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Vladimir F. Lukichev
Konstantin V. Rudenko
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Contents

DEVICE MODELING AND SIMULATION

MEMS DEVICES AND SENSORS

MICRO- AND NANOELECTRIC MATERIALS AND FILMS

MICRO- AND NANOELECTRONIC TECHNOLOGIES II

QUANTUM INFORMATICS I

QUANTUM INFORMATICS II

Authors

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Plenary Session II: Quantum Informatics I
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Plenary Session III: THz Photonics
Vladimir V. Vyurkov, Valiev Institute of Physics and Technology of Russian Academy of Sciences (Russian Federation)

1 2D Materials for Nanodevices
Vladimir V. Vyurkov, Valiev Institute of Physics and Technology of Russian Academy of Sciences (Russian Federation)

2 Thin Films
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3 Quantum Informatics II
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4 Advanced Nanoelectronic Technologies
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5 Modeling and Simulation of FETs
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6 Quantum Informatics III
Yurii I. Ozhigov, Lomonosov Moscow State University (Russian Federation)

7 Nanoscale Lithography
Konstantin V. Rudenko, Valiev Institute of Physics and Technology of Russian Academy of Sciences (Russian Federation)

8 Spintronics Devices
Oleg S. Trushin, Valiev Institute of Physics and Technology of Russian Academy of Sciences, Yaroslavl Branch (Russian Federation)

9 Quantum Informatics IV
Aleksey A. Kalachev, Zavoisky Physical-Technical Institute of Russian Academy of Sciences (Russian Federation)

10 Beyond CMOS
Konstantin V. Rudenko, Valiev Institute of Physics and Technology of Russian Academy of Sciences (Russian Federation)

11 Solid State THz Electronics
Victor I. Ryzhii, Tohoku University (Japan)

12 Quantum Informatics V
Farid M. Ablayev, Kazan Federal University (Russian Federation)

13 Superconducting Devices
Vladimir F. Lukichev, Valiev Institute of Physics and Technology of Russian Academy of Sciences (Russian Federation)

Introduction

This volume contains selected papers presented at the International Conference on Micro- and Nanoelectronics 2018 (ICMNE-2018), which was held in Zvenigirod, Moscow Region (Russian Federation), 1–5 October 2018. ICMNE is a biannual conference covering the main fields of micro- and nanoelectronic technologies and device physics. Since 1992, the Valiev Institute of Physics and Technology of the Russian Academy of Sciences (Moscow, Russian Federation) has been the permanent organizer of ICMNE. SPIE has published the proceedings for ICMNE since 2003.

The ICMNE-2018 scope contained such scientific and technological fields as physics and technologies of micro- and nanodevices; simulation and modeling; MEMS physics and technology; materials and films for micro- and nanoelectronics; metrology; and quantum informatics. ICMNE-2018 included three plenary sessions, an extended Session on Quantum Informatics, and 21 topical sessions covering the following areas of focus:

- Emerging Devices
- Solid State THz Electronics and Photonics
- Beyond CMOS
- Modeling and Simulation of FETs
- Superconducting and Spintronics Devices
- Integrated Photonic Devices
- MEMS Devices
- 2D Materials and Thin Films for Micro- and Nanodevices
- Advanced Nanoelectronic Technologies
- Nanoscale Lithography
- Plasma Processing
- Metrology and Characterizatio
- Quantum Informatics.

The scientific program was based on invited and contributed papers from scientists from the European and Siberian Regions of Russian Federation, Belarus, Austria, Italy, United Kingdom, United States, and Japan. The invited lectures on current achievements and challenges in contemporary microelectronics were delivered by scientists from Austria, Italy, United Kingdom, United States, Japan, and Russian Federation. The contributions to the sessions of the conference were made by academic institutions, universities, as well as industry. More than 100 contributions were discussed as oral presentations and about 100 others were presented as posters.

We hope that helpful discussions of these works at the sessions of the conference and during personal contacts between attendees will promote research activity in the microelectronic community. Additional information about ICMNE-2018 can be found at the conference website http://www. icmne.ftian.ru

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