
Guest Editorial: IAMPI2006: International Conference on the Interaction of Atoms, Molecules and Plasmas with Intense Ultrashort Laser Pulses

The aim of the 2006 conference on the interaction of atoms, molecules, and plasmas with intense ultrashort laser pulses was to bring closer together researchers dealing with the generation and application of ultrashort light pulses up to the attosecond range, and those dealing with ultrahigh intensities. Although both can be obtained by using ultrashort laser pulses, traditionally different communities deal with the generation and application of attosecond pulses in molecules, atoms, and plasma physics. The COST P14 (ULTRA) action and the XTRA Marie-Curie research training network, the initiators and supporters of the conference are committed to the synthesis of these activities. Thus the topics of IAMPI included fundamental science and applications in the fields of femtosecond and attosecond metrology, controlling atomic and molecular dynamics, laser acceleration of particles, and laser-plasma interactions. Special sessions were devoted to new laser sources (from FEL to XRL) and to the generation of harmonics and thus attosecond pulses in molecules and in plasmas.

It is hoped that IAMPI2006 was the first conference in a series which is worth being continued. This and the previous issue of *Laser and Particle Beams* carry a selection of eight papers originating from the International Conference on the Interaction of Atoms, Molecules and Plasmas with Intense Ultrashort Laser Pulses held on 1–5 October 2006 in Szeged, Hungary (Baeva *et al.*, 2007; Giulietti *et al.*, 2007; Ozaki *et al.*, 2007; Poletto & Villoresi, 2007; Stancalie *et al.*, 2007; Varró, 2007; Ziaja *et al.*, 2007; Zvorykin *et al.*, 2007). Besides the European networks, the conference was organized by the institutes of the Hungarian Academy of Sciences and the University of Szeged. The chairs of the International Scientific Committee were Charles Joachain (Université Libre de Bruxelles, Bruxelles), Ferenc Krausz (Max-Planck-Institute of Quantum Optics, Garching), and Marc Vrakking (FOM Institute, AMOLF, Amsterdam). This collection contains mainly articles which are fitted to the traditional profile of the journal; therefore they do not cover the whole scope of the conference. They include however several key areas of physics with intense laser-fields as generation and diagnostics of attosecond pulses, and developments and applications of new sources of coherent radiation in the ultraviolet and XUV.

I should like to use this opportunity to thank all 116 participants of IAMPI2006, especially the contributors of this issue for their high-quality scientific results presented at the conference and in the journal. Besides the above-mentioned chair persons, the success of the conference was based on the active participation of the program committee which included S. Atzeni, D. Batani, D. Charalambidis, Gy. Farkas, N. Kroó, A. Maquet, J. Meyer-ter-Vehn, P. Monot, P. Salieres, S. Szatmári, G. Szabó, K. Taylor, J. Ullrich, C-G. Wahlström, and K. Yamanouchi. The Albert Apponyi grant of the Hungarian National Office and Technology allowed the easier participation of several Hungarian students in the conference, thus giving them a possibility to get acquainted with leading researchers of the field, and on the other hand providing the lively atmosphere of the conference. Additional support to the conference was provided by FEMTOLASERS, Kurt J. Lesker Company, KON-TRADE Ltd. (Leybold Vacuum) and RK Tech Ltd. (Newport and Spectra Physics).

Finally as the chairman of the Local Organizing Committee, the guest editor, wants to acknowledge the help of the editorial team of *Laser and Particle Beams* and especially for Dieter Hoffmann that they gave the possibility to introduce some of the IAMPI contributions to the community of the readers of this journal.

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