

NANOSISTEMI, NANOMATERIALI, NANOTEHNOLOGII

FOUNDED IN OCTOBER, 2003

Volume 18, Issue 3 (2020)

CONTENTS

Editorial Announcements	Information for Subscribers Information for Contributors Publication Ethics	X XIII XVI
Structure and Properties of Nanoscale Materials	The Change in the Biochemical Parameters of the Rat Blood after Skeletal Muscle Injury with C ₆₀ Fullerene Injection <i>D. M. NOZDRENKO, T. Yu. MATVIENKO, O. V. VYGOVSKA, K. I. BOGUTSKA, P. Yu. DROZD, and Yu. I. PRYLUTSKYY</i> Chalcone Calix[4]arenas Are Supramolecular Compounds, Which Modulate the Electron-Transport Chain of Smooth Muscle Mitochondria <i>Yu. V. DANYLOVYCH, H. V. DANYLOVYCH, O. A. YESYPENKO, V. I. KAL'CHENKO, and S. O. KOSTERIN</i> Calix[4]arenas C-107 and C-90 Are Embedded in the Lipid Bilayer of Plasma Membranes and Change Their Structure <i>T. O. VEKLICH, O. A. SHKRABAK, R. V. RODIK, V. I. KAL'CHENKO, and S. O. KOSTERIN</i>	449 459 465
	Calix[4]arene Chalcone Amides as Effectors of Mitochondria Membrane Polarization <i>S. G. SHLYKOV, A. V. SYLENKO, L. G. BABICH, S. O. KARAKHIM, O. Yu. CHUNIKHIN, O. A. YESYPENKO, V. I. KAL'CHENKO, and S. O. KOSTERIN</i> Antitumor Efficiency of Hybrid Nanocomplexes Depends on the Time of Their Interaction with Ehrlich Carcinoma Cells <i>A. M. GOLTSEV, Yu. V. MALYUKIN, N. M. BABENKO, Yu. O. GAEVSKA, M. O. BONDAROVICH, M. V. OSTANKOV, I. F. KOVALENKO, and V. K. KLOCHKOV</i>	473 487
	Optimization by Specific Surface Area of Nanoarchitecture of Magnetosensitive Nanocomposites Such as Superparamagnetic Core–Multilevel Shell for Use	

in Oncology <i>M. V. ABRAMOV, S. P. TURANS'KA, and P. P. GORBYK</i>	505
Self-Organized Anatase-Nanotubes' Array <i>A. I. SCHURENKO, V. I. STYOPKIN, D. O. GRYNKO, and A. M. DOBROVOLSKIY</i>	529
Notes to the Centenary of Michaelis–Menten's Scheme <i>L. N. CHRISTOPHOROV</i>	541
Concentration Polarization During Langmuir–Blodgett Films' Deposition <i>M. P. BONDARENKO, V. I. KOVALCHUK, Yu. B. BORKOVSKA, E. K. ZHOLKOVSKIY, and D. VOLLHARDT</i>	551
Formation of Liquid Film on a Static Film Former <i>P. E. TROFIMENKO, M. V. NAIDA, and A. V. KHOMENKO</i>	565
Structural, Nanostructural and Biocolloidal Transformations in Marine Iron–Aluminosilicate Sediments and Their Catastrophic Manifestations <i>V. O. OLIINYK, A. V. PANKO, I. G. KOVZUN, V. A. PROKOPENKO, O. A. TSYGANOVICH, O. M. NIKIPELOVA, and I. O. AGEENKO</i>	577
Influence of Nanostructured Iron–Aluminosilicates on Catastrophic Processes on Marine Slopes and Artificial Dams <i>A. V. PANKO, I. G. KOVZUN, V. A. PROKOPENKO, O. M. NIKIPELOVA, O. A. TSYGANOVICH, V. O. OLIINYK, and K. E. PANNOVA</i>	599
Synthesis and Characterization of the System (EP– <i>n</i> -MgO) Used in Thermal Ablation Applications <i>Jafer Fahdel ODAH, Fadhil K. FARHAN, and Ahmed Abed ANBER</i>	619
Heating-Induced Photoluminescence-Tunable Carbon Dots Synthesized From <i>Aloe Vera</i> Gel <i>Elisabeth PRATIDHINA, SABARUDDIN, Riki PERDANA, Heru KUSWANTO, and Wipsar Sunu Brams DWANDARU</i>	631
Synthesis and Spectral Properties of Highly Fluorescent Nitrogen-Containing Graphene-Type Structures <i>V. M. OGENKO, L. B. KHARKOVA, O. G. YANKO, L. S. LYSIUK, A. A. ISHCHELENKO, and A. V. KULINICH</i>	639
Barrier and Superexchange Models for the Analysis of Tunnelling Current in Molecular Junctions 'Metal–Molecular Wire–Metal' <i>E. G. PETROV</i>	649
Spatially Indirect Excitons' Spectroscopy in Germanium Quantum Dots <i>S. I. POKUTNYI</i>	663
Influence of SiC Production Temperature on Its Physicochemical Characteristics <i>T. TKACHENKO, V. YEVDOKYmenko, D. KAMENSKYH, V. POVAZHNY, M. FILONENKO, V. KREMENETSKII, V. VAKHRIN, and V. KASHKOVSKY</i>	669
The Influence of Sulphur Dopants on Optical, Textural,	
ISSN 1816-5230. Nanosistemi, Nanomateriali, Nanotehnologii. 2020. Vol. 18, Iss. 3	VII

CONTENTS, Iss. 3 (Vol. 18)

Structural, and Photocatalytic Properties of Titanium Dioxide <i>M. V. SHAPOVALOVA, T. A. KHALYAVKA, N. D. SHCHERBAN, O. Y. KHYZHUN, V. V. PERMYAKOV, and S. N. SHCHERBAKOV</i>	681
Structure and Photocatalytic Properties of SnO ₂ Doped with Titanium <i>M. SAMSONENKO, S. KHALAMEIDA, V. SYDORCHUK, A. LAKHNIK, and L. KOTYNNSKA</i>	697
Influence of Structural Disorder on the Luminescence Properties of Nanosize Eu ^{2+/3+} -Doped Al ₂ O ₃ <i>O. V. KHOMENKO, I. V. BEREZOVSKA, M. I. POLETAEV, M. E. KHLEBNIKOVA, N. P. EFRYUSHINA, and V. P. DOTSENKO</i>	707
Effect of Activator Concentration on the Morphology of Thin Films of Y ₂ O ₃ :Eu Obtained by Radio-Frequency Sputtering <i>O. M. BORDUN, I. O. BORDUN, I. M. KOFLIUK, I. Yo. KUKHARSKYY, I. I. MEDVID, Zh. Ya. TSAPOVSKA, and D. S. LEONOV</i>	717
Electronic Structure of Nanoporous Zinc Oxide <i>M. V. KOVALENKO, O. V. BOVGYRA, V. Ye. DZIKOVSKYI, and R. V. BOVHYRA</i>	727
Influence of Preparation Conditions on the Electronic Structure of Nanosize Calcium Hydroxyapatite <i>N. A. KURGAN, V. L. KARBIVSKYY, L. I. KARBOVSKA, and S. S. SMOLYAK</i>	743
Electrophysical Properties of NiCo Nanostructured Composite Materials <i>O. M. LISIOVA, S. N. MAKHNO, G. M. GUNYA, and P. P. GORBYK</i>	755
Dynamics of Information Flows on Vacuum-Arc High-Entropy Nanostructured Coatings <i>A. G. SHEPELEV and O. V. NEMASHKALO</i>	767

Scientific Editor of the Issue—*V. A. Tatarenko*

Executive Managing Editor—*V. V. Lizunov*

Technical Editor—*D. S. Leonov*

Editorial-Publishing Department, G. V. Kurdyumov Institute for Metal Physics, N.A.S. of Ukraine

Editorial Office: 36 Academician Vernadsky Boulevard, UA-03142 Kyyiv, Ukraine

Telephone: +380 44 4229551, +380 44 4249042, +380 44 4241221. Fax: +380 44 4242561

E-mail: tatar@imp.kiev.ua, dsleonov@gmail.com