

Springer Series on

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Editors: G. Ecker P. Lambropoulos H. Walther



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Volume 1 **Polarized Electrons** 2nd Edition
By J. Kessler

Volume 2 **Multiphoton Processes**
Editors: P. Lambropoulos and S. J. Smith

Multiphoton Processes

Proceedings
of the 3rd International Conference,
Iraklion, Crete, Greece
September 5–12, 1984

Editors: P. Lambropoulos and S. J. Smith

With 101 Figures

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Preface

The chapters of this volume represent the invited papers delivered at the 3rd International Conference on Multiphoton Processes (ICOMP III) held in Iraklion, Crete, Greece, September 5-11, 1984. The invited papers at a conference like ICOMP cannot possibly cover the whole field which has grown to immense proportions in recent years, overlapping with such diverse areas as atomic and molecular spectroscopy, plasma physics, nonlinear optics, quantum optics, etc. We believe these contributions represent that part of the research activity which has been attracting the most interest in the past year or so, as well as reviews of some of the more established topics. Even within this scope, and given the confines imposed by the finite duration of a conference, important and timely topics are inevitably left out. But then, there will be ICOMP IV.

The collection of articles in this volume, combined with extensive references to related work given by the authors, should provide an introduction to the major problems of the field and its state of the art. The chapters have been arranged according to thematic proximity, beginning with atoms, and continuing on with molecules and surfaces. This classification, however, would not cover all the subject matter even within the limited scope of the conference and of this volume. Multiphoton physics is interdisciplinary and topics dealing with the stochastic properties of the field or with collisions and collective effects, to name a few, are part of the field and part of the conference. We have chosen to group such articles separately since they relate as much to atoms as they do to molecules.

The conference was made possible by financial support from the Greek Ministry of Research and Technology, the U.S. Department of Energy and National Science Foundation, as well as the International Union of Pure and Applied Physics. The support of Lambda Physik and Spectra Physics is also gratefully acknowledged.

Many people have contributed significantly to the success of the conference. In particular, members of the organizing committee and colleagues at the University of Crete must be recognized for their contributions to the programming and organization of the conference. Finally, ICOMP III would not have been the success it was without the dedication of Ms. Lia Papadopoulou who handled every detail with admirable professionalism.

P. Lambropoulos · S.J. Smith

Contents

Introduction. By P. Lambropoulos and S.J.Smith	1
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Part I Multiphoton Processes in Atoms

Multiphoton Ionisation of Atoms in Strong Fields By M.Crance (With 3 Figures)	8
Multiphoton Transitions in the Ionization Continuum of Atoms By P. Agostini and G. Petite (With 7 Figures)	13
Multiply Charged Ions Produced in Multiphoton Ionization of Rare Gas Atoms. By L.A. Lompré and G. Mainfray (With 5 Figures)	23
Studies of Collision-Free Nonlinear Processes in the Ultraviolet Range By C.K. Rhodes (With 2 Figures)	31
Multiphoton Excitation of Doubly Excited States of Two-Electron Atoms By R.R. Freeman, L.A. Bloomfield, W.E. Cooke, J. Bokor, and R.M. Jopson (With 4 Figures)	42
Multiphoton Ionization Via Rydberg States and Effects of High Laser Intensity. By G. Leuchs (With 7 Figures)	48
Effects of dc Electric Fields on Multiphoton Ionization Spectra in Cesium. By C.E. Klots and R.N. Compton (With 6 Figures)	58

Part II Field Fluctuations and Collisions in Multiphoton Processes

Field Fluctuations and Multiphoton Processes By P. Zoller (With 5 Figures)	68
Two-Photon Absorption from a Phase Diffusing Laser Field By D.S. Elliott (With 2 Figures)	76
Electron Scattering in the Presence of Laser Radiation By L. Rosenberg	82
Multiphoton Effects During Collisions By K. Burnett and J. Cooper (With 5 Figures)	91
Pressure Effects in the Multiphoton Ionization of Atoms and Molecules By P.M. Johnson, L. Li, and R.N. Porter (With 5 Figures)	99

Part III **Multiphoton Processes in Molecules and Surfaces**

Infrared Multiphoton Absorption and Decomposition By D.K. Evans and R.D. McAlpine (With 2 Figures)	112
A Physical Explanation of Quasiperiodic Motion and the Onset of Chaos in Nonlinear Systems. By H.S. Taylor (With 8 Figures)	119
Theoretical Studies of Resonantly Enhanced Multiphoton Ionization Processes in Molecules. By S.N. Dixit, D.L. Lynch, and V. McKoy (With 4 Figures)	131
Photoionization of Excited Molecular States By P.M. Dehmer, J.L. Dehmer, and S.T. Pratt (With 8 Figures)	141
Resonant Two-Photon Ionization and Dissociation of the Hydrogen Atom and Molecule. By K.H. Welge and H. Rottke (With 9 Figures)	151
Multiphoton Ionization Photoelectron Spectroscopy for Excited-State Atoms and Molecules. By K. Kimura (With 4 Figures)	164
2-Step Photoionization of Benzene: Mechanism and Spectroscopy By G. Müller, K.L. Kompa, J.L. Lyman, W.E. Schmid, and S. Trushin (With 9 Figures)	174
Multiphoton Ionization Spectroscopy of Surface Molecules By V.S. Antonov and V.S. Letokhov (With 6 Figures)	182
Experimental Investigation of the Possibilities of the Optical Tunnelling of Electron from a Metal Surface Induced by Strong CO ₂ Laser Pulses. By Gy.Farkas and S.L. Chin (With 9 Figures)	191
<i>Index of Contributors</i>	201