

## Contents

List of Participants	v
Director's Preface	ix
Editors' Note	xi
<b>From Linear Dispersion to Self-Induced Transparency: An Introduction to Nonlinear Optics</b> B. S. Wherrett	1
<b>1. Microscopic and Macroscopic Nonlinear Optics</b> J. Ducuing	11
<b>2. Parametric Oscillators and Nonlinear Materials</b> R. G. Byer	47
<b>3. The Laser Revolution in Spectroscopy</b> B. P. Stoicheff	161
<b>4. Free-Electron Nonlinear Optical Processes in Semiconductors</b> P. A. Wolff	169
<b>5. Tunable Semiconductor Lasers</b> A. Mooradian	213
<b>6. Dye Lasers</b> H. Walther	255
<b>7. Ultrashort Pulses in Nonlinear Optics</b> W. Kaiser and A. Lauberau	257
<b>8. Coherent Optical Spectroscopy</b> R. G. Brewer	307
<b>9. Nonlinear Optical Effects in Plasmas</b> T. P. Hughes	365
Subject Index	426
Materials Index	433
	xiii