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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Laser-Assisted Electron Scattering and Diffraction in Ultrashort Intense Laser Fields -- Electron Localization in Hydrogen -- Observation of Vibrational Wave-Packet Dynamics in D2+ using High-order Harmonic Pulses -- Frequency Tunable Attosecond Apparatus -- Strong-Field Atomic Physics in the X-Ray Regime -- Third Harmonic Generation from Perturbed Femtosecond Filaments in Air -- Strong and Coherent Forward Emissions from Molecules Driven by Femtosecond Infrared Laser Pulses -- Tests of Classical and Quantum Electrodynamics with Intense Laser Fields -- Quantum Vacuum Polarization Searches with

Sommario/riassunto

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. This tenth volume covers a broad range of topics from this interdisciplinary research field, focusing on electron scattering by atoms in intense laser fields, atoms and molecules in ultrashort pulsed EUV and X-ray light fields, filamentation induced by intense laser fields, and physics in super-intense laser fields.

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