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		CHAPTER VIII APPLICATIONS OF THE RIEMANN PRODUCT INTEGRAL METHOD TO SPECTROSCOPIC PROBLEMSCHAPTER IX ANALYTIC

SOLUTIONS AND DYNAMIC SYMMETRIES IN LASER-DRIVEN ATOMIC EXCITATIONS; CHAPTER X SPIN RELAXATION AND MOTIONAL DYNAMICS; CHAPTER XI DENSITY MATRIX METHODS AND RELAXATION PHENOMENA IN LASER-EXCITED POLYATOMIC MOLECULES; CHAPTER XII REDUCED EQUATIONS OF MOTION FOR MOLECULAR LINESHAPES AND SEMICLASSICAL DYNAMICS IN LIOUVILLE SPACE; CHAPTER XIII TIME-DEPENDENT WAVEPACKET APPROACH TO OPTICAL SPECTROSCOPY INVOLVING NONADIABATICALLY COUPLED POTENTIAL SURFACES CHAPTER XIV LOCAL MODE OVERTONES AND MODE SELECTIVITYCHAPTER XV INTERACTION OF AN ADSORBED ATOM WITH A LASER; CHAPTER XVI TELEGRAPHIC ATOMIC FLUORESCENCE; CHAPTER XVII GENERALIZED FLOQUET THEORETICAL APPROACHES TO INTENSE-FIELD MULTIPHOTON AND NONLINEAR OPTICAL PROCESSES; CHAPTER XVIII QUANTUM OPTICS AT VERY HIGH LASER INTENSITIES: ESSENTIAL STATES AND ABOVE-THRESHOLD IONIZATION; CHAPTER XIX COUPLED-EQUATION METHOD FOR MULTIPHOTON TRANSITIONS IN DIATOMIC MOLECULES: BRIDGING THE WEAK- AND INTENSE-FIELD LIMITS; CHAPTER XX SQUEEZED STATES OF LIGHT

CHAPTER XXI NOTES ON CLASSICAL AND QUANTUM THEORIES OF DRIVEN NONLINEAR SYSTEMSCHAPTER XXII CLASSICAL CHAOS VERSUS QUANTUM DYNAMICS: KAM-TORI AND CANTORI AS DYNAMICAL BARRIERS; CHAPTER XXIII ADIABATIC SWITCHING: A TOOL FOR SEMICLASSICAL QUANTIZATION AND A NEW PROBE OF CLASSICALLY CHAOTIC PHASE SPACE

| Sommario/riassunto | Based on a symposium on lasers, molecules, and methods held at the Los Alamos Center for Nonlinear Studies held in July 1986. Contributors present recent advances in theoretical and experimental research on a diversity of dynamical and optical phenomena resulting from the interactions of laser beams with molecules. They describe the predictive results of sophisticated mathematical models, the equipment involved in experiments, and reveal new insights into molecular structure and behavior. |