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Titolo	Progress in Ultrafast Intense Laser Science XVI // edited by Kaoru Yamanouchi, Katsumi Midorikawa, Luis Roso
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Collana	Topics in Applied Physics, , 1437-0859 ; ; 141
Disciplina	621.366
Soggetti	Atoms Molecules Photonics Lasers Chemistry, Physical and theoretical Quantum theory Atomic, Molecular and Chemical Physics Ultrafast Photonics Laser-Matter Interaction Atoms and molecules in external fields Physical Chemistry Excited States
Lingua di pubblicazione	Inglese
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Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Observation of the post-ionization optical coupling in N2+ lasing in intense laser fields -- Circularly polarized high harmonic generation for probing molecular chirality -- Channel-resolved angular correlation between photoelectron emission and fragment ion recoil of ethanol in intense laser fields -- The Shanghai Superintense Ultrafast Laser Facility (SULF) project -- Effects of electron correlation on the intense field ionization of molecules: Effective potentials of time-dependent molecular orbitals -- Robust strategies for affirming Kramers-Henneberger atoms -- LD-pumped kilo-Joule-class solid-state laser technology -- Volterra integral equation approach for electron

dynamics in the intense light field (with an application) -- Chirality in molecules in intense laser fields.

Sommario/riassunto

This book covers a broad range of topics from the interdisciplinary research field of ultrafast intense laser science, focusing on atoms and molecules interacting with intense laser fields, laser-induced filamentation, high-order harmonics generation, and high power lasers and their applications. This sixteenth volume features contributions from world-renowned researchers, introducing the latest reports on probing molecular chirality with intense laser fields, and the most recent developments in the Shanghai Superintense Ultrafast Laser Facility project. The PUILS series delivers up-to-date reviews of progress in this 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 of their own subfields of ultrafast intense laser science. Every chapter opens with an overview of the topics to be discussed, so that researchers unfamiliar to the subfield, especially graduate students, can grasp the importance and attractions of the research topic at hand; these are followed by reports of cutting-edge discoveries.
