

1. Record Nr.	UNINA9910791786503321
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Titolo	Light propagation in gain media : optical amplifiers // Malin Premaratne, Govind P. Agrawal [[electronic resource]]
Pubbl/distr/stampa	Cambridge : , : Cambridge University Press, , 2011
ISBN	1-107-21552-8 1-68015-990-9 1-283-01737-7 9786613017376 1-139-00979-6 1-139-01031-X 1-139-00816-1 1-139-00705-X 0-511-97363-2 1-139-00926-5
Descrizione fisica	1 online resource (xiii, 270 pages) : digital, PDF file(s)
Classificazione	SCI053000
Disciplina	621.382/75
Soggetti	Optical communications - Equipment and supplies Optical amplifiers Light - Transmission
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Title from publisher's bibliographic system (viewed on 05 Oct 2015).
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Machine generated contents note: 1. Introduction; 2. Dispersive dielectric slabs; 3. Generic active media; 4. Optical Bloch equations; 5. Fiber amplifiers; 6. Semiconductor optical amplifiers; 7. Raman amplifiers; 8. Optical parametric amplifiers; 9. Gain in optical metamaterials; Index.
Sommario/riassunto	Over the past two decades, optical amplifiers have become of key importance in modern communications. In addition to this, the technology has applications in cutting-edge research such as biophotonics and lab-on-a-chip devices. This book provides a comprehensive treatment of the fundamental concepts, theory and analytical techniques behind the modern optical amplifier technology.

The book covers all major optical amplification schemes in conventional materials, including the Raman and parametric gain processes. The final chapter is devoted to optical gain in metamaterials, a topic that has been attracting considerable attention in recent years. The authors emphasize analytical insights to give a deeper, more intuitive understanding of various amplification schemes. The book assumes background knowledge of electrical engineering or applied physics, including exposure to electrodynamics and wave motion, and is ideal for graduate students and researchers in physics, optics, bio-optics and communications.
