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Introduction

Following the tradition of annual ALT (Advanced Laser Technologies) International Conferences devoted to fundamental and engineering aspects of the rapidly growing laser industrial applications, the 14th ALT Conference was held in Brasov, Romania, 8-12 September 2006. The primary aim of these conferences, organized successively in different countries [Russia (two times), Germany, Czech Republic (two times), Greece, France, Italy (two times), Switzerland, UK, China, and Romania (two times)] is to share and promote the progress achieved in laser technologies, as well as, to exchange experiences and to strengthen the collaboration between East and West research teams and individuals.

The ALT’06 was focused on recent achievements and actual problems in research and development of novel ultrafast laser sources and techniques, laser nanotechnologies, laser synthesis, structuring and processing as well as laser technologies used in medicine and biology. It was organized jointly by the National Institute for Laser, Plasma and Radiation Physics, Bucharest, the Transilvania University of Brasov, and the General Physics Institute of Russian Academy of Sciences, Moscow.

Participants were from 18 countries, not only from Russia (the traditional ALT organizing country), Romania (the host country), Finland (the next organizer of ALT’07), but also from Austria, Switzerland, Czech Republic, France, Germany, Greece, Italy, Hungary, Poland, Spain, Portugal, Canada, Singapore, UK, and USA. More than 150 attendees have participated in ALT’06, and this fact confirms once again the importance and high scientific level of this serial scientific forum.

Organization of ALT’06 was possible only through the actions and support of several domestic and international organizations. We shall mention the Department of Lasers, National Institute for Laser, Plasma and Radiation Physics, Bucharest-Magurele, the Transilvania University of Brasov, the General Physics Institute, Moscow, and the Center of Laser Technology and Material Science at GPI, Moscow. Thanks should be addressed to the cosponsoring institutions for their important advice and contributions to the success of this Conference: the Romanian Ministry of Education and Research, the SPIE Russia Chapter, Russian Ministry of Industry, Science and Technology, Russian Foundation for Basic Research, and Schaefer Italy SRL.

The ALT’06 Scientific Committee selected for presentation 117 papers. Forty invited lectures on topics of general interest were scheduled in plenary sessions, 23 papers were presented in two oral parallel sessions, while the other 56 papers were presented as posters. The editors selected 60 papers to be published, which give an overview of the newest and most important results in laser technologies and fundamentals of laser physics.
In addition to the interesting scientific program, the conference participants had also the possibility to discover part of the beautiful landscapes of Brasov, Poiana Brasov, Sinaia and Bran, and to visit Peles and “Dracula” Castles.

Perfect and efficient work of the Organizing Committees led by Prof. Corneliu Bazil Cizmas in Brasov and Dr. Vladimir I. Pustavoy in Moscow and the support from Transilvania University of Brasov were among the key factors that ensured the success of this conference. We would like to express our thanks to them, to the secretariat, and to many colleagues and persons on the various committees for their collaboration and hard work.

Our acknowledgements are also due to all of the participants for their outstanding contribution to the success of the conference. We do hope that every participant attending the ALT’06 enjoyed the scientific climate and the time spent during this event. We believe that the short time spent together provided an opportunity to renew friendships or to start new ones.

Dan C. Dumitras  
Maria Dinescu  
Vitally I. Konov