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| Autore | Letokhov V. S |
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| Descrizione fisica | 1 online resource (323 p.) |
| Collana | International Series of Monographs on Physics |
| Disciplina | 535.8/4 |
| Soggetti | Quantum optics Laser cooling Laser beams Laser spectroscopy Electronic books. |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Note generali | Description based upon print version of record. |
| Nota di bibliografia | Includes bibliographical references (p. [273]-302) and index. |
| Nota di contenuto | Contents; 1 Introduction; 2 Elementary radiative processes; 3 Laser velocity-selective excitation; 4 Optical orientation of atoms and nuclei; 5 Laser cooling of atoms; 6 Laser trapping of atoms; 7 Atom optics; 8 From laser-cooled and trapped atoms to atomic and molecular quantum gases; 9 Laser photoselective ionization of atoms; 10 Multiphoton ionization of molecules; 11 Photoselective laser control of molecules via molecular vibrations; 12 Coherent laser control of molecules; 13 Related topics: laser control of microparticles and free electrons; 14 Concluding comments; References; Index |
| Sommario/riassunto | This text treats laser light as a universal tool to control matter at the atomic and molecular level, one of the most exciting applications of lasers. Lasers can heat matter, cool atoms to ultra-low temperatures where they show quantum collective behaviour, and can act selectively on specific atoms and molecules for their detection and separation. - ; Rather different problems can be lumped together under the general term 'laser control of atoms and molecules'. They include the laser |

selection of atomic and molecular velocities for the purpose of
Doppler-free spectroscopy, laser control of the
