



Preface

The sixth in traditional series of biennial Euro-Mediterranean Symposium on Laser-Induced Breakdown Spectroscopy, EMSLIBS' 2011, was held in a beautiful destination for holiday renowned for its gorgeous beaches, Çeşme-Izmir, Turkey, between 11 and 15th of September 2011. EMSLIBS' 2011 was organized by the Chemistry Department of Izmir Institute of Technology, IZTECH, and supported by three industrial companies of Turkey: Tüpraş, Elginkan Foundation and Zentiva.

With more than 220 participants attending from various universities, research institutions and sponsoring companies of 40 different countries, the meeting was extended well beyond the borders of Euro-Mediterranean in such a warm and pleasant atmosphere. Student participation in the meeting was the highest among past meetings, amounting to one third of the total number of participants. 170 scientific contributions as 3 plenary lectures, 17 invited talks, 34 oral presentations and 113 high quality poster presentations related with all aspects of Laser-Induced Breakdown Spectroscopy for fundamental and application purposes were presented.

The vendor exhibition was run in parallel with the symposium and exhibition booths placed close to the auditorium and coffee break facilities provided an easy communication platform between EMSLIBS' 2011 participants and LIBS service companies. Seven laser and spectrometer manufacturing companies, 8 local distributors and service companies presented their latest innovations in Laser-Induced Breakdown Spectroscopy and related areas.

Since 2001, EMSLIBS symposia aimed to provide a platform for the presentation and discussion of the fundamentals and recent applications of the technique as well as encouraging young scientists to exchange their ideas and work. Focusing on the same goal, short courses were offered to students and all interested participants before the official opening of the symposium. Short course lecturers gave an overview of topics such as "Fundamentals and Basic Principles of LIBS Plasmas" (by Nicoló Omenetto), "Instrumentation and Recent Developments in LIBS" (by David A. Cremers) and "Data Analysis and Chemometric methods in LIBS" (by Jean-Baptiste Sirven) to more than 125 attendees.

Extensive scientific program, structured with the help of Scientific Committee Members, included a total of 13 sessions: 11 oral, 1 poster and 1 "Concluding Remarks and Discussion" session. The symposium was opened with a plenary talk entitled "The History of LIBS—the 1960s to the Present" by David Cremers and followed by invited and oral presentations. The breadth of the topics was reflected in the names chosen for the sessions, i.e., Plasma Diagnostics and Fundamental Studies (2 sessions), Double Pulse LIBS—LIBS in Liquids, LIBS Instrumentation, Hyphenated LIBS Techniques, Laser Ablation, Chemometric Approaches, Nuclear-Space-Security Applications, Geochemical—Industrial Applications—Process Control, Environmental—Cultural Heritage Applications, Biological—Biomedical—Forensic Applications of LIBS.

Three best "student's poster" were awarded by a jury of Scientific Committee Members. Elsevier's special award of one-year free

subscription to *Spectrochimica Acta—Part B Atomic Spectroscopy* was also given to the first place winner Marko CVEJIC (*University of Belgrade, Serbia*) for his poster entitled 'Li I 460.3 nm Line with Forbidden Component for LIBS Electron Number Density Diagnostics'. The prizes were given to the young scientists during the social event, gala dinner and Marko CVEJIC has received his certificate from the hands of Nicoló Omenetto.

The conference dinner under the moonlight was a memorable event at which participants demonstrated their dancing skills. During the gala dinner, the next EMSLIBS symposium, EMSLIBS' 2013, which will take place in *Bari, Italy* was announced.

The scientific sessions of the symposium were concluded with a "Remarks and Discussion" session chaired by Prof. Ulrich Panne. The ideas and suggestions of interested participants on the subject of "A Roadmap to Future R&D Activities in LIBS" were discussed.

At the end of the symposium, on the 15th of September, a day-long excursion to Ephesus Antic City, House of Virgin Mary and Sirince Village was organized. Participants enjoyed visiting one of the great outdoor museums in the world.

From an overview of the wide range of topics discussed in both oral and poster presentations, the main attributes of LIBS, namely: (1) real-time analysis, (2) no or minimal sample preparation, (3) high sensitivity, and (4) high specificity for variety of research and industrial applications were clearly re-emphasized. The high level of discussions and the record number of international representation are some of the clear indications of the present state and the promising future of the LIBS in research and technology.

We are delighted to edit this Thematic Issue of *Spectrochimica Acta, Part B*, specifically devoted to the best, peer-reviewed contributions presented at the sixth Euro-Mediterranean Symposium on Laser-Induced Breakdown Spectroscopy, EMSLIBS' 2011. On behalf of the Organizing Committee, we would like to express our appreciation to all participants for the most successful symposium and acknowledge all the authors for their contribution of the manuscripts for this Thematic Issue.

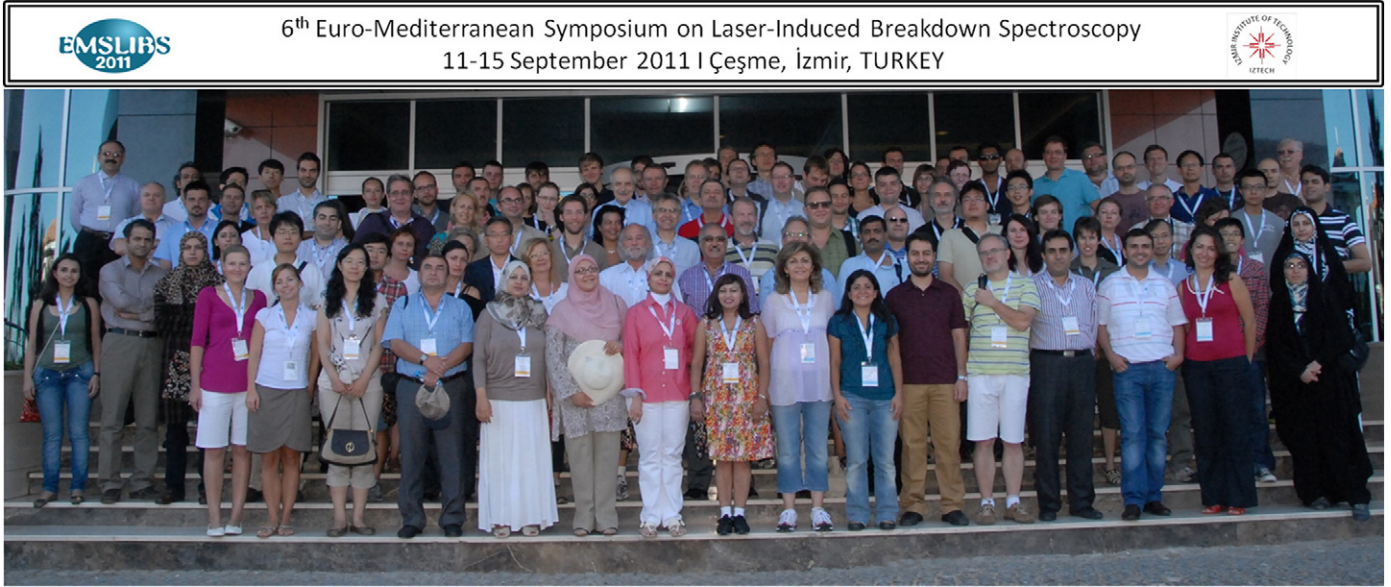
We would like to extend our gratitude to all International Scientific Committee members and to all LIBS experts for peer-refereeing the submitted manuscripts. We are very grateful to the editorial staff of Elsevier, *Spectrochimica Acta Part B* and especially to Nicoló Omenetto for his invaluable support and guidance in publishing this issue.

We express special thanks to all sponsoring companies for their generous financial support, which made the meeting possible.

Finally, we extend our gratitude to the members of the Organizing Committee, the staff and students of IZTECH who all spent their time and efforts, enthusiastically, to make EMSLIBS' 2011 a great success.

We are looking forward to meeting an even larger number of participants in another exciting chapter of this great symposium series.

6th Euro-Mediterranean Symposium on Laser-Induced Breakdown Spectroscopy—EMSLIBS' 2011.



EMSLIBS
2011

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