

NANOSCIENCE AND TECHNOLOGY

AN INTERNATIONAL JOURNAL

CONTENTS, VOLUME 11, 2020

Page Range of Issues – Issue 1: 1–98; Issue 2: 99–194; Issue 3: 195–282; Issue 4: 283–373

ISSUE 1

Distinctive Features of the Diffusion Reaction in the Transition Zone between Titanium Nickelide Substrate and Silicon Coating under Electron Flux Action <i>A.I. Shveykin & P.V. Trusov</i>	1
Effect of Intense Mechanical Vibration of Ultrasonic Frequency on Thermal Unstable Low-Temperature Plasma <i>S.I. Koshoridze & Yu.K. Levin</i>	15
Adsorption and Diffusion of Benzylpenicillin in Nanoporous Silicon <i>K.P. Zolinkov, A.V. Korchuganov, A.A. Tsukanov, & A.I. Lotkov</i>	23
Stresses in the Vicinity of the Reaction Cell during the Synthesis of a Composite of Nonequilibrium Composition <i>M.A. Anisimova & A.G. Knyazeva</i>	37
Influence of Intermolecular Interaction Force on the Jump Magnitude of the Atomic Force Microscope Probe during Indentation of Soft Material <i>A.L. Svistkov & R.I. Izumov</i>	55
A Review on Recent Advancements in the Hemodynamics of Nano-Drug Delivery Systems <i>J. Tripathi, B. Vasu, A. Dubey, R.S.R. Gorla, P.V.S.N. Murthy, O. Anwar Bég, & P. Saikrishnan</i>	73

ISSUE 2

Eshelby Integral Formulas in Second Gradient Elasticity <i>Y. Solyaev & S. Lurie</i>	99
The Effect of Niobium on Microstructure and Mechanical Properties of Austenitic CrNi Steel Produced by Wire-Feed Electron Beam Additive Manufacturing <i>M.Yu. Panchenko, E.G. Astafurova, V.A. Moskvina, G.G. Maier, S.V. Astafurov, E.V. Melnikov, K.A. Reunova, V.E. Rubtsov, & E.A. Kolubaev</i>	109
Investigation of Shrinkage Related Leakage in CI Sand Casting — Study and Control Using Simulation and Experimental Validation <i>S. Singh, R. Khanna, & N. Sharma</i>	119
Computation of Gold–Water Nanofluid Natural Convection in a Three-Dimensional Tilted Prismatic Solar Enclosure with Aspect Ratio and Volume Fraction Effects <i>S. Kuharat, O. Anwar Bég, A. Kadir, B. Vasu, T.A. Bég, & W.S. Jouri</i>	141
Chemically Reacting Flow of Water- and Kerosene-Based Nanofluid in a Porous Channel with Stretching Walls <i>I. Ahmad, A. Abbasi, W. Farooq, & M. Ahmad</i>	169

ISSUE 3

Regularities of Structural Changes after Friction Stir Processing in Materials Obtained by the Additive Method	195
--	-----

<i>A.V. Gusarova, A.V. Chumaevskii, K.S. Osipovich, K.N. Kalashnikov, & T.A. Kalashnikova</i>	
Effect of Surface Tension on the Lifetime of Bulk Nanobubbles S.I. Koshoridze	207
Properties and Microstructure of AlSi10Mg Samples Obtained by Selective Laser Melting A.V. Babaytsev, A.A. Orekhov, & L.N. Rabinskii	213
Analysis of Fluid Flow and Entropy Generation of a MHD Nanofluid through a Vertical Channel with Deformable Porous Medium V.M.K. Uppuluri, S. Sreenadh, & G.G. Krishna	223
Comparative Investigation of Nickel-Based Metal-Ceramic Structures with Ceramic Particles of Tungsten and Boron Carbides Made by the Selective Laser Melting Method A.A. Golyshev & A.A. Filippov	247
Strength Characteristics of Hypereutectic Silumin after Electron Beam Modification M.E. Rygina, Yu.F. Ivanov, E.A. Petrikova, A.D. Teresov, & A.N. Prudnikov	259
Influence of Unit Cell Parameters of Tetrachiral Mechanical MetaMaterial on Its Effective Properties L.R. Akhmetshin & I.Yu. Smolin	265
Conditions for the Creation of High-Modulus Polymeric/Carbon Nanotubes Nanocomposites G. V. Kozlov, I.V. Dolbin, Yu.N. Karnet, & A.N. Vlasov	275

ISSUE 4

Effect of Boron Carbide Concentration on the Microstructure and Mechanical Properties of the Ti-6Al-4V Titanium Alloy Produced by Selective Laser Melting A.A. Filippov & A.A. Golyshev	283
Entropy Generation in Magnetohydrodynamic Radiative Non-Newtonian Dissipative Convection Flow from an Inclined Plane: Numerical Study B.Md. Hidayathulla Khan, S.A. Gaffar, K. Ur-Rehman, & O.A. Beg	297
Diffusion Model of Drug Nanopore Filling A.G. Knyazeva	327
A Review of Lattice Boltzmann Method Computational for Micro-and Nanoregime Applications G. Narendran, D.A. Perumal, & N. Gnanasekeran	343
Index, Volume 11, 2020	375

NANOSCIENCE AND TECHNOLOGY

AN INTERNATIONAL JOURNAL

AUTHOR INDEX, VOLUME 10, 2019

Page Range of Issues – Issue 1: 1–98; Issue 2: 99–194; Issue 3: 195–282; Issue 4: 283–373

- | | | |
|----------------------------------|-------------------------------|--------------------------|
| Abbasi, A., 169 | Izyumov, R.I., 55 | Perumal, D.A., 343 |
| Ahmad, I., 169 | Jouri, W.S., 141 | Petrikova, E.A., 259 |
| Ahmad, M., 169 | Kadir, A., 141 | Prudnikov, A.N., 259 |
| Akhmetshin, L.R., 265 | Kalashnikov, K.N., 195 | Rabinskiy, L.N., 15, 213 |
| Anisimova, M.A., 37 | Kalashnikova, T.A., 195 | Reunova, K.A., 109 |
| Astafurov, S.V., 109 | Karnet, Yu.N., 275 | Rubtsov, V.E., 109 |
| Astafurova, E.G., 109 | Khanna, R., 119 | Rygina, M.E., 259 |
| Babaytsev, A.V., 213 | Knyazeva, A.G., 1, 37,
327 | S. Kuharat, S., 141 |
| Bég, O.A., 73,141, 297 | Kolubaev, E.A., 109 | Saikrishnan, P., 73 |
| Bég, T.A., 141 | Korchuganov, A.V., 23 | Sharma, N., 119 |
| Bulychev, N.A., 15 | Koshoridze, S.I., 207 | Singh, S., 119 |
| Chumaevskii, A.V., 195 | Kozlov, G.V., 275 | Smolin, I.Yu., 265 |
| Dolbin, I.V., 275 | Krishna, G.G., 223 | Solyaev, Y., 99 |
| Dubey, A., 73 | Kryukova, O.N., 1 | Sreenadh, S., 223 |
| Farooq, W., 169 | Lotkov, A.I., 23 | Svistkov. A.L., 55 |
| Filippov, A.A., 247, 283 | Lurie, S., 99 | Teresov, A.D., 259 |
| G. Narendra, G., 343 | Maier, G.G., 109 | Tripathi, J., 73 |
| Gaffar, S.A., 297 | Maslov, A.L., 1 | Tsukanov, A.A., 23 |
| Gnanasekeran, N., 343 | Melnikov, E.V., 109 | Tushavina, O.V., 15 |
| Golyshев, A.A., 247, 283 | Moskvina, V.A., 109 | Uppuluri, V.M.K., 223 |
| Gorla, R.S.R., 73 | Murthy, P.V.S.N., 73 | Ur-Rehman, K.,
297 |
| Gusarova, A.V., 195 | Orekhov, A.A., 213 | Vasu, B., 73,141 |
| Hidayathulla Khan, B.Md.,
297 | Osipovich, K.S., 195 | Vlasov, A.N., 275 |
| Ivanov, Yu.F., 259 | Panchenko, M.Yu., 109 | Zolinkov, K.P., 23 |

NANOSCIENCE AND TECHNOLOGY

AN INTERNATIONAL JOURNAL

SUBJECT INDEX, VOLUME 10, 2019

Page Range of Issues – Issue 1: 1–98; Issue 2: 99–194; Issue 3: 195–282; Issue 4: 283–373

- austenite, 109
additive, 259
adsorption, 23
adsorption, 327
aluminum alloys, 213
aluminum, 259
arterial lumen, 73
aspect ratio, 141
atomic force microscopy, 55
Bejan number, 298
blood flow, 73
boron carbide B4C, 247
boron carbide, 283
bulk nanobubbles, 207
carbon nanotubes, 275
cardiovascular diseases, 73
cermets, 283
channel flow, 169
chemical reaction, 169
chiral structure, 265
composite, 37
concentration distribution, 327
deformable porous medium, 223
density distribution, 23
diffusion, 1, 327
dilute aqueous nanofluid, 141
discharge, 15
drug delivery system, 73
drug release, 23
effective properties, 37
elasticity modulus, 275
electron probe microanalysis, 213
electron-beam additive manufacturing, 195
entropy generation number, 298
entropy generation, 223
Eshelby's integral formulas, 99
finite volume method, 141
finite-element method, 265
flow boiling, 343
fractal dimensionality, 275
friction stir processing, 195
gating and feeding system, 119
gold nanoparticles, 141
green sand casting, 119
hardening, 259
Hartmann number, 298
high-modulus nanocomposite, 275
hybrid technologies, 195
inclination, 141
isotherms, 141
Keller box method, 169
Knudsen number, 343
Langevin dynamics, 23
laser melting of powder, 213
lattice Boltzmann method, 343
leakage, 119
MAGMAS simulation, 119
magnetohydrodynamics, 298
mechanical engineering, 259
mechanical properties, 195, 283
mechanical testing, 213
metal matrix composites, 247
MHD flow, 223
micrograins, 1
microstructure, 109, 213
mixture rule, 275
molecular dynamics, 23
moving boundaries, 37
nanobubble lifetime, 207
nanofluid, 169, 223
nanofluids, 343
nanograins, 1
nanoinclusions, 99
nanoindentation, 55
nanomagnetic drug delivery, 73
nanomedicine, 73
nanoparticles, 15, 73
nanopore, 327
natural convection, 343
NiCrBSi, 247
niobium, 109
nitic stainless steel, 265
numerical modeling, 1
numerical simulation, 1
Nusselt number, 141
optimization, 119
percolation theory, 275
plasma, 15
polymetallic materials, 195
prismatic direct absorber solar collector, 141
probe jump, 55
properties, 259
reaction cell, 37
reaction kinetics, 1
rotation, 265
second gradient elasticity, 99
selective laser melting, 247, 283
self-diffusion coefficients, 23
shrinkage porosity, 119
silicon, 1, 259
size effect, 23
strain gradient effects, 99
strains, 37
streamlines, 141
stresses, 37
stretching walls, 169
structural-phase state, 195
structure, 259, 275
structure-property relation, 265

surface tension forces, 55
surface, 259
technologies, 259
thermal buoyancy, 141
thermal conductivity, 11
thermal convection, 29

Ti–6Al–4V, 28
titanium nickelide, 1
Tolman length, 207
transient layer, 3
transition zone, 265
tungsten carbide WC, 247
ultrasound, 1
uniaxial deformation, 265

vibrations, 15
viscoelastic fluid, 298
volume fraction, 141
wire-feed electron beam additive manufacturing, 109
 δ -ferrite, 109