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Contents

- vii *Author Index*
- ix *Conference Committees*
- xv *Introduction*

SESSION 1 MICRO- AND NANOELECTRONIC MATERIALS AND FILMS I

- 9440 02 **The chemistry screening for ultra low-k dielectrics plasma etching** [9440-70]
- 9440 03 **Optically transparent fluoro-containing polyimide films with low dielectric permeability** [9440-23]
- 9440 04 **Electrical properties of ALD HfO₂ (EOT 0.47 nm)** [9440-69]
- 9440 05 **Influence of doping on the crystallization kinetics of Ge-Sb-Te thin films for phase-change memory application** [9440-79]
- 9440 06 **Investigation of transport mechanisms in Bi doped Ge₂Sb₂Te₅ thin films for phase change memory application** [9440-66]
- 9440 07 **Nanostructured chalcogenide materials for memory switching devices** [9440-7]
- 9440 08 **Electrochemical formation of Ag-Sn layers on copper plates** [9440-50]
- 9440 09 **TaN_x and Ta/graded Ta(N)/TaN multilayer diffusion barriers** [9440-59]
- 9440 0A **Surface treatment of polyimide film for metal magnetron deposition in vacuum** [9440-22]

SESSION 2 MICRO- AND NANOELECTRONIC MATERIALS AND FILMS II

- 9440 0B **Reversible and non-reversible changes in nanostructured Si in humid atmosphere** [9440-63]
- 9440 0C **Low-voltage field desorption in carbon nanotubes** [9440-60]
- 9440 0D **Study of growth kinetics of amorphous carbon nanopillars formed by PECVD** [9440-15]
- 9440 0E **Formation of gold and silver cluster arrays using vacuum-thermal evaporation on a non-heated substrate** [9440-51]
- 9440 0F **Formation of Si nanocrystals in SiO_x, SiO_x:C:H films and Si/SiO₂ multilayer nano-heterostructures by pulse laser treatments** [9440-6]

- 9440 OG **Study of hydrogen states in a-Si:H films, dehydrogenization treatments and influence of hydrogen on nanosecond pulse laser crystallization of a-Si:H** [9440-5]
- 9440 OH **New generation photoelectric converter structure optimization using nano-structured materials** [9440-55]
- 9440 OI **Different methods of forming multicomponent metal sulfide by SILAR-techniques** [9440-43]

SESSION 3 MICRO- AND NANOELECTRONIC TECHNOLOGIES AND EQUIPMENT

- 9440 OJ **Some peculiarities of the new method of a relief creating by the direct electron-beam etching of resist** [9440-17]
- 9440 OK **Formation of fast neutral beams and their using for selective etching** [9440-26]
- 9440 OL **Carbon and fluorine co-implantation for boron diffusion suppression in extremely ultra shallow junctions** [9440-68]

SESSION 4 DIAGNOSTICS AND METROLOGY

- 9440 OM **Approaches to a dies decoupling during failure analysis of the 3D package integrated circuits** [9440-78]
- 9440 ON **Electrochemical recovery of damaged bonding area during failure analysis of the modern integrated circuits** [9440-77]
- 9440 OO **Modification of cantilevers for atomic-force microscopy using the method of exposure defocused ion beam** [9440-3]

SESSION 5 PHYSICS AND TECHNOLOGY OF MICRO- AND NANODEVICES

- 9440 OP **High-temperature single-electron transistor based on a gold nanoparticle** [9440-76]
- 9440 OR **Photocurrent relaxations and gain in semiconductor nanowires** [9440-57]
- 9440 OS **Photoresponse beyond the red border of the internal photoeffect: designing problems of photon counting schemes in 10 μ m band** [9440-40]
- 9440 OT **Large scale (~25 m²) metal diffraction grating of submicron period as possible optoelectronic detector for short scalar gravitational waves** [9440-42]
- 9440 OU **Development of driving setup for micromechanical friction vacuum gauge** [9440-56]
- 9440 OV **The sensor of surface defects based on electrical impedance tomography technique** [9440-28]
- 9440 OW **Electrostatically actuated MEMS switch with resistive contact** [9440-8]

SESSION 6 MODELING AND SIMULATION I

- 9440 0X **SOI layout decomposition for double patterning lithography on high-performance computer platforms** [9440-54]
- 9440 0Y **Monte Carlo simulation of boron doping profile of fin and trench structures by plasma immersion ion implantation** [9440-72]
- 9440 0Z **Aluminum anodization process modeling approach** [9440-2]
- 9440 10 **Self-organization phenomena during electrochemical formation of nanoclusters in silicon** [9440-29]

SESSION 7 MODELING AND SIMULATION II

- 9440 11 **Unified description of I-V characteristics in field-effect and bipolar transistors based on current density continuity equation solution** [9440-34]
- 9440 12 **A simplified analytical model of merged MOS** [9440-10]
- 9440 13 **Monte Carlo simulation of hot electron transport in deep submicron SOI MOSFET** [9440-21]
- 9440 14 **Numerical modeling of functionally integrated injection lasers-modulators** [9440-18]
- 9440 15 **Iterative approach as alternative to S-matrix in modal methods** [9440-27]
- 9440 16 **Conducting media with spatial dispersion in a microwave field: eigenvalue problem for permittivity operator** [9440-38]
- 9440 17 **Simulation of devices based on carbon nanotubes and graphene** [9440-19]
- 9440 18 **Modeling and simulation of nanoelectronics devices in cognitive nanoinformatics** [9440-1]

SESSION 8 MODELING AND SIMULATION III

- 9440 19 **Radiation-induced mismatch enhancement in 65nm CMOS SRAM for space applications** [9440-36]
- 9440 1A **Estimation technique for SET-tolerance of combinational ICs** [9440-35]
- 9440 1B **Modeling of single event gate rupture in power MOSFETs under heavy ion irradiation** [9440-47]
- 9440 1C **Modeling and simulation of dose effects in bipolar analog integrated circuits** [9440-48]

SESSION 9 QUANTUM INFORMATICS

- 9440 1D **Antiferromagnetic anisotropic XXZ chain of spins $S = 1/2$ in the presence of an inhomogeneous transverse magnetic field as a basis for the multiqubit quantum register simulation** [9440-71]
- 9440 1E **Quantum discord in central spin model** [9440-44]
- 9440 1F **Quantum key distribution over 300km** [9440-45]
- 9440 1G **Quantum diamond chip under network optical control** [9440-20]
- 9440 1H **Numerical and analytical research of the impact of decoherence on quantum circuits** [9440-64]
- 9440 1I **The study of amplitude and phase relaxation impact on the quality of quantum information technologies** [9440-62]
- 9440 1J **The study of classical dynamical systems using quantum theory** [9440-73]
- 9440 1K **Root approach for estimation of statistical distributions** [9440-75]
- 9440 1L **Finite frames constructed by solving Fekete problem and accuracy of quantum tomography protocols based on them** [9440-61]
- 9440 1M **Qubit model of Jaynes-Cummings-Hubbard with phonon environment for exciton transport in light-harvesting FMO complex** [9440-46]
- 9440 1N **Biologically inspired path to quantum computer** [9440-32]

Authors

Numbers in the index correspond to the last two digits of the six-digit citation identifier (CID) article numbering system used in Proceedings of SPIE. The first four digits reflect the volume number. Base 36 numbering is employed for the last two digits and indicates the order of articles within the volume. Numbers start with 00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 0A, 0B...0Z, followed by 10-1Z, 20-2Z, etc.

Abramov, Igor I., 17
Antonenko, A. H., 0F, 0G
Antonov, Andrey A., 19
Antonov, S. P., 0O
Arzhanova, Natalia A., 10
Babich, Alexey V., 05
Baklanov, Mikhail R., 02
Balbekov, A., 1A
Bantysh, B. I., 1H, 1I
Belinsky, L. V., 1L
Belov, Alexey N., 07, 0Z
Bogdanov, Yuri I., 1H, 1I, 1J, 1K, 1L
Bogdanova, N. A., 1J, 1K
Borgardt, N. I., 0D, 0E
Borzdov, A. V., 13
Borzdov, V. M., 13
Boyko, Anton N., 0U
Bruk, M. A., 0J
Chaplygin, Yuri A., 0O
Cherkov, A. G., 0F
Chernyaev, A. P., 16
Chernyavskiy, A. Yu., 1H, 1I
Dagesyan, S. A., 0P
Danilov, I. A., 1C
Dedkova, A., 0D
Denisenko, Mark A., 14
Divochiy, A., 1F
Dolotov, Pavel S., 19
Dresvyannikov, Maxim A., 0S, 16
Dronov, A., 0H, 0I
Drosdetsky, M. G., 1C
Dubkov, S. V., 0D, 0E
Elezov, M., 1F
Emelianov, A., 0C
Emelianov, V. V., 1B
Fastovets, D. V., 1H
Galimov, A. M., 1C
Galkov, M. S., 0G
Gavrilin, I., 0H
Gavrilov, Sergey A., 07, 0B, 0I, 0Z
Gismatulin, A. A., 0F
Goltsman, G., 1F
Gorbunov, Maxim S., 19, 1A
Grishina, Y. S., 0D, 0E
Gromov, Dmitry G., 06, 0D, 0E
Holevo, A. S., 1H
Isaeva, Alina S., 0V
Iskakov, R., 03
Kalnov, V. A., 09, 0J
Kamaev, G. N., 0F, 0G
Karuzskii, Aleksandr L., 0S, 16
Kateev, Igor Yu., 1G
Kelm, E. A., 0M, 0N
Khorin, I., 09
Kirilenko, E., 0D
Kochubey, S. A., 0G
Kokin, A. A., 1D
Kokin, V. A., 1D
Kolomejtsseva, N. V., 17
Konoplev, Boris G., 14
Korobova, N., 03
Kovalyuk, V., 1F
Kovyrkin, Pavel B., 0U
Kozyukhin, Sergey A., 05, 06
Krasnoborodko, S. Yu., 0O
Kravtsova, V., 03
Krishtab, M., 02
Kudrya, V. P., 0K
Kukhtyaeva, V. R., 08
Kurochkin, V., 1F
Kurochkin, Y., 1F
Labunov, Vladimir A., 17
Lazarenko, Petr I., 06
Lazzarino, F., 02
Lebedev, Anatoly A., 19, 1C
Lisovsky, I. P., 0F
Litovchenko, Vladimir G., 0F
Lukichev, Vladimir F., 0L, 1H, 1I
Maidanchuk, I. Yu., 0F
Maishev, Yu. P., 0K
Makarчук, Vladimir, 0X
Miakonkikh, Andrey V., 0L, 0Y
Mikhailova, M. S., 08
Milovanov, R. A., 0M, 0N
Mironov, Rostislav E., 05
Mityagin, Yu. A., 16
Molchanova, A., 04
Molodtsova, G., 0M, 0N
Naumov, Victor V., 0W
Neizvestniy, Igor G., 0F
Nersesyan, Suren, 0R
Nikolaev, V., 0A
Ogryzko, Vasily, 1N
Orlikovsky, Alexander A., 1G, 1H, 1I
Orlikovsky, Nikolay A., 09, 1G
Ozhegov, R., 1F
Ozhigov, Yuri I., 1M, 1N
Pavlova, L. M., 0E

Perestoronin, Anatoly V., 0S, 16
 Petrosyan, Stepan, 0R
 Petrov, V., 0A
 Petukhov, I. N., 08
 Petukhov, V., 0C
 Popova, E., 0I
 Presnukhina, A., 0I
 Prikhodko, O., 03
 Prokaznikov, Alexander V., 10
 Prokaznikov, Michael A., 10
 Pyatilova, O., 07, 0B
 Rakitin, A., 12
 Rakitin, V., 12
 Redichev, Evgeniy N., 06
 Rezhikova, Elena V., 18
 Rogozhin, Aleksander E., 04, 09, 0J, 0L
 Romanova, I. A., 17
 Roschin, V. M., 08
 Rozanov, R., 07
 Rudakov, Valeriy I., 0L
 Rudenko, Konstantin V., 0L, 0Y
 Ryndin, Eugeny A., 0V, 14
 Safronova, N. A., 0G
 Savitskiy, A. I., 0E
 Selyukov, Roman V., 0W
 Semenihih, I. A., 1H
 Semenikhin, Igor A., 15
 Shahsenov, Izat S., 0Y
 Shakhnov, Vadim A., 18
 Shalimov, Andrei S., 0U
 Sherchenkov, Alexey A., 05, 06
 Shevchuk, S. L., 0K
 Shevyakov, Vasily I., 07, 0O, 0Z
 Shilyaeva, Yu. I., 08
 Shnaider, Alexandra I., 19
 Shtern, Maxim Y., 06
 Shtern, Yuri I., 05
 Skovoroda, Nikita A., 1M
 Smagulova, S. A., 0O
 Smirnov, K., 1F
 Soldatov, E. S., 0P
 Spirin, A. V., 0J
 Stepanov, A. S., 0P
 Streltsov, D. R., 0J
 Timoshenkov, Sergei P., 0U
 Timoshenkov, Sergey P., 06, 0A, 0B, 0C
 Trifonov, A. Y., 0E
 Tskhovrebov, Andrey M., 0S
 Tsukanov, Alexander V., 1G
 Turin, V. O., 1C
 Umersakova, M., 03
 Useinov, R. G., 1B
 Uvarov, Ilya V., 0W
 Vachtomin, Y., 1F
 Vatuev, A. S., 1B
 Verstov, Vladimir, 0X
 Vertyanov, D., 0A
 Volchkov, N. A., 16
 Volodin, V. A., 0F, 0G
 Vorobiev, Maksim I., 0Z
 V'yurkov, V. V., 13
 Yesayan, Ashkhen, 0R
 Zanuccoli, Mauro, 15
 Zebrev, Gennady I., 11, 19, 1B, 1C
 Zharik, G., 0P
 Zheleznyakova, A., 07, 0H, 0I
 Zherikhina, Larisa N., 0S
 Zhigalov, V., 0B, 0C
 Zhikharev, E. N., 0J
 Zhukov, Valery A., 0T
 Zinchenko, Lyudmila A., 0X, 18
 Zobov, Vladimir Eu., 1E
 Zotovich, A., 02
 Zubov, D. N., 0M, 0N

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9 Quantum Informatics III

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10 Materials and Films IV

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- 11 Meeting of the International Association of the Academies of Sciences
Alexander A. Orlikovsky, Institute of Physics and Technology
(Russian Federation)
- 12 Quantum Informatics IV
Sergey A. Moiseev, Kazan Physical-Technical Institute (Russian Federation)
- 13 Simulation and Modeling I
Vladimir V. Vyurkov, Institute of Physics and Technology
(Russian Federation)
- 14 Micro- and Nanoelectronics Technologies and Equipment
Alexander E. Rogozhin, Institute of Physics and Technology
(Russian Federation)
- 15 Quantum Informatics V
Eduard B. Fel'dman, Institute of Problems of Chemical Physics
(Russian Federation)
- 16 Simulation and Modeling II
Boris G. Konoplev, Institute of Nanotechnology, Electronics and Electronic
Equipment Engineering of Southern Federal University
(Russian Federation)
- 17 Metrology and Characterization
Andrey V. Miakonkikh, Institute of Physics and Technology
(Russian Federation)
- 18 Quantum Informatics VI
Farid M. Ablayev, Institute for Informatics (Russian Federation)
- 19 Simulation and Modeling III
Mikhail A. Chuev, Institute of Physics and Technology
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Introduction

The volume contains selected papers presented at the International Conference "Micro- and Nano-Electronics 2014" (ICMNE-2014) which was held in Zvenigirod, Moscow Region, Russia 6–10 October 2014. ICMNE is a biannual conference covering the main fields of micro- and nano-electronic technologies and device physics. Since 1992, the Institute of Physics and Technology (Moscow, Russian Federation) has been the permanent organizer of ICMNE, and it became an SPIE-affiliated conference in 2003.

ICMNE-2014 included an extended session, "Quantum Informatics 2014". The ICMNE-2014 scope contained such scientific and technological fields as micro- and nano-electronic materials and films; technologies and equipment; metrology, physics and technologies of micro- and nano-devices; simulation and modeling; silicon-on-insulator and low-dimensional structures; and quantum informatics. ICMNE-2014 included three plenary sessions and 19 topical sessions focusing on the following areas:

- Physics and Technology of Micro- and Nano-Devices
- Materials and Films
- Quantum Informatics
- Silicon-on-Insulator and Low-Dimensional Structures
- Simulation and Modeling
- Micro- and Nano-Electronics Technologies and Equipment
- Metrology and Characterization
- Superconducting Structures and Devices

The scientific program was based on invited and contributed papers from the scientists employed at European and Siberian Regions of Russia, Armenia, Belarus, Belgium, Germany, France, United States, and Japan. The invited lectures on the current achievements and challenges in the contemporary microelectronics were delivered by the scientists from France, Belgium, Germany, France, Japan, and Russia. The session contributions were made by academic institutions and universities, as well as from industry. About 100 contributions were oral presentations and about 80 were presented as posters.

We hope these sessions resulted in helpful discussions at the session and between attendees will promote continuing research activity in the microelectronic community. Additional information about ICMNE-2014 can be found at the conference website <http://www.icmne.ftian.ru>

Alexander A. Orlikovsky

