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Autore	Ganeev Rashid
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Nota di contenuto	Contents; Preface; List of Figures and Tables; Chapter 1. Introduction; References; Chapter 2. Basic Principles of Harmonic Generation in Plasmas; 2.1 Fundamentals of HHG in Isotropic Media; 2.2 High-Order Harmonic Generation in Various Laser Plasmas; 2.2.1 Boron; 2.2.2 Silver; 2.2.3 Gold; 2.3 Application of 400-nm Radiation for Harmonic Generation in Laser Plasma; 2.4 High-Order Harmonic Generation in Plasmas Produced by Laser Pulses of Different Durations; 2.5 Analysis of Laser-Produced Plasma Characteristics for Optimization of HHG; References Chapter 3. Resonance-Induced Enhancement of High-Order Harmonic Generation in Plasma 3.1 Giant Enhancement of 13th Harmonic Generation in Indium Plasma; 3.2 Single Harmonic Enhancement in Chromium, Gallium Arsenide, and Indium Antimonide Plasmas; 3.3 Single Harmonic Enhancement at Strong Excitation Conditions; 3.4 Resonance Enhancement of Odd and Even Harmonics in Tin Plasma During Two-Color Pumping; 3.5 Plasma Harmonic Enhancement Using Two-Color Pump and Chirp Variation of 1 kHz Ti:sapphire Laser; 3.5.1 Experimental; 3.5.2 Silver plasma; 3.5.3 Chromium plasma; 3.5.4 Vanadium plasma 3.6 Theoretical Approaches for Description of Observed Peculiarities of Resonant Enhancement of Single Harmonic in Laser Plasma References; Chapter 4. Cluster-Containing Plasma Plumes: Attractive Media for

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Sommario/riassunto

This book represents the first comprehensive treatment of high-order harmonic generation in laser-produced plumes, covering the principles, past and present experimental status and important applications. It shows how this method of frequency conversion of laser radiation towards the extreme ultraviolet range matured over the course of multiple studies and demonstrated new approaches in the generation of strong coherent short-wavelength radiation for various applications. Significant discoveries and pioneering contributions of researchers in this field carried out in various laser scientific c

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