

FOREWORD

Dear readers:

By the time you receive this issue of the journal, the Third International Conference on Atomic and Molecular Pulsing Lasers (AMPL'97) held in Tomsk, September 22–26, 1997 will have been over.

The organizers of this Conference that has already become traditional are the Institute of Atmospheric Optics of the Siberian Branch of the Russian Academy of Sciences, the Institute of High-Current Electronics of the Siberian Branch of the Russian Academy of Sciences, the Tomsk State University, the Siberian Physical-Technical Institute, the Russian Division of SPIE, and the Tomsk Innovation Center in Western Siberia. The Conference is held under the auspices of the Russian Foundation for Basic Research, the Siberian Branch of the Russian Academy of Sciences, the Ministry of General Education and Vocational Training, and sponsors.

Leading scientists from Russia, USA, Germany, France, Japan, Netherlands, Bulgaria, China, Belorussia, Ukraine, Armenia, and Uzbekistan intended to take part at the Conference.

The Organizing Committee of the Conference greatly appreciates the editorial staff and the board of the journal for the opportunity to publish quickly selected papers submitted before June 1, 1997.

The following topics are covered by articles included in this thematic issue:

- *gas and plasma lasers,*
- *metal vapor lasers,*
- *physical processes in gas lasers,*
- *dye lasers and photoprocesses in complex organic molecules,*
- *laser systems and their applications.*

The issue is opened by the articles devoted to physics and technology of gas lasers (CO₂, excimer, and metal vapor lasers). Special attention is paid to methods of volume discharge formation in high-pressure gas laser media as well as to improvement of the output and operation laser parameters. Then follow the articles on investigation into photoprocesses in complex organic compounds. These compounds are considered as active media for lasers in the visible and UV regions of spectrum. Finally, the articles on laser applications are included.

Unfortunately, the volume of the journal did not allow us to publish all submitted papers. We apologize to the authors whose papers have not been published in this issue. The publication of Conference materials will be continued in the first issues of the journal Atmospheric and Oceanic Optics in 1998 and in the thematic SPIE Proceedings.

Scientific Secretary of the AMPL'97 Organizing Committee
Dr. G.S. Evtushenko