List of Accepted abstracts for Poster Session of NATO Advanced Research Workshop "Functional Nanomaterials and Devices for Electronics, Sensors, Energy Harvesting

#

1 **The device-technological simulation of local 3D SOI-structures**
I.T. Kogut, V.I. Holota, A.O. Druzhinin[*], V.V. Dovhij
Precarpathian National University, Ivano-Frankivsk, Ukraine
[*]Lviv Polytechnic National University, Ukraine

2 **Physical topological aspects of modeling gallium arsenide super beta transistors on heterostructures for speed integrated circuit of computer systems.**
S.P. Novosyadly, L.V. Melnyk
Vasyl Stefanyk Precarpathian National University, Ivano-Frankivsk, Ukraine

3 **Aqueous nanoparticle colloids for sensing and bio-imaging applications synthesized using high energy ball milling technique**
O. Zribi, Y. Garbovskiy, A. Glushchenko
Department of Physics and Energy Science, University of Colorado Colorado Springs

4 **A simple dual chemosensor for recognition of Cu^{+2} and sulfide in aquous solution**
Awad Said[a,b], Nikolai Georgiev[a], Vladimir Bojinov[a]
[a]Department of Organic synthesis, University of Chemical Technology and Metallurgy, Sofia, Bulgaria
[b]Department of Chemistry, Faculty of Science. Assiut University, Assiut, Egypt

5 **CdS Nanowire Arrays with Hyper-Branched Morphology for Photovoltaic and Sensory Applications**
D.O. Galaktionov[1], D.O. Grynko[2], O.M. Fedoryak[2], O.L. Kukla[2], T.P. Doroshenko[2] and O.P. Dimitriev[2]
[1]Taras Shevchenko National University, Kyiv, Ukraine
[2]V. Lashkaryov Institute of Semiconductor Physics, NAS of Ukraine, Kyiv, Ukraine

6 **Memristor Effect in Sandwich-type Ni-TiO_x-p/Si-Ni Heterojunction**
O.M. Kostiukevych[*], V.A. Skryshevsky[**], V.V. Lendiel[*], Yu.G. Shulimov[**], A.I. Manilov[**], O.Ye. Lushkin[*]
[*]Faculty of Radiophysics Electronics and Computer Systems, Taras Shevchenko National University of Kyiv, Kyiv, Ukraine
[**]Institute of High Technologies, Taras Shevchenko National University of Kyiv, Kyiv, Ukraine

7 **Capacitive Properties of MIS Structures with SiO_x and $Si_xO_yN_z$ Films Containing Si Nanoclusters**
A.A. Evtukh[1], O.L. Bratus'[1], V.V. Ilchenko[2], V.V. Marin[2], I.S. Vasyliev[2]
[1]V. Lashkaryov Institute of Semiconductor Physics, NAS of Ukraine, Kyiv, Ukraine
[2]Taras Shevchenko Kyiv National University, Institute of High Technologies, Kyiv, Ukraine

8 **The charge trapping and temperature assisted retention of single and double layered Si nanocrystalline NVMs**
V.A. Ievtukh, A.N. Nazarov, V.S. Lysenko
V. Lashkaryov Institute of Semiconductor Physics, NAS of Ukraine, Kyiv, Ukraine

9 **Nano-indentation investigations of $(As_2Se_3)_{1-x}$: Sn_x and $(As_4S_3Se_3)_{1-x}$: Sn_x glasses**
D. Harea, E. Harea, O. Iaseniuc, M. Iovu
Institute of Applied Physics, Academy of Sciences of Moldova, Chisinau, R. Moldova

10 **Solar Cells Based on Micro- and Nanotextured Silicon**
A.A. Druzhinin, V.Yu. Yerokhov, S.I. Nichkalo, Ye.I. Berezhanskyi
Lviv Polytechnic National University, Lviv, Ukraine

11 **Electron Transport through Thin SiO_2 Films Containing Si Nanoclusters**
A.Yu. Kizjak, A.A. Evtukh, O.V. Steblova, Yu.M. Pedchenko
V. Lashkaryov Institute of Semiconductor Physics, NAS of Ukraine, Kyiv, Ukraine

12 **Oxidation of PbTe by different methods**
S.V. Fadeyev[1], M. Trzyna[2], N. Berchenko[2]
[1]*Lviv Polytechnic National University, Lviv, Ukraine*
[2]*Centre of Microelectronics and Nanotechnology, Rzeszow University, Rzeszow, Poland*

13 **The character of temperature changes of the physical properties of the surface layer of InAs quantum dots in GaAs matrix**
S.K. Guba[*], V.N. Yuzevich[*+]
[*]*Lviv Polytechnic National University, Lviv, Ukraine*

14 **Current-voltage characteristics of the film materials**
O.V. Vlasenko, D.V. Poduremne, L.V. Odnodvorets, I.Yu. Protsenko
Sumy State University, Department of Applied Physics, Sumy, Ukraine

15 **Application of graphene layers for gas and liquid detections**
V.A. Skryshevsky[1], Yu.S. Milovanov[1], I.V. Gavrilchenko[1], S.I. Tiagulskyi[2], A.V. Rusavsky[2], V.S. Lysenko[2], A.N. Nazarov[2]
[1]*Institute of High Technologies, Taras Shevchenko National University of Kyiv, Kyiv, Ukraine*
[2]*V. Lashkaryov Institute of Semiconductor Physics, NAS of Ukraine, Kyiv, Ukraine*

16 **Mathematical modelling of the amplitude-frequency characteristic of graphene nanotube**
R.M. Peleshchak[1], I.R. Peleshchak[2], O.V. Kuzyk[1], O.O. Dan'kiv[1], U.B. Marikutsa[2]
[1] *Ivan Franko Drohobych State Pedagogical University, Ukraine, Drohobych*
[2] *Lviv Polytechnic National University, Ukraine, Lviv*