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Editorial

Special Issue: "Selected Papers Presented at the 2007 Spring Meeting of the Quantum Optics and Photonics Section of the German Physical Society"

It has become a well anticipated tradition that Applied Physics B publishes an annual collection of selected contributions to the Quantum Optics and Photonics Section of the German Spring Meeting of the German Physical Society. A particularly nice feature of the German Spring Meeting is its goal of offering a platform for graduate students working on their diploma or PhD thesis, thereby allowing them to present their work to a broader audience of physicists. In this tradition, the special issues of Applied Physics B provide an additional opportunity to some of these young scientists to publish their results in an international journal, sometimes as their first scientific paper. Naturally, it is considered an honor to be selected for such a contribution. In fact, the selection procedure is quite competitive as the number of contributions to the Quantum Optics and Photonics Section has steadily increased. In 2007, there were a total of almost 500 abstracts presented at the German Spring Meeting within the Quantum Optics and Photonics section alone. Among them, around 330 oral contributions. For the first time, a large number of joint sessions were organized between the different participating sections in Atomic, Molecular, Optical and Plasma Physics, illustrating the large degree of cross-disciplinarity within these fields of research. The program of the sections was complemented by a symposia. Among them was a Memorial Symposium to Herbert Walther and the symposium of the candidates for the newly established AMOP Dissertation Prize.

The selection of papers for this special issue was based on proposals by the session chairs. The papers underwent the usual refereeing process of Applied Physics B, thereby ensuring the level of quality associated with this journal. Finally, 16 papers have made it into this special issue. The selected articles cover the experimental and theoretical advances in the physics of ultracold atomic and molecular gases, quantum computation with atoms and photons, developments and applications of photonic devices as well as a survey of complex plasmas. This compilation of intriguing new results represents a good overview of the liveliness and the scientific diversity within the Quantum Optics and Photonics Section of the German Physical Society.

We would like to thank Karl Kleinermanns and his team at the University of Düsseldorf for organizing such an excellent meeting. We owe our thanks to the chairpersons of the sessions who quickly responded to our query. This special issue has been made possible by the professional support of editor-in-chief Frank Träger. We would also like to thank Jutta Kaisig from the University of Kassel for her continuous encouragement.

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