



## Articles, published in the journal "Nanoindustry" in 2022

### COMPETENT OPINION

**M.G.Biryukov**

60 Years at the frontend of the development of  
STE for Russian Microelectronics ..... № 5, c. 248

### CONFERENCES, SEMINARS, EXHIBITIONS

**I.V.Yaminsky, A.I.Akhmetova**

3D Design centre: involvement young people  
in active creativity ..... № 6, c. 392

### CONTROL AND MEASUREMENTS

**A.O.Roenko (Dudnik), G.A.Armeev, E.S.Trofimchuk,**

**I.V.Yaminsky**

Portable cell for qualitative assessment of vapor  
permeability of film materials ..... № 5, c. 308

### EQUIPMENT FOR NANOINDUSTRY

**I.V.Yaminskiy, A.I.Akhmetova**

Scanning probe microscopy of bacteria: genotype  
and phenotype ..... № 1, c. 38

**B.G.Turukhano, N.Turukhano, I.A.Turukhano**

Measurement of displacement using a  
movable holographic diffraction grating in an  
interference field ..... № 1, c. 46

**A.A.Isaev, A.A.Raykov, A.V.Burmistrov, S.I.Salikov**

Conductivity of the roots type double rotor  
vacuum pump channels in the molecular gas  
flow mode ..... № 1, c. 58

**B.G.Turukhano, N.Turukhano, V.V.Korotaev, A.S.Vasiliev,**

**S.N.Khanov, O.G.Ermolenko, D.L.Konstantinov**

Analysis of the angular errors components when  
processing data by the reading head ..... № 1, c. 66

**O.V.Sinitsyna, I.V.Yaminskiy**

The power of a scanning force microscope ..... № 2, c. 140

**D.S.Shakhov, V.P.Mikhailov, A.M.Bazinenkov, M.E.Zhukov**

Vacuum two-axis movement mechanism with  
electrorheological speed control ..... № 2, c. 144

**B.G.Turukhano, N.Turukhano, S.N.Khanov, O.G.Ermolenko**

Holographic nanolength meter with slide bearing ..... № 2, c. 150

**A.Yu.Kochetkov, E.Yu.Kotlyarov, A.F.Shabarchin, E.V.Shemetova**

Concept development: design and experimental  
analysis of the heat exchanger / heat meter

operating characteristics for performing  
thermal vacuum tests at low temperature useful  
workload for spacecrafts ..... № 3-4, c. 204

**V.T.Ryabov, N.A.Djuzhev**

Study of a thermal MEMS sensor  
for gas mass flow rate ..... № 3-4, c. 216

**Yu.V.Panfilov, L.L.Kolesnik**

Micro-Contamination of nanostructures  
at manufacturing in vacuum ..... № 3-4, c. 224

**V.P.Mikhailov, A.A.Kopylov**

Research of the platform for active vibration  
isolation of the nanotechnological equipment ..... № 3-4, c. 232

**A.I.Belikov, L.L.Kolesnik, O.E.Alikhanov, V.E.Brazhnikov**

Development of a vacuum tribometric stand  
for high-temperature testing and research  
of solid-lubricating MoS<sub>2</sub> coatings ..... № 5, c. 300

**V.S.Shcherbakova, A.P.Rotar', A.M.Bazinenkov, D.A.Ivanova,  
V.P.Mikhailov**

Research of the actuators characteristics based  
on dielectric elastomers ..... № 6, c. 328

**Ye.V.Leontiev, A.S.Korotkov, Yu.A.Matveev**

Class G power amplifier  
for infocommunication systems ..... № 6, c. 368

**I.P.Li, V.I.Kapustin, A.V.Shumanov, D.V.Bychkov,  
N.E.Ledentsova, A.A.Polunina, Yu.V.Polyakov**

Influence of vacuum state on the field  
emission properties of cathode heating unit  
of magnetrons with instant readiness ..... № 6, c. 376

**A.A.Kozlov, C.G.Davydov, A.N.Dolgov, R.Kh.Yakubov**

Erosive effect of a pulsed vacuum ARC on the  
working surfaces of a small-sized spark gap ..... № 6, c. 384

**I.P.Li, V.I.Kapustin, N.E.Ledentsova, A.V.Shumanov**

Design features of three-module cathode heating  
units in the instantaneously ready magnetrons .. № 7-8, c. 434

**V.I.Kapustin, I.P.Li, A.V.Shumanov**

Electronic structure of the scandate  
cathode variants ..... № 7-8, c. 442

**B.G.Turukhano, I.A.Turukhano, Yu.M.Lavrov,**

**O.G.Ermolenko, S.N.Khanov**

Nanolength holographic encoder ..... № 7-8, c. 450

**N.I. Skripkin, A.V. Shmelev, A.I. Pronikov, I.M. Ivanov**

Complexed UHF-module with synchronized  
M-type generators ..... № 7-8, c. 458

**V.N.Reshetov, I.V.Krasnogorov, V.V.Solovyov,**

**E.V.Gladkikh, A.S.Useinov**

Equipment for instrumented nanoindentation –  
principles of operation and design features ..... № 7-8, c. 466



## NANOMATERIALS

**V.I.Lysenko**

Ceramics prepared from molybdenum oxide powder: properties and production by SPS Method ..... № 1, c. 34

**V.M.Elinson, A.S.Abolentsev, T.V.Khodyrev, P.A.Shchur**

The effect of the surface charge of electrets on the resistance to fungi of fluorocarbon polymer materials ..... № 2, c. 106

**A.S.Kolobkov**

Electroforming of synthetic fibres and their applications (Overview) ..... № 2, c. 118

**A.A.Churakova, E.M.Kayumova**

Structural features and mechanical characteristics of the Ti<sub>49.4</sub>Ni<sub>50.6</sub> alloy during thermal cycling in the range of multiple martensitic transformations ..... № 2, c. 128

**O.A.Farus**

Biodegradable film materials based on polymer hydrogels and silver nanoparticles ..... № 3-4, c. 196

**A.G.Kolesnikov, Yu.A.Kryukov, N.V.Gorbunov, A.Kh.Abduev,**

**A.Sh.Asvarov, A.K.Akhmedov, S.A.Kulikov, A.V.Churakov,**

**A.V.Shadrin**

Low temperature formation of boron carbide thin films enriched boron isotope <sup>10</sup>B ..... № 5, c. 290

**V.V.Syrrantsev**

The role of the surface structure of nanoparticles in their hardening of epoxy resin ..... № 6, c. 346

**V.I.Kapustin, I.P.Li, N.E.Kozhevnikova**

Trace impurities have synergistic effects on electronic structure of oxide-nickel cathodes ..... № 6, c. 354

**G.D.Khudododova, O.B.Kulyasova, R.K.Islamgaliev**

Strength and corrosion resistance of the UFG Mg-Zn-Ca alloy ..... № 7-8, c. 426

## NANOTECHNOLOGIES

**T.A.Smirnova, Z.S.Plieva, M.V.Zubasheva, A.I.Akhmetova, Yu.A.Smirnov, V.G.Zhukhovitsky, I.V.Yaminsky**

Structural organisation of the surface of *Bacillus cereus* spores ..... № 1, c. 8

**I.F.Khanbekov, V.P.Mikhailov**

Research of the ultrasonic activation processes of diffusion and desorption in electrovacuum devices ..... № 1, c. 20

**V.V.Zalipaev, D.Yu.Kobtsev, D.O.Zinchenko, O.V.Andreeva**

Structure characterisation of nanoporous silicate matrices by optical methods ..... № 1, c. 28

**A.A.Trukhova, A.S.Filonov, I.V.Yaminsky**

The words and glory of probe microscopy: language will take you to Beijing ..... № 2, c. 88

**A.E.Sidorova, V.S.Bystrov, A.O.Lutsenko, D.K.Shpigun, E.V.Belova**

Method for assessment of the chirality of proteins and phenylalanine nanotubes as an effective tool of nanobioengineering ..... № 2, c. 96

**I.V.Yaminsky, A.I.Akhmetova, T.O.Sovetnikov,**

**M.A.Tikhomirova, Shuang Yang**

Scanning capillary microscopy: tumour cells visualisation ..... № 3-4, c. 168

**I.V.Yaminsky, A.I.Akhmetova, D.V.Kornilov**

Fashion for the flirt mode ..... № 3-4, c. 178

**V.A.Kazakov, A.V.Smirnov, A.V.Kokshina,**

**E.S.Tyunterov, V.S.Abrukov, D.A.Anufrieva**

Synthesis and study of the hybrid metal-carbon systems optical properties: linear-chain carbon films doped with silver ..... № 3-4, c. 186

**M.V.Zubasheva, A.I.Akhmetova, T.A.Smirnova,**

**N.V.Shevlyagina, Yu.A.Smirnov, V.G.Zhukhovitsky, I.V.Yaminsky**

Crystal formation in bacterial cells of *Brevibacillus laterosporus* ..... № 5, c. 254

**G.V.Stepanov, E.Yu.Kramarenko, P.A.Storozhenko**

Magnetodeformation effect and vacuum sealing with a magnetoactive elastomer ..... № 5, c. 266

**O.P.Posnansky**

Method of renormalization of the random three-component system: dynamic characteristics of the effective susceptibility function ..... № 5, c. 272

**I.V.Yaminsky, A.I.Akhmetova**

Probe microscopy workshop at the physical department of Lomonosov Moscow State university ... № 6, c. 328

**E.V.Gladkikh, K.S.Kravchuk, V.N.Reshetov, A.A.Rusakov,**

**A.S.Useinov**

Simulation of the indentation of EUROFER97 steel after ion radiation by the finite element method ..... № 6, c. 336

**I.V.Yaminsky**

High-speed scanning probe microscopy: electronics and software issues ..... № 7-8, c. 408

**I.V.Yaminsky, A.I.Akhmetova, N.E.Maksimova, A.P.Melnikov,**

**A.F.Akhkiamova, D.A.Ivanov**

Measurement of the structure and thermophysical characteristics of the samples by combined atomic force microscopy and nanocalorimetry ..... № 7-8, c. 418