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Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Image-based closed-loop control of molecular dynamics: controlling strong-field dissociative-ionization pathways -- Classical trajectory methods in the theoretical description of laser-atom and laser-molecule interaction -- Non-adiabatic molecular alignment and orientation -- Dynamics of atomic clusters under intense femtosecond laser pulses -- Backward lasing of femtosecond plasma filaments -- Propagation of ultrashort, long wavelength laser pulses -- Dense matter states produced by laser pulses -- Laser-plasma particle

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Sommario/riassunto	This volume covers a broad range of topics focusing on atoms, molecules, and clusters interacting in intense laser field, laser induced filamentation, and laser plasma interaction and application. The PUILS series delivers up-to-date reviews of progress in Ultrafast Intense Laser Science, a newly emerging interdisciplinary research field spanning atomic and molecular physics, molecular science, and optical science, which has been stimulated by the recent developments in ultrafast laser technologies. Each volume compiles peer-reviewed articles authored by researchers at the forefront of each their own subfields of UILS. Every chapter opens with an overview of the topics to be discussed, so that researchers unfamiliar to the subfield, as well as graduate students, can grasp the importance and attractions of the research topic at hand; these are followed by reports of cutting-edge discoveries. .