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**Vadim P. Veiko**

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# Contents

vii	<i>Conference Committees</i>
ix	<i>Introduction</i>

---

## SECTION 1 LASER-ASSISTED DIAGNOSTICS AND SPECTROSCOPY

---

- 6985 02 **The role of plasmon-polaritons and waveguide modes in surface modification of semiconductors by ultrashort laser pulses** [6985-01]  
G. A. Martynovskiy, G. D. Shandybina, D. S. Smirnov, St. Petersburg State Univ. of Information Technologies, Mechanics and Optics (Russia); S. V. Zaboltnov, L. A. Golovan, V. Yu. Timoshenko, P. K. Kashkarov, M.V. Lomonosov Moscow State Univ. (Russia)
- 6985 03 **Three-dimensional nanomodification with ultrafast pulse laser** [6985-02]  
Y. Shimotsuma, M. Sakakura, M. Shimizu, K. Miura, Kyoto Univ. (Japan); P. G. Kazansky, Univ. of Southampton (United Kingdom); K. Hirao, Kyoto Univ. (Japan)
- 6985 04 **Possibility of control of propagation regime in medium with cubic nonlinearity for chirped femtosecond pulse under the temporal dispersion of nonlinear response** [6985-03]  
V. A. Trofimov, A. G. Volkov, Lomonosov Moscow State Univ. (Russia)
- 6985 05 **Selective laser melting process monitoring with high speed infra-red camera and pyrometer** [6985-04]  
F. Bayle, M. Doubenskaia, Ecole Nationale d'Ingénieurs de Saint-Etienne (France)
- 6985 06 **Optical properties of the chalcogenide films for interference coatings in IR spectral range** [6985-05]  
E. N. Kotlikov, V. N. Prokashev, St. Petersburg State Univ. of Aerospace Instrumentation (Russia); A. N. Tropin, Scientific-Research Institute, Giricond (Russia)
- 6985 07 **Laser technological system for precision 3D material treatment and inspection** [6985-06]  
A. G. Verkhogliad, Technological Design Institute of Scientific Instrument Engineering (Russia)
- 6985 08 **A study of thermally stimulated reversible rearrangement of the structure and optical parameters of molecular layers and solutions: IR image visualization based on the stereoisomerization of molecular systems** [6985-07]  
L. N. Asnis, E. N. Kaliteevskaya, V. P. Krutyakova, T. K. Razumova, St. Petersburg State Univ. of Information Technologies, Mechanics and Optics (Russia); A. N. Tamovskii, Bowling Green State Univ. (USA); A. S. Tibilov, S. A. Chizhov, S.I. Vavilov State Optical Institute (Russia)

---

## SECTION 2 LASER TECHNOLOGY IN MATERIAL SCIENCES

---

- 6985 09 **Dynamics of bulk modification inside glass by femtosecond laser** [6985-08]  
M. Sakakura, M. Terazima, K. Miura, Y. Shimotsuma, K. Hirao, Kyoto Univ. (Japan)

- 6985 0A **3D transient model for CO<sub>2</sub> laser hardening** [6985-09]  
G. Tani, DIEM, Univ. of Bologna (Italy); L. Orazi, DISMIS, Univ. of Modena and Reggio Emilia (Italy); A. Fortunato, G. Campana, A. Ascari, DIEM, Univ. of Bologna (Italy)
- 6985 0B **High rate ablative formation of ultra-deep channels by self-adaptive Nd:YAG laser with dynamically adjustable passive Q-switch** [6985-10]  
T. T. Basiev, A.M. Prokhorov General Physics Institute (Russia); A. V. Fedin, V.A. Degtyarev Kovrov State Technological Academy (Russia); S. V. Garnov, A.M. Prokhorov General Physics Institute (Russia); A. V. Gavrillov, V.A. Degtyarev Kovrov State Technological Academy (Russia); S. M. Klimentov, P. A. Pivovarov, A.M. Prokhorov General Physics Institute (Russia); S. N. Smetanin, S. A. Solokhin, V.A. Degtyarev Kovrov State Technological Academy (Russia)
- 6985 0C **Waves of optical bleaching caused by continuously operated Nd:YAG laser radiation in glass-ceramics** [6985-11]  
V. Veiko, E. Shakhno, E. Yakovlev, B. Novikov, St. Petersburg State Univ. of Information Technologies, Mechanics and Optics (Russia)
- 6985 0D **Laser cleaning of metal surfaces: physical processes and applications** [6985-12]  
V. P. Veiko, T. Ju. Mutin, V. N. Smirnov, E. A. Shakhno, St. Petersburg State Univ. of Information Technologies, Mechanics and Optics (Russia); S. A. Batishche, B.I. Stepanov Physical Institute (Belarus)
- 6985 0E **Crystallization phenomenon in different glass-ceramic and glass materials under CO<sub>2</sub> laser action** [6985-13]  
V. P. Veiko, A. I. Ignatyev, N. V. Nikonorov, E. B. Yakovlev, D. V. Orlov, St. Petersburg State Univ. of Information Technologies, Mechanics and Optics (Russia)
- 6985 0F **Laser deposition of SmCo thin film on steel substrate** [6985-14]  
L. Allocca, CNR, Istituto Motori (Italy); U. Gambardella, CNR-INFM, Lab. Regionale Supermat (Italy); A. Morone, CNR, Istituto di Metodologie Inorganiche e dei Plasmi-Unità Distaccata di Potenza (Italy); M. Valentino, CNR-INFM Coherentia (Italy) and Univ. di Napoli Federico II Piazzale V. Tecchio (Italy)
- 6985 0G **Destruction of metals at solid state induced by laser** [6985-15]  
Yu. Chivel, Institute of Molecular and Atomic Physics (Belarus); M. Petrushina, United Institute of Informatics Problems (Belarus)
- 6985 0H **Nanoparticle thin films deposited by MAPLE for sensor applications** [6985-16]  
A. P. Caricato, Univ. del Salento (Italy); S. Capone, M. Epifani, M. Lomascolo, Istituto per la Microelettronica ed i Microsistemi, CNR (Italy); A. Luches, M. Martino, F. Romano, Univ. del Salento (Italy); R. Rella, P. Siciliano, J. Spadavecchia, A. Taurino, Istituto per la Microelettronica ed i Microsistemi, CNR (Italy); T. Tunno, D. Valerini, Univ. del Salento (Italy)
- 6985 0I **Laser-assisted micro sheet forming** [6985-17]  
J. Holtkamp, A. Gillner, Fraunhofer Institute for Laser Technology (Germany)
- 6985 0J **Deposition of films and layers for sensors with PLD and LIFT method** [6985-18]  
S. A. Mulencko, Y. V. Kudryavtsev, N. T. Gorbachuk, Institute for Metal Physics (Ukraine); A. Luches, A. P. Caricato, Univ. of Salento (Italy); V. P. Veiko, V. A. Chuiko, A. A. Petrov, St. Petersburg State Univ. of Information Technologies, Mechanics and Optics (Russia)

- 6985 OK **Features of kinetics of clusters formation under intensive evaporation of small solid particles by short laser pulses** [6985-19]  
G. A. Lukyanov, O. I. Simakova, N. Yu. Bykov, Ctr. for Advanced Studies (Russia)
- 6985 OL **Modeling of metal nanoclusters formation, growth, and deposition on a surface under pulsed laser ablation in a vacuum** [6985-20]  
G. A. Lukyanov, N. Yu. Bykov, L. Yu. Nikolaeva, St. Petersburg State Polytechnical Univ. (Russia)
- 6985 OM **Precision laser system based on complementary scanning principle for dielectric materials microprocessing** [6985-21]  
N. Goloshevsky, A. Aleshin, S. Baev, V. Bessmeltsev, K. Smirnov, M. Maksimov, M. Mikhailov, Institute of Automation and Electrometry (Russia)
- 6985 ON **Diffraction model of radiation scattering by a rough surface: dependence of a spatial frequency spectrum on size of roughness** [6985-22]  
V. I. Bronnikov, Joint Co. ISC Sun Energies (Russia)
- 6985 OO **Using of middle IR lasers for guided termocleavage of glass** [6985-23]  
V. K. Sysoev, Lavochkin Association (Russia); Yu. N. Bulkin, RFNC-VNIIEF (Russia); P. A. Vyatlev, Lavochkin Association (Russia); A. N. Soldatov, GY (Russia)
- 6985 OP **Laser-induced plume expansion from a silicon wafer in a wide range of ambient gas pressure** [6985-24]  
A. N. Volkov, National Univ. of Ireland, Galway (Ireland); G. A. Lukyanov, St. Petersburg Polytechnical Univ. (Russia); G. M. O'Connor, National Univ. of Ireland, Galway (Ireland)
- 6985 OQ **Laser micro sintering of SiO<sub>2</sub> with an NIR-laser** [6985-25]  
A. Streek, P. Regenfuss, T. Süß, R. Ebert, H. Exner, Hochschule Mittweida (Germany)

---

**SECTION 3 ULTRA SHORT LASER PULSES: INTERACTION WITH A MATTER AND APPLICATION IN MICRO- AND NANOTECHNOLOGIES**

---

- 6985 OR **Dynamics of shock waves generated in liquids by high-energy KrF laser** [6985-27]  
V. Zvorykin, P.N. Lebedev Physical Institute (Russia); L. Berthe, Lab. pour l'Application des Lasers de Puissance, CNRS (France); M. Boustie, Lab. de Combustion et de Détonique, CNRS, Univ. de Poitiers-ENSMA (France); A. Levchenko, N. Ustinovskii, P.N. Lebedev Physical Institute (Russia)
- 6985 OT **High-power lasers at RFNC-VNIIEF** [6985-29]  
S. G. Garanin, Russian Federal Nuclear Ctr., VNIIEF (Russia)

*Author Index*



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## Introduction

*To the memory of A. M. Bonch-Bruevich, A. Guenther, and M. N. Libenson, founders of Russian and international conferences on non-resonant laser-matter interaction.*

This volume presents selected papers of the International Conference on Fundamentals of Laser-Assisted Micro- and Nanotechnologies (FLAMN-07).

This conference continues in the new format of other well-known traditional symposiums such as Intensive Laser Actions and Technological Applications (ILATA), consisting of Laser-Assisted Microtechnologies (LAMN) and Laser-Matter Interaction (LMI) conferences which were previously organized in former Leningrad, USSR dating back to the mid '60s. Laser-assisted micro- and nanotechnology is one of the first and most rapidly growing areas of research, development and production.

This conference was devoted to the wide spectrum of laser micro- and nanoprocessing from physical fundamentals of different processes and their experimental demonstration to industrial setups and their realization. Topics covered by FLAMN-07 include theoretical and experimental aspects of laser-matter interaction applied to laser micro- and nanotechnology.

Sessions of FLAMN-07 were visited by over 300 participants including 150 speakers, with approximately 75 of them from abroad (Belarus, Canada, Czech Republic, France, Germany, Italy, Japan, Korea, Latvia, Lithuania, UK, Ukraine, USA, Uzbekistan,). Approximately 140 papers were presented including 71 oral and 70 poster presentations. This volume contains 27 selected papers.

For the convenience of the reader all papers in this volume are arranged by three sections:

Section 1: Laser Physics and Technology of Material Sciences

Section 2: Laser-assisted Diagnostics and Spectroscopy

Section 3: Ultrashort Laser Pulses Interaction with Matter and Application in Laser Micro- and Nanotechnology

The Program Committee expresses its gratitude to all the institutions and persons who contributed to organizing, supporting, and holding the conference.

My special thanks are owed to the Scientific Secretary of the FLAMN-07, Dr. V. A. Parfenov, for his efforts to bring this volume to reality.

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