

## Table of Contents

**2012, Vol. 1, No3**

### Track: Thin Films

Thin Oxide Films on Copper Single Crystals: Anodic Formation and Photoelectrochemical Properties

*Vvedenskii A.V., Eliseev D.S., Grushevskaya S.N., Ganzha S.V.* ..... 03TF01

Carbon Nanotubes Doped Vanadium Oxide Thin Film

*Özkan Zayim E., Karamahmutoglu N.* ..... 03TF02

Synthesis and Characterization of CuInS<sub>2</sub> Microsphere under Controlled Reaction Conditions and Its Application in Low-Cost Solar Cell

*Salavati-Niasari M.* ..... 03TF03

Annealing Effect on the Structural, Electrical and Optical Properties of Er,Li-Codoped ZnO Films

*Aghamalyan N., Hovsepyan R.K., Kuz'min R.V., Kafadaryan E.A., Kostanyan R.B., Petrosyan S.I., Eganyan A.V., Mezdrogina M.M.* ..... 03TF04

As<sub>2</sub>S<sub>3</sub> Thin Films Synthesized in “Soft” Chemistry Conditions and Microtubules from Them

*Gulina L., Tolstoy V.P.* ..... 03TF05

Shape and Size Controlled Deposition of ZnO Thin Films: Comparative Sensitivity towards Methane Gas

*Mukherjee N., Jana S., Chakraborty H., Mondal A., Sinha A.* ..... 03TF06

Properties Of Langmuir-Blodgett films Based On Organosoluble Polyelectrolyte-Surfactant Complex And Oxazine Dye

*Seliverstova E.V., Ibrayev N.K., Kudaibergenov S.E.* ..... 03TF07

Synthesis and Characterization of ZnSe<sub>1-x</sub>Te<sub>x</sub> Alloy Thin Films Deposited by Electron Beam Technique

*Suthagar J., Suthan Kissinger J.K.* ..... 03TF08

Electrophysical Properties of Nanodimentional Pt Thin Films

*Pazukha I.M., Protsenko I.Yu., Tyschenko K.V., Shumakova N.I., Shirzadfar H.* ..... 03TF09

Electrophysical, Magnetoresistivity and Magneto-Optical Properties of Multilayer Materials Based on Nanocrystalline and Amorphous Films

*Nepijko S., Odnodvorets L.V., Pylypenko O.V., Vlasenko O.V., Saltykova A.I., Tkach O.P.* ..... 03TF10

Electrochemical Deposition of Film Materials Based on Co and Ag

*Shumakova N.I., Protsenko Z.M.* ..... 03TF11

Raman and Photoluminescence Study of ZnO Films Grown by Chemical Method

*Avramenko K.A., Romanyuk A.S., Roshina N.N., Strelchuk V.V., Kolomys O.F., Zavyalova L.V., Svechnikov S.V., Snopok B.A.* ..... 03TF12

Absorption Cross Section and Photoluminescence Lifetime of Silicon-Based Light-Emitting nc-Si-SiO <sub>x</sub> Structures	
<i>Dan'ko V.A., Shepeliavyi P.E., Michailovska K.V., Indutnyi I.Z.</i> .....	03TF13
Analysis of the Electronic and Band-Structure in As-grown and Annealed (Ga,Mn)As Epitaxial Layers	
<i>Yastrubchak O.B., Žuk J., Sadowski J., Domagala J.Z., Wosinski T.</i> .....	03TF14
Surface Diffusion and Phase Transitions in Ultrathin Films with Quasi-One-Dimensional Long-Period Structures	
<i>Zaika S.A., Naumovets A.G., Loburets A.T., Stryzheus D.V.</i> .....	03TF15
Electrical Properties of High-k Oxide in Pd/Al <sub>2</sub> O <sub>3</sub> /InGaAs Stack	
<i>Gomeniuk Yu.Y., Nazarov A.N., Monaghan S., Cherkaoui K., O'Connor E., Povey I., Djara V., Hurley P.K.</i> .....	03TF16
Ge/GaAs(100) Thin Films: Large Effect of Film Growth Rate and Thicknesses on Surface Morphology, Intrinsic Stresses and Electrical Properties	
<i>Mitin V.F., Lytvyn P.M., Kholevchuk V.V., Matveeva L.A., Mitin V.V., Kulyk O.S., Venger E.F.</i> .....	03TF17
Magnetoresistive Properties of Three-Layer Systems on the Basis of Thin Metal Films Fe and V or Ni and V	
<i>Grichanovskaya T.M., Grischuk A.S., Bibik V.V., Sheshenya L.A.</i> .....	03TF18
The Surface Properties Of The CdS, CuS, ZnS, CdSe, CuSe And ZnSe Thin Films Grown By SILAR Method	
<i>Saglam M., Özakın O., Ateş A., Güzeldir B.</i> .....	03TF19
Structural Properties of ZnO Thin Films Obtained by Chemical Bath Deposition Technique	
<i>Berestok T.O., Kurbatov D.I., Opanasyuk A.S., Danilchenko S.M., Manzhos O.P.</i> .....	03TF20
Raman Investigation on ZnS, Znse, ZnTe Thin Films Obtained by CSVS Technique	
<i>Cheong H., Nam D., Opanasyuk A.S., Ivashchenko M.M., Kurbatov D.I., Kolesnyk M.M., Klymov O.V.</i> .....	03TF21
Magneto-optical Properties of Spin-Valve Systems on the Basis of Au/Fe/Au/Co/Si	
<i>Fedchenko O.V., Protsenko S.I., Demydenko M.G., Wegierek P.</i> .....	03TF22
Substructural Features of Zn1-xMnxTe Solid Solution Thin Films	
<i>Klymov O.V., Kurbatov D.I., Opanasyuk A.S., Danilchenko S.M., Khlyap H.M.</i> .....	03TF23
<b>Track: Consolidated Nanomaterials and Nanocomposites</b>	
Phase Transition and Functional Characteristics of Shape Memory Alloys	
<i>Adiguzel O.</i> .....	03CNN01
Polymer-assisted Synthesis, Structure and Properties of Metal Nanocomposites	
<i>Dzhardimalieva G.I., Pomogailo A.D.</i> .....	03CNN02
Synthesis and Structure of Intercalated Organo-inorganic Nanocomposites	
<i>Pomogailo A.D.</i> .....	03CNN03

The Influence of Stabilizing Impurities and Annealing on the Structure and Mechanical Properties of Partially Stabilized Zirconia

*Milovich F.O., Tabachkova N., Bublik V., Osiko V., Lomonova E., Borik M., Kulebyakin A., Myzina V.* ..... 03CNN04

Spark Plasma and Rate Controlled Sintering of High-Melting Point Nanocomposites

*Zgalat-Lozynskyy O., Herrmann M., Ragulya A.* ..... 03CNN05

Nanocomposites TiN –TiB<sub>2</sub>, TiN – Si<sub>3</sub>N<sub>4</sub> Consolidated by Electric Discharge Technology

*Zamula M., Ragulya A.V., Zgalat-Lozynskyy O.B., Kolesnichenko V.G., Deravyanko O.V., Butenko O.O.* ..... 03CNN06

Wear-Resistant TiN - Si3N4 Nanocomposites Consolidated by Electric Discharge Sintering

*Kolesnichenko V.G., Ragulya A.V., Varchenko V.T., Zgalat-Lozynskyy O.B., Herrmann M.* ..... 03CNN07

Elaboration of Nanocomposites Based on Poly (Ethyl Methacrylate-co-Acrylonitrile) by In Situ Polymerization Using an Algerian Bentonite. Thermal Stability and Kinetic Study

*Djadoun S., Kadi S.* ..... 03CNN08

Migration of Frenkel Excitons in PIC J-Aggregates

*Fylymonova I., Malyukin Yu.V., Sorokin A.V.* ..... 03CNN09

Porous Silicon Templates with High Aspect Ratio for Nanocomposites Formation

*Redko S.V., Chubenko E.B., Klyshko A.A.* ..... 03CNN10

Structure and Properties of Ceramics Based on ZrO<sub>2</sub>, Synthesis by Solvothermal Method

*Ivanisenko V.V., Sirota V.V.* ..... 03CNN11

Formation of Nanocrystalline Solid Solution in Al-Fe-V-Si Alloys by Mechanical Alloying

*Enayati M.H., Ashrafi H., Emadi R.* ..... 03CNN12

Nanocomposites Based on an Algerian Bentonite and Poly(Methyl Methacrylate-co-4-Vinyl pyridine) Initiated by ni(ii)α-Benzoinoxime Complex

*Djadoun A., Ouaad K., Djadoun S.* ..... 03CNN13

Investigation of Heat Transfer in Nanocomposite Structures “PS-liquid” Using Photoacoustic Method

*Tytarenko A.I., Andrusenko D.A., Isaiev M.V., Burbelo R.M.* ..... 03CNN14

Structural Evolutions of Nanostructured CoAl Intermetallic Compound during Mechanical Alloying and Subsequent Heat Treatment

*Karimzadeh F., Hosseini S.N., Enayati M.H.* ..... 03CNN15

Investigation of Manufacturing Parameters on the Mechanical Properties of PM Magnesium Matrix ODS Nanocomposite by Artificial Neural Networks

*Amirjan M., Khorsand H., Abdoos H.* ..... 03CNN16

Study of Catalytic Activity of the New Nanohybrid Material Based on Gold Nanoparticles and 1,4-bis(Terpyridine-4'-yl)Benzene

*Manzheliy E.A., Zyk N.V., Majouga A.G., Beloglazkina E.K., Golubina E.V.* ..... 03CNN17

Fluorescent Few-Atom Clusters of Silver Formed in Organic Solvents on Polymeric Supports

*Kanyuk M., Demchenko A.P., Díez I., Ras R.H. A.* ..... 03CNN18

Electro-Conductive Composites Based on Metal Oxides and Carbon Nanostructures

*Volodin A.A., Tarasov B.P., Belmesov A.A., Gerasimova E.V., Zolotarenko A.D., Shchur D.V.* ..... 03CNN19

Effect of Nano-Al<sub>3</sub>Mg<sub>2</sub> Addition on the Microstructure of PEEK Nanocomposite Bulk Samples Consolidated from Mechanically Milled Powders

*Zolriasatein A., Shokuhfar A., Alzamani M.* ..... 03CNN20

**Track: Properties and Characterizations of Surfaces and Interfaces**

Kinetic Properties of the First Order Ridges in Zn

*Sursaeva V.G.* ..... 03PCSI01

Emulsion-Liquid-Membrane Extraction of Alkali Metals by Nano-baskets

*Mokhtari B., Pourabdollah K.* ..... 03PCSI02

Study of the Structure Effect on Water Adsorption by a Group of Nano Copper Clusters

*Oftadeh M., Totonkooban M., Farzi N.* ..... 03PCSI03

Characterization of nanomaterials in liquid phase for nanotoxicological assessment

*Kato H.* ..... 03PCSI04

Electrical Properties of Al/p-Si Structures with Colchicine Organic Thin Film

*Gullu O., Ruzgar S., Asubay S., Ozerden E., Kilicoglu T., Turut A.* ..... 03PCSI05

Mechanical Properties of Nano- and Submicrocrystalline Iron Subjected to Severe Plastic Deformation by Friction

*Yurkova A.I., Byakova A.V.* ..... 03PCSI06

The Wear Resistance of the Nanocomposite Coatings Obtained by the Cumulative-Detonation Device

*Tyurin Yu.N., Arseenko M.Yu., Prozorova M.S., Kolisnichenko O.V., Kovaleva M.G.* ..... 03PCSI07

Laser Ultrasound Methods for Investigation of Thermal Properties of Semiconductors Plate with Modified Surface Layer

*Isaiev M.V., Kuzmich A.G., Burbelo R.M.* ..... 03PCSI08

Use of Vibrational Spectroscopic Techniques for the Characterization of Structured Particles for Chemical Robots

*Prokopec V., Štěpánek F., Čejková J., Singh M., Matějka P.* ..... 03PCSI09

Laser Raman-Spectroscopy of Phase Transformation in the Near Surface of GaP

*Gotoshia S.V., Gotoshia L.V.* ..... 03PCSI10

Investigation of Interaction Hydrogen Sulfide with (5,0) and (5,5) Single-Wall Carbon Nano-tubes by DFT Method

*Oftadeh M., Gholamian M., Abdallah H.H.* ..... 03PCSI11

Influence of Synthesis Conditions on the Structure and the Surface State of Zirconia Nanoparticles

*Peshcherova N.A., Konstantinova T.E., Dmitruk A.F., Gorban' O.A., Nosolev I.K., Volkova G.K., Gorban S.V.* ..... 03PCSI12

Oxygen Behavior Around Heavily Doped Ultra-Shallow Junction in Si

*Oberemok O.S., Gudymenko O.Yo., Lytovchenko V.G., Melnyuk V.P.* ..... 03PCSI13

Examination of Thermally Induced Deformations of Composite System "Porous Silicon – Liquid"

*Kuzmich A.G., Andrusenko D.A., Tesel'ko P.A., Isaiev M.V., Burbelo R.M.* ..... 03PCSI14

Method for Characterization of Nano-Films Mechanical Properties

*Pogorelov A.E., Filatov A.V.* ..... 03PCSI15

Diesters of Pyromellitic Acid – New Amphiphilic Surfactants

*Khomenko O.I., Budishevska O.G., Voronov S.A., Varvarenko S.M., Voronov A.S.* ..... 03PCSI16

Adsorption Study of Cyanate Ion on the Single-Wall BC<sub>2</sub>N Nanotubes: a Computational Study

*Baei M.T., Torabi P.* ..... 03PCSI17

Electric Field Effect in CO Adsorption on the (6,0) Zigzag Single-Walled Aluminum Nitride Nanotube: an Ideal Method for CO Adsorption

*Torabi P., Baei M.T.* ..... 03PCSI18

First-Principles Quantum Molecular Dynamics Study of Ti<sub>x</sub>Zr<sub>1-x</sub>N(111)/SiN<sub>y</sub> Heterostructures

*Ivashchenko V., Veprek S., Pogrebnjak A.D.* ..... 03PCSI19

Local Molecular Structures Induced by Water Adsorption/Desorption in Smectite Minerals

*Sato K.* ..... 03PCSI20

**Track: Advances in Equipment and Technologies**

Invalidity of Molecular Dynamics in Heat Transfer

*Prevenslik T.* ..... 03AET01

Liquid-Liquid Microextraction of Vanadyl Porphyrins by Nano-baskets

*Mokhtari B., Pourabdollah K.* ..... 03AET02

Liquid-Liquid Microextraction of Tetrahedral Oxoanions by Nano-baskets

*Mokhtari B., Pourabdollah K.* ..... 03AET03

Nanostructures of Polyaniline with Organic and Inorganic Dopants for Sensing of Ammonia

*Kargupta K., Banerjee D., Chatterjee K., Ganguly S.* ..... 03AET04

Micro- and Nanocapillary Structures Based on Dielectric Materials to Focus the Ion Beams

*Komarov F., Kamyshan A., Grishin P.* ..... 03AET05

Method and Experimental Setup for the Study of the Local Current Distribution in Conducting Micro-and Nanostructures

*Pokrovskiy S., Rudnev I., Podlivaev A., Osipov M.* .....03AET06

Experimental Investigations of Hydrogen Purification by Purging through Metal Hydride

*Blinov D.V., Malyshenko S.P., Borzenko V.I., Dunikov D.O.* .....03AET07

Equipment for Measurement of Hydrogen Desorption Isotherms of Different Scale Samples

*Romanov I.A., Malyshenko S.P.* .....03AET08

Super Heavy Nano Reinforcing Concrete

*Smolikov A.V., Pavlenko V.I., Beresnev V.M., Kolesnikov D.A., Solokcha A.S.* .....03AET09