kolesnichenko V., Loboda P.

National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute"

THE EFFECT OF MODIFICATION OF CARBON-BEARING COMPOSITE POWDERS ON THE MECHANICAL PROPERTIES OF ALLOYS ON THE BASIS OF IRON

Tymoshenko Ya. G., Gadzyra M. P., Davydchuk N. K., Pinchuk M. O.

Frantsevich Institute for Problems of Materials Science, National Academy of Sciences of Ukraine

PHYSICAL AND MECHANICAL CHARACTERISTICS OF HIGH MELTING BORON-BASED CERAMIC COMPOSITES FOR EXTREME ENVIRONMENTS

Barvitskiy P.P., Prikhna T.O.⁽¹⁾, Devin L.N.⁽¹⁾, Muratov V.B.⁽²⁾, Vasiliev O.O.⁽²⁾, Richev S.V.⁽¹⁾, Lokatkina A.S.⁽¹⁾

⁽¹⁾ V. Bakul Institute for Superhard Materials, National Academy of Sciences of Ukraine

⁽²⁾ Frantsevich Institute for Problems of Materials Science, National Academy of Sciences of Ukraine

THE ELASTIC PROPERTIES OF ALUMINUM NITRIDE

Kaidash O. M.⁽¹⁾, Fesenko I. P.⁽¹⁾, Kysla G. P.⁽²⁾, Tuz Yu. M.⁽²⁾, Dobroliubova M. V.⁽²⁾

⁽¹⁾ V. Bakul Institute for Superhard Materials, National Academy of Sciences of Ukraine,

⁽²⁾ National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute"

GLASS CERAMICS BASED ON BIOGENIC HYDROXYAPATITE AND SODIUM SILICATE GLASS DOPED NANO-SIZED DIAMOND PARTICLES

Kuda O.A.⁽¹⁾, Sych O.E.⁽¹⁾, Pinchuk N.D.⁽¹⁾, Bykov O.I.⁽¹⁾, Olifan O.I.⁽¹⁾, Evych Y.I.⁽¹⁾, Kuzmenko L.M.⁽¹⁾, Panova A.M.⁽²⁾

⁽¹⁾ Frantsevich Institute for Problems of Materials Science, National Academy of Sciences of Ukraine,

⁽²⁾ V. Bakul Institute for Superhard Materials of NAS of Ukraine

THE STUDY OF INORGANIC IONS IN THE COMPOSITION OF THE SYNTHESIZED HYBRID OLIGOMERS

Pashchenko E.A., Savchenko D.A., Kukhareno C.A., Bychykhin V.N., Shchur N.A., Shatokhin V.V., Dovgan A.G.

V. Bakul Institute for superhard materials of the National Academy of Science of Ukraine

INFLUENCE OF SYNTHESIS CONDITIONS ON THE STRUCTURE OF HYBRID OLIGOMERIC PRODUCTS

Pashchenko E.A., Savchenko D.A., Kukhareno C.A., Skorokhod S.V., Koshkin A.M., Lazhevskaya O.V.

V. Bakul Institute for Superhard Materials, National Academy of Science of Ukraine

PHASE TRANSFORMATIONS IN $\text{Si}_3\text{N}_4 - \text{SiO}_2 - \text{Y}_2\text{O}_3$ CERAMIC DURING SPARK PLASMA CONSOLIDATION

Zamula M. V., Kolesnichenko, V.G., Tyschenko N.I., Shyrovkov O.V., Stepanenko A.V., Borodianska H. Y., Ragulya A.V.

Frantsevich Institute for Problems of Materials Science, National Academy of Sciences of Ukraine

INFLUENCE KINETICS OF THE SINTERING PROCESS ON THE STRUCTURE AND PROPERTIES OF HARD ALLOYS

Loboda P.I., Minitsky A.V., Byba Ie.G.

National technical university of Ukraine «Igor Sikorsky Kyiv Polytechnic Institute»

COMPOSITES OBTAINED BY THE ARC METHOD, CONSISTING OF STACKS OF GRAPHENE AND CARBON NANOSTRUCTURES CONTAINING REFRACTORY METALS

Al.D. Zolotarenko⁽¹⁾, E.P. Rudakova⁽²⁾, An.D. Zolotarenko⁽²⁾, M.V. Chimbai⁽²⁾, N.A. Gavrylyuk⁽¹⁾, A.D. Zolotarenko⁽²⁾, D.V. Schur⁽²⁾

⁽¹⁾ Chuiko Institute of Surface Chemistry, NAS of Ukraine,

⁽²⁾ Frantsevich Institute for Problems of Materials Science, National Academy of Sciences of Ukraine

ELECTRIC CONDUCTIVE COMPOSITES BASED ON TiO_2 AND CARBON NANOSTRUCTURES FOR THE CREATION OF 3D - PRODUCTS USING 3D - PRINTING TECHNOLOGY CJP

Al.D. Zolotarenko⁽¹⁾, E.P. Rudakova⁽²⁾, An.D. Zolotarenko⁽²⁾, M.V. Chimbai⁽²⁾, N.A. Gavrylyuk⁽¹⁾, A.D. Zolotarenko⁽²⁾, D.V. Schur⁽²⁾

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OBTAINING OF TAPES FROM HARD ALLOYS POWDERS

Hrebenok T.P., Radchenko O.K., Itsenko A. I., Litvin R. V., Yarmolinskij S. V.

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THE EFFECT OF NANOSIZED ADDITIVES ON THE PROPERTIES OF SILICON CARBIDE-BASED MATERIALS

Hnylytsia I.D., Tsap I.V.

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MODIFYING THE STRUCTURE OF BORON CARBIDE: NEW PROPERTIES OF $\text{AlB}_{12}\text{C}_2$ -BASED CERAMICS

Muratov V.B.⁽¹⁾, Garbuz V.V.⁽¹⁾, Mazur P.V.⁽¹⁾, Vasiliev O.O.⁽¹⁾, Khomko T.V.⁽¹⁾, Kartuzov V.V.⁽¹⁾, Prikhna T.O.⁽²⁾, Barvitsky P.P.⁽²⁾, Kindrachuk V.⁽³⁾

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NANOSTRUCTURED COMPOSITE BASED ON DEPOSITION OF OXYGEN MODIFIED CARBON NITRIDE ON THE SURFACE OF ANATASE NANOPARTICLES FOR PHOTOCATALYTIC APPLICATION

Bondarenko M.E., Silenko P.M., Solonin Yu.M., Ragulya A.V., Gubareni N.I., Zahornyi M.M., Khyzhun O.Y., Yarova N.Y.

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CURRENTLESS SILICIDES COATINGS DEPOSITION ON TUNGSTEN

Malyshev V.V.⁽¹⁾, Shakhnin D.B.⁽¹⁾, Gumeniuk Ye.Ye⁽¹⁾, Stetsyuk T.V.⁽²⁾, Gab I.I.⁽²⁾

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STRUCTURAL AND OPTICAL PROPERTIES OF ZnO FILMS DEPOSITED IN Zn-RICH CONDITIONS

Ievtushenko A., Mamykin S.⁽¹⁾, Olifan O., Bykov O., Garashchenko V.⁽²⁾, Baturin V.⁽³⁾, Karpenko O.⁽³⁾

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CHARACTERIZATION of Cr-Ni-B-C-N COATINGS DEPOSITED BY MAGNETRON SPUTTERING

Onoprienko A.A., Ivashchenko V.I., Scrynskyy P.L., Sinelichenko O.K., Kozak A.O., Kovalchenko A.M., Olifan E.I.

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NANOCOATINGS OF REFRACTORY METALS Ti, Nb, Cr, V, Mo, DEPOSITE ON SiO_2 – ADHESION AND WETTING BY SOLDER MELTS

Krasovskyy V.P., Krasovskaya N.A.

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PHOTOLUMINESCENCE OF PECVD a-SiCN:H FILMS

Porada O.K.⁽¹⁾, Manzhara V.S.⁽²⁾, Ivashchenko V.I.⁽¹⁾, Kozak A. O.⁽¹⁾, Ivashchenko L.A.⁽¹⁾

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ELECTRODEPOSITION OF TUNGSTEN AND TUNGSTEN-MOLYBDENUM COATINGS BY ELECTROLYSIS OF METAPHOSPHATE-CONTAINING MELTS

Malyshev V.V.⁽¹⁾, Shakhnin D.B.⁽¹⁾, Patsalovska L.Yu.⁽¹⁾, Stetsyuk T.V.⁽²⁾, Gab I.I.⁽²⁾

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JOINTS OF ALUMINA CERAMIC METALLIZED BY MOLYBDENUM NANOFILMS POSSESSED OF THIN BRAZED SEAMS

Gab I.I., Stetsyuk T.V.

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ELECTROLYTIC PRODUCTION OF THIN MOLYBDENUM CARBIDE FILMS

Malyshev V.V.⁽¹⁾, Gab A.I.⁽¹⁾, Belimenko V.I.⁽¹⁾, Stetsyuk T.V.⁽²⁾

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MANAGEMENT OF STRUCTURE OF THIN MOLYBDENUM CARBIDE FILMS

Malyshev V.V.⁽¹⁾, Gab A.I.⁽¹⁾, Dudka D.M.⁽¹⁾, Stetsyuk T.V.⁽²⁾

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THERMALLY BARRIER COATINGS BASED ON COMPLEX STABILIZED ZrO₂

Dudnik E.V.⁽¹⁾, Lakiza S.N.⁽¹⁾, Grechaniuk I.N.⁽²⁾, Shmybelskyi V.B.⁽¹⁾, Makudera A.A.⁽¹⁾, Ruban A.K.⁽¹⁾, Redko V.P.⁽¹⁾, Grechanyuk N.I.⁽¹⁾

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FREQUENCY DEPENDENCE OF CURRENT IN Fe,Co,Ni/HO₂O₃/Fe,Co,Ni THIN-FILM STRUCTURES

Kasumov A.M., Karavaeva V.M., Vyshnevskaya K.O., Korotkov K.A., Olifan O.I.

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FREQUENCY DEPENDENCE OF PERMITTIVITY IN Fe,Co,Ni/HO₂O₃/Fe,Co,Ni THIN-FILM STRUCTURES

Kasumov A. M., Karavaeva V. M., Vyshnevskaya K. O., Korotkov K. A., Olifan O.I.

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THE PHOTOCATALYTIC PROPERTIES OF ZnO DOPED BY LANTHANIDES

Korotkov K. A., Kasumov A. M., Ievtushenko A. I.

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UNUSUAL ELECTRICAL PROPERTIES OF CrSi₂ THIN FILM PHASE COMPOSITE

Dransenko A.S., Koshelev M. V.

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COMPOSITE COLD SPRAYING HIGH-ENTROPY AlNiCoFeCrTi COATINGS ON STEEL

Nakonechnyy S.O., Hushchuk D.V., Litvinova O.A., Yurkova A.I.

Igor Sikorsky Kyiv Polytechnic Institute

OXIDATION RESISTANCE OF COMPOSITE COLD SPRAYED AlNiCoFeCrTi HIGH-ENTROPY COATING

Yurkova A.I., Nakonechnyy S.O., Hushchuk D.V., Akinola Olajide

Igor Sikorsky Kyiv Polytechnic Institute

AlNiCoFeCrTiB_x HIGH-ENTROPY COATINGS WITH COMPOSITE STRUCTURE RESULTED FROM ELECTRON-BEAM CLADDING

Yurkova A.I., Nakonechnyy S.O., Dukhota D.G.

Igor Sikorsky Kyiv Polytechnic Institute

INFLUENCE SUBSTRATE TEMPERATURE ON THE MORPHOLOGY AND LUMINESCENCE OF ZnO DOPED BY Mg

Myroniuk L. A.⁽¹⁾, Karpyna V.A.⁽¹⁾, Myroniuk D. V.⁽¹⁾, Petrosyan L. I.⁽¹⁾, Fiyalka L. I.¹, Khranovskyy V. D.², Ievtushenko A. I.¹

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⁽²⁾ Department of Physics, Chemistry and Biology, Linköping University

ELECTRO-SPARK DEPOSITION OF CERMET COMPOSITE TiC-Cr-Ni

Litvin R.V., Belik V.D., Tolochin O. I., Myslyvchenko O. M., Zgalat-Lozynskyy O. B., Bagliuk G. A.

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MAX PHASES in Ti-Al-C and Ti-Al-Si-C FILMS

Onoprienko A.A.⁽¹⁾, Ivashchenko V.I.⁽¹⁾, Skrynskyy P.L.⁽¹⁾, Kozak A.A.⁽¹⁾, Sinelnichenko A.K.⁽¹⁾, Olifan E.I.⁽¹⁾, Lytvyn P.M.⁽²⁾, Marchuk O.K.⁽¹⁾

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POSTER SESSION II

Thursday, May 27

13:00-14:30

INFLUENCE OF UNIFORMITY IN STRENGTH OF DIAMOND GRINDING POWDERS SYNTHESIZED USING FERROALLOYS

Prikhna T.O., Ilnytska H.D., Lavrinenko V.I., Smokvyna V.V., Zaitseva I.M.

V. Bakul Institute for Superhard Materials of the National Academy of Sciences of Ukraine

INFLUENCE OF THERMAL PROCESSING ON THERMOSTABILITY OF DIAMONDS SYNTHESIZED WITH APPLICATION OF FERROALLOYS

Prikhna T.O., Ilnytska H.D., Lavrinenko V.I., Smokvyna V.V., Zaitseva I.M.,

Zakora A.P., Tymoshenko V.V.

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OPTICAL PROPERTIES AND STRUCTURE INVESTIGATIONS OF $C_3N_4O_x$ (TiO_2)-POLYANILINE AS PERSPECTIVE MATERIALS FOR PHOTOCATALYTIC APPLICATION

Zahornyi M.N., Bondarenko M.E., Ragulya A.V., Ievtushenko A.I., Silenko P.M., Lobunets T.F., Tyschenko N.I., Solonin Yu.M., Gubareni N.I., Khyzhun O.Y., Yarova N.Yu., Skoryk M.A. ⁽¹⁾

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(1) Nanomedtech

ATOMIC STRUCTURE, VIBRATIONAL SPECTRUM AND MECHANICAL PROPERTIES OF AMORPHOUS AIBC

Shevchenko R.V., Ivashchenko V.I., Shevchenko V.I.

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THE DEPENDENCE OF THE OPTICAL PROPERTIES OF SYNTHESIZED FROM VARIOUS PRECURSORS DOPED CARBON NITRIDE $C_3N_4O_x$ ON THE OXYGEN CONTENT IN THE MATERIAL

Bondarenko M.E., Silenko P.M., Solonin Yu.M., Ragulya A.V., Gubareni N.I., Zahornyi M.M., Khyzhun O.Y., Yarova N.Y.

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EPR SPECTROSCOPIC STUDY OF MIXED Dy_2O_3 - CeO_2 CERAMICS

Bataiev M. M., Bataiev Y.M., Lavrinenko O. M., Dmitriev O. I., Kornienko O. A.

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INFLUENCE OF THE SIZE OF PARTICLES OF THE INITIAL COMPONENTS OF THE MIXTURE ON THE PHYSICAL AND MECHANICAL PROPERTIES OF SINTERED PRESSER COPPER - TUNGSTEN, TUNGSTEN ALLOY

Epifantseva T.A., Vlasova O.V., Stern M.B., Baglyuk G.A.

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INFLUENCE OF Pr³⁺ ELECTRONIC STRUCTURE ON THE LOW TEMPERATURE HEAT CAPACITY OF Pr₂Hf₂O₇

Kopan A.R., Gorbachuk M.P., Lakiza S.M.

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THE INFLUENCE OF THE PHASE COMPOSITION OF THE TITANIUM DIOXIDE MATRIX ON THE OPTICAL PROPERTIES AND MORPHOLOGY OF C₃N₄O_x/TiO₂ COMPOSITE NANOPARTICLES

Bondarenko M.E., Silenko P.M., Solonin Yu.M., Ragulya A.V., Zahornyi M.M., Gubareni N.I., Khyzhun O.Y., Yarova N.Y.

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ELECTRONIC STRUCTURE OF Cu₂HgGeS₄ COMPOUND STUDIED BY XPS METHOD

Tkach V.A., Khuzhun O.Y., Denysyuk N. M., Luzhnyi I. V.

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SIMULATION OF SILICON CARBIDE NUCLEI AND INITIAL STAGE OF NUCLEATION WITH QUANTUM CHEMISTRY CALCULATIONS

Pokropivny A.V., Sylenko P.M., Solonin Yu.M.

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INFLUENCE OF THICKNESS OF THERMOSENSITIVE ELEMENTS ON THE MAGNETIC PROPERTIES OF IRON-NICKEL-BASED POWDER MATERIALS ALLOYED WITH Ti, Cr, Mo ADDITIVES

Sytnyk I.A., Maslyuk V.A.

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PHASE REACTIONS AND PROPERTIES OF PHASES IN THE CeO₂-La₂O₃ Ln₂O₃ (LN = Sm, Eu, Gd) SYSTEMS AT TEMPERATURE OF 1500 °C

Kornienko O.A., Andrievskaya E. R., Sameljuk A.V., Korichev S. F., Yurchenko Yu.V., Barshchevskaya A. K.

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STUDY OF THE PROCESS FOR OBTAINING NANOSIZED PARTICLES OF TUNGSTEN CARBIDE BY REDUCTION AND CARBURIZATION IN THE GAS PHASE OF VOLATILE TUNGSTEN COMPOUNDS

Matviichuk O.O., Bondarenko V.P., Ievdokymova O.V.

V. Bakul Institute for Superhard materials NASU

SOME ASPECTS OF THERMOCHEMICAL ACTIVATION OF MOLYBDENUM SINTERING

Ponomarchuk S.H., Solodkiy E.V., Loboda P.I., Kovrizhko O.M., Brychko S.O., Bogomol I.

National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute"

**LOW-TEMPERATURE PHASE STABILITY OF MATERIALS IN THE SYSTEM
ZrO₂-Y₂O₃-CeO₂**

Marek I. O.⁽¹⁾, Ruban O. K.⁽¹⁾, Red'ko V. P.⁽¹⁾, Dudnik O. V.⁽¹⁾, Korniy S. A.⁽²⁾

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⁽²⁾ Karpenko physico-mechanical institute of the NAS of Ukraine

**THE OPPORTUNITY TO APPLY MIXED Gd₂O₃ – CeO₂ POWDERS FOR
HYDROPHOBIC CERAMIC MATERIALS CREATION**

Lavrynenko O.M., Kolesnichenko V.G., Zhuravlev V.S., Pavlenko O.Yu., Kornienko O.A., Bykov A.I.

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**EFFECT OF THE PRODUCTION METHOD ON THE PHYSICOCHEMICAL
POWDER PROPERTIES IN THE Al₂O₃ – ZrO₂ (Y₂O₃, CeO₂) SYSTEM**

Smyrnova-Zamkova M. Yu., Ruban O.K, Bykov O.I., Dudnik O. V.

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**MAX-PHASE OF Cr₂AlC COMPOSITION IN ALLOYS OF THE Cr-Al-C TERNARY
SYSTEM**

Tymoshenko O.A., Bondar A.A., Petyukh V.M.

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**COMPUTER SIMULATION OF POROUS MATERIAL EFFECTIVE THERMAL
CONDUCTIVITY WITH FINITE-ELEMENT ANALYSIS**

Andriienko Yu., Stepanoff O., Bogomol I.

Igor Sikorsky Kyiv Polytechnic Institute

**FEATURES OF THE HfB₂-HfN COMPOSITION SYNTHESIS IN THE CONDITIONS
OF SPARK-PLASMA SINTERING**

Petukhov O., Ragulya A., Morozov I.

Frantsevich Institute for Problems of Materials Science, National Academy of Sciences of Ukraine

**INFLUENCE OF MOLYBDENUM OXIDE AND NANOCRYSTALLINE TITANIUM
OXIDE ON PHASE FORMATION AND CHARACTERISTICS OF DYSPOSIUM
TITANATE PELLETS**

Chernov I.A.⁽¹⁾, Belash N.N.⁽¹⁾, Romankov V.O.⁽¹⁾, Kolodiy I.V.⁽²⁾, Kalchenko A.S.⁽²⁾

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National Science Center "Kharkov Institute of Physics and Technology"

INTERACTION IN THE Al₂O₃-ZrO₂-Sc₂O₃ SYSTEM

Makudera A.A., Lakiza S.M.

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THE OXIDE FORMATION OF $\gamma \rightarrow \alpha$ -Al₂O₃ POWDERS-NANO AT 570 –1470 K

Petrova V.A., Garbuz V.V., Silinskaya T.A., Lobunets T.F., Bykov O.I., Muratov V.B., Terentyeva T.M., Kuzmenko L.M., Homko T.V., Olifan O.I.

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SUPERCRITICAL FLUID SYNTHESIS OF “CUBIC GRAPHITE ” WITH THE STRUCTURES OF KFI AND LTA CARBON ZEOLITE TYPES

Pokropivny A.V.⁽¹⁾, Smolyar A. S.⁽²⁾, Kuts V. A.⁽³⁾, Sylenko P.M.⁽¹⁾, Solonin Yu. M.⁽¹⁾

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⁽³⁾ Institute of Magnetism NASU

TEMPERATURE INTERVAL OF STABILITY OF MAX-PHASES IN THE Ti-Al-C SYSTEM

Bilous O.O.¹, Bondar A.A.¹, Voblikov V.M.¹, Tsyganenko N.I.¹, Witusiewicz V.T.², Hecht U.²

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INFLUENCE OF THE TRAMPOLINE ION-PLASMA MODIFICATION OF SURFACE MORPHOLOGY FOR POWDER METALLURGY PRODUCTS

Gabovich A. M.⁽¹⁾, Loboda P. I.⁽²⁾, Semeniuk N. I.⁽³⁾, Semeniuk V. F.^(1,2,3), Soloviova T. O.⁽²⁾, Zavadiuk S.V.⁽²⁾

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⁽³⁾ GreSem Innovation, LLC

GENERATION OF ABNORMAL POROSITY DURING SINTERING OF Fe-Mo POWDER ALLOY

Mazur V., Loboda P., Soloviova T., Vterkovskiy M., Remizov D., Kovryzhko O., Smolinskyi L National Technical University of Ukraine ‘Igor Sikorsky Kyiv Polytechnic institute’

INFLUENCE OF REDUCTION TEMPERATURE ON RESIDUAL STRESSES IN FE POWDERS OF DIFFERENT MORPHOLOGY

Karasevska O.P.^(1,2), Loboda P.I.⁽¹⁾, Soloviova T.O.⁽¹⁾, Nakonechniy S.O.⁽¹⁾, Zavadiuk S.V.⁽¹⁾

⁽¹⁾ National Technical University of Ukraine ‘Igor Sikorsky Kyiv Polytechnic institute’

⁽²⁾ Kurdyumov Institute for Metal Physics, National Academy of Sciences of Ukraine

STRUCTURE AND PHASE CONSTITUENTS OF AS-CAST ALLOYS OF THE Hf–Ru–Rh–Ir QUATERNARY SYSTEM

Kriklya L.S., Korniyenko K.Ye., Levchenko P.P., Tikhonova I.B., Samelyuk A.V.

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PECULIARITIES OF CRYSTALLIZATION OF THE Ti–Rh–Ir ALLOYS

Kriklya L.S., Korniyenko K.Ye., Levchenko P.P., Artyukh S.Yu.

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IMPROVEMENT OF EXPERIMENTAL METHODS OF MECHANICAL AND CHEMICAL TREATMENT FOR THE FORMATION OF HIGH-QUALITY SURFACES OF PbTe PLATES

Malanych G.P.

V. Ye. Lashkaryov Institute of Semiconductor Physics, National Academy of Sciences of Ukraine

SYNTHESIS OF POWDERS FOR DEPOSITION OF ELECTRIC-SPARK COATINGS BASED ON NICKEL ALLOYS REINFORCED BY HIGH-MODULUS TITANIUM CARBIDES/CARBONITRIDES

Kud I.V., Ieremenko L.I., Zyatkevych D.P., Lytvyn R.V., Krushynska L.A., Zgalat-Lozynskyy O.B., Baglyuk G.A.

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THE TEMPERATURE INFLUENCE ON OF INITIAL STATE FOR DIAMOND GRAINS IN SEGMENTS OF INSTRUMENTAL APPLICATION

Laptev A.V., Istomina T.I., Derev'yanko O.V., Tolochin O.I., Ershova O.G., Vasylkivska M.A.
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STUDY OF THE INFLUENCE OF MODIFICATION OF CARBON COMPOUND POWDER COMPOSITES ON THE MECHANICAL PROPERTIES OF MAGNESIUM ALLOYS

Davidchuk N.K., Gadzyra N.F., Tymoshenko Y.G., Pinchuk N.O.

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MAGNETIC-FRACTION COMPOSITION AND MORPHOMETRIC CHARACTERISTICS OF THE SLUDGE, OBTAINED DURING THE PROCESSING OF THE SANDSTONE BY FUNCTIONAL ELEMENTS FROM COMPOSITE DIAMOND-CONTAINING MATERIALS

Vasylchuk O.S., Maystrenko A.L., Oliinyk N.O., Ilnitska G.D., Petasyuk G.A., Vynohradova O. P., Bazaliy G.A., Zakora A.P.

N. Bakul Institute for Superhard Materials National Academy of Sciences of Ukraine

STRUCTURE AND MECHANICAL PROPERTIES OF TIN BASED NANOCOMPOSITES SINTERED AT LOW TEMPERATURE THROUGH MICROWAVE ENERGY

Yehorov I.I., Suresh K.C.⁽¹⁾, Zgalat-Lozynskyy O.B.⁽²⁾, Apurbba K.S.⁽³⁾

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⁽¹⁾ Indian Institute of Technology Roorkee

X-RAY DIFFRACTION STUDY OF CLUSTERING IN SOLID SOLUTIONS OF MULTICOMPONENT ALLOYS

Vasylkivska M. A., Kartuzov V. V., Krapivka N. A., Rozhenko N. M., Timofeeva I. I.

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EFFECT OF MoO₃ AND TiO₂ PARTICAL SIZE ON THE PHASE COMPOSITION AND DENSITY DYSPROSIUM TITANATE PELLETS

Chernov I.O.⁽¹⁾, Belash M.M.⁽¹⁾, Romankov V.O.⁽¹⁾, Slabospitskaya O.O.⁽¹⁾, Kolodiy I.V.⁽²⁾, Kalchenko O.S.⁽²⁾

⁽¹⁾“Nuclear Fuel Cycle” Science and Technology Establishment, National Science Center

⁽²⁾ Institute of Solid State Physics, Materials Science and Technologies National Science Center “Kharkov Institute of Physics and Technology”

ON THE PROSPECTS FOR THE USE OF MATERIALS FROM THE COMPOSITIONS OF REFRACTORY COMPOUNDS - SELF-FLUXING ALLOYS FOR THE PRODUCTION OF PRODUCTS FOR ROBOTS IN EXTREME CONDITIONS

Stepanchuk A. M., Tesla S. Y.

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ALLOY CERTIFICATION ZrNi_{1,2}Mn_{0,5}Cr_{0,2}V_{0,1}

An.D. Zolotarenko⁽²⁾, E.P. Rudakova⁽²⁾, Al.D. Zolotarenko⁽¹⁾, A.F. Savenko⁽²⁾, M.V. Chimbai⁽²⁾, N.A. Gavrylyuk⁽¹⁾, A.D. Zolotarenko⁽²⁾, O.Z. Galiy⁽²⁾, D.V. Schur⁽²⁾

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