

## PREFACE

In view of the recent rapid growth in both experimental and theoretical studies of multiphoton processes and multiphoton spectroscopy of atoms, ions and molecules in chemistry, physics, biology, materials sciences, etc., it is desirable to publish an Advanced Series that contains review papers readable not only by active researchers in these areas but also by those who are not experts in the field but intend to enter the field. The present series attempts to serve this purpose. In this series, both theory and experiment are equally emphasized, and each review article 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 theory of multiphoton processes in molecules (Chapter 1), photochemistry, and photophysics of molecular IR multiphoton excitation (Chapter 2), theoretical treatment of intense field multiphoton processes (Chapter 3), time-resolved resonance Raman spectroscopy (Chapter 4) and application of resonance enhanced multiphoton ionization to radicals (Chapter 5). The editor wishes to thank the authors for their important contributions. It is hoped that the collection of topics in this volume will prove to be useful, valuable and stimulating not only to active researchers but also to other scientists in the areas of biology, chemistry, materials science and physics.

S. H. Lin