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Tigran A. Vartanyan
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Introduction

This volume presents selected papers of the International Conference on "Fundamentals of Laser-Assisted Micro- and Nanotechnologies" (FLAMN-10).

This conference continues in a new format from well-known traditional symposia ILATA (Intensive Laser Actions and Technological Applications), consisting of LAMN (Laser-Assisted Microtechnologies) and LMI (Laser-Matter Interaction) conferences, originally organized in former Leningrad, USSR since the middle of the 1960's. Laser-assisted micro- and nanotechnology is one of the first and rapidly growing areas of research, development, and production.

The Conference was devoted to the wide spectrum of laser micro- and nanoprocessing from physical fundamentals of different processes and their experimental demonstration to industrial set-ups and their realization. Topics covered by FLAMN-10 include theoretical and experimental aspects of laser-matter interaction applied to laser micro- and nanotechnology.

Sessions of FLAMN-10 were attended by over 300 participants including 180 speakers, approximately 75 of them from abroad (Algeria, Australia, Belarus, Canada, China, Czech Republic, France, Germany, Hungary, Greece, Italy, Japan, Korea, Serbia, Singapore, Taiwan, United Kingdom, Ukraine, and the United States). About 185 papers were presented (75 orals, 110 posters); this volume contains 40 selected papers.

For the convenience of readers, all papers in these proceedings are arranged into seven sections:

Section 1: Laser material and thin films processing
Section 2: Control of laser material processing
Section 3: Nanotechnology
Section 4: Femtotechnology
Section 5: Laser plasma, laser-plasma deposition
Section 6: Photonics
Section 7: Laser cleaning

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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