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Vadim P. Veiko

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Introduction

To the memory of A. M. Bonch-Bruевич, 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.

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