

Preface

The biennial **International Conferences on Photoacoustic and Photothermal Phenomena** (ICPPP) are widely recognized as the major venue for the dissemination of recent and significant research results in the traditional areas, as well as in new and exciting outgrowths of this interdisciplinary field. The ICPPP is concerned with the science, applications and technologies involving the optical, electron-beam or otherwise production, propagation and detection of acoustic, thermal and general diffusion-wave fields.

In the 2004 edition the conference was held in Rio de Janeiro, Brazil, and involved 14 topics covered in the scientific programme. These are *Spectroscopy, Analytical Chemistry and Photochemistry, PA and PT Imaging and Microscopy, Thermophysical Properties and Characterization of Materials, Laser Ultrasonics, Ultrafast PA and PT Phenomena, Electronic and Optical Materials, Thin Films and Devices, Non Linear Phenomena and Inverse Problem, Nanoscale Phenomena, Non Destructive Evaluation, Diffusion Waves and Applications, Industrial Applications, New Instruments and Methodology, Biological, Medical and Dental Applications, Agriculture, Food and Environmental Applications*. More than 300 short abstracts contributions were received and refereed for acceptance, from 690 authors of 28 different countries.

This volume contains the proceedings of the 13ICPPP including the 207 full papers accepted after a very careful peer review process. Their contents are very deep and modern and show the peculiar interdisciplinary nature of the area. It is provided a collection of papers which includes the traditional subjects of the area as well as new developments of the fields. The characterization of materials is occupying a great interest in the papers and many studies involving nanoscale phenomena were developed exploring the photothermal methodology. As in the previous conferences thermal wave microscopy and non-linear photothermal phenomena keep a high interest. The application of the methodology to any diffusive wave, other than the thermal one, showed significant growth. In the applications field many expressive papers are analyzing environmental, dental and medical concerns besides those involving other industrial purposes.

The Conference received financial support from various Brazilian institutions and agencies, specially the National Council for Scientific and Technological Development – CNPq and Research and Projects Financing – Brazilian innovation Agency – FINEP, and from United Nations Educational, Scientific and Cultural Organization – UNESCO, to whom the conference organizers are very grateful.

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on Photoacoustic and Photothermal Phenomena*

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