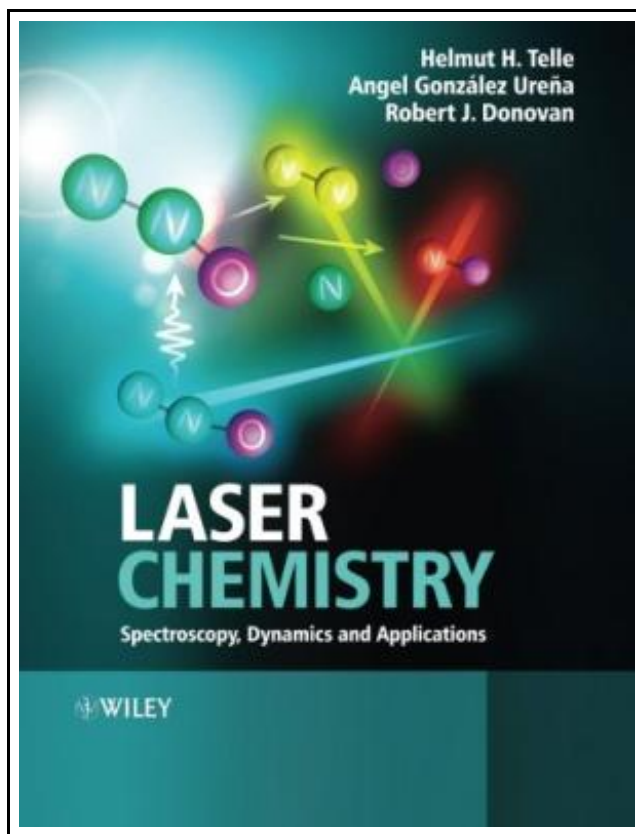# Laser Chemistry: Spectroscopy, Dynamics and Applications

Filesize: 5.05 MB

Reviews

A top quality publication along with the font used was intriguing to read. I really could comprehended everything using this written e ebook. Its been designed in an remarkably straightforward way and it is only after i finished reading through this publication by which basically altered me, modify the way i believe.

(Cathrine Larkin Sr.)

LASER CHEMISTRY: SPECTROSCOPY, DYNAMICS AND APPLICATIONS

To read **Laser Chemistry: Spectroscopy, Dynamics and Applications** eBook, make sure you refer to the button under and download the ebook or get access to additional information which are have conjunction with LASER CHEMISTRY: SPECTROSCOPY, DYNAMICS AND APPLICATIONS book.

Wiley, 2007. Book Condition: New. Brand New, Unread Copy in Perfect Condition. A+ Customer Service! Summary: Preface.About the authors.Chapter 1 Introduction.1.1 Basic concepts in laser chemistry.1.2 Organization of the book.Part 1 Principles of lasers and laser systems.Chapter 2 Atoms and molecules, and their interaction with light waves.2.1 Quantum states, energy levels and wave functions.2.2 Dipole transitions and transition probabilities.2.3 Einstein coefficients and excited-state lifetimes.2.4 Spectroscopic line shapes.2.5 The polarization of light waves.2.6 Basic concepts of coherence.2.7 Coherent superposition of quantum states and the concept of wave packets.Chapter 3 The basics of lasers.3.1 Fundamentals of laser action.3.2 Laser resonators.3.3 Frequency and spatial properties of laser radiation.3.4 Gain in continuous-wave and pulsed lasers.3.5 Q-switching and the generation of nanosecond pulses.3.6 Mode locking and the generation of picosecond and femtosecond pulses.Chapter 4 Laser systems.4.1 Fixed-wavelength gas lasers: helium-neon, rare-gas ion and excimer lasers.4.2 Fixed-wavelength solid-state lasers: the Nd:YAG laser.4.3 Tuneable dye laser systems.4.4 Tuneable Ti:sapphire laser systems.4.5 Semiconductor diode lasers.4.6 Quantum cascade lasers.4.7 Non-linear crystals and frequency-mixing processes.4.8 Three-wave mixing processes: doubling, sum and difference frequency generation.4.9 Optical parametric oscillation.Part 2 Spectroscopic techniques in laser chemistry.Chapter 5 General concepts of laser spectroscopy.5.1 Spectroscopy based on photon detection.5.2 Spectroscopy based on charged particle detection.5.3 Spectroscopy based on measuring changes of macroscopic physical properties of the medium.Chapter 6 Absorption spectroscopy.6.1 Principles of absorption spectroscopy.6.2 Observable transitions in atoms and molecules.6.3 Practical implementation of absorption spectroscopy.6.4 Multipass absorption techniques.Chapter 7 Laser-induced fluorescence spectroscopy.7.1 Principles of laser-induced fluorescence spectroscopy.7.2 Important parameters in laser-induced fluorescence.7.3 Practical implementation of laser-induced fluorescence spectroscopy.Chapter 8 Light scattering methods: Raman spectroscopy and other processes.8.1 Light scattering.8.2 Principles of Raman spectroscopy.8.3 Practical implementation of Raman spectroscopy.Chapter 9 Ionization spectroscopy.9.1 Principles of ionization spectroscopy.9.2 Photoion detection.9.3 Photoelectron detection.9.4 Photoion imaging.Part 3 Optics and measurement concepts.Chapter 10 Reflection, refraction and diffraction.10.1 Selected properties of optical materials...

You May Also Like

[PDF] Grandpa Spanielson's Chicken Pox Stories: Story #1: The Octopus (I Can Read Book 2)

Access the link listed below to read "Grandpa Spanielson's Chicken Pox Stories: Story #1: The Octopus (I Can Read Book 2)" PDF file.

Read Book »

[PDF] The Web Collection Revealed, Premium Edition: Adobe Dreamweaver CS6, Flash CS6, and Photoshop CS6 (Stay Current with Adobe Creative Cloud)

Access the link listed below to read "The Web Collection Revealed, Premium Edition: Adobe Dreamweaver CS6, Flash CS6, and Photoshop CS6 (Stay Current with Adobe Creative Cloud)" PDF file.

Read Book »

[PDF] Star Flights Bedtime Spaceship: Journey Through Space While Drifting Off to Sleep

Access the link listed below to read "Star Flights Bedtime Spaceship: Journey Through Space While Drifting Off to Sleep" PDF file.

Read Book »

[PDF] Projects for Baby Made with the Knook[Trademark]: Sweet Creations Made with Light Weight Yarns!

Access the link listed below to read "Projects for Baby Made with the Knook[Trademark]: Sweet Creations Made with Light Weight Yarns!" PDF file.

Read Book »

[PDF] JA] early childhood parenting :1-4 Genuine Special(Chinese Edition)

Access the link listed below to read "JA] early childhood parenting :1-4 Genuine Special(Chinese Edition)" PDF file.

Read Book »

[PDF] Edge] the collection stacks of children's literature: Chunhyang Qiuyun 1.2 --- Children's Literature 2004(Chinese Edition)

Access the link listed below to read "Edge] the collection stacks of children's literature: Chunhyang Qiuyun 1.2 --- Children's Literature 2004(Chinese Edition)" PDF file.

Read Book »