

Preface

In view of the rapid growth in both experimental and theoretical studies of multiphoton processes and multiphoton spectroscopy of atoms, ions, and molecules in chemistry, physics, biology, materials science, etc., it is desirable to publish an advanced series that contains review papers readable not only by active researchers in these area, but also by those who are not experts in the field but who intend to enter the field. The present series attempts to serve this purpose. Each chapter is written in a self-contained manner by the experts in the area so that the readers can grasp the knowledge in the area without too much preparation.

The topics covered in this volume are “Nonlinear optics for characterizing XUV/soft X-ray high-order harmonic fields in attosecond regime,” “Signatures of molecular structure and dynamics in high-order harmonic generation,” “Molecular manipulation techniques and their applications,” “Sum frequency generation: an introduction with recent developments and current issues,” “Propagation and intramolecular coupling effects in the four-wave mixing spectroscopy,” and “Control of molecular chirality by lasers.” The editors wish to thank the authors for their important contributions. It is hoped that the collection of topics in this volume will be useful not only to active researchers but also to other scientists in biology, chemistry, physics, and materials science.

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