1. Record Nr. UNINA9910459766403321

Autore	Bernath Michael T
Titolo	Confederate minds [[electronic resource]] : the struggle for intellectual independence in the Civil War South / / Michael T. Bernath
Pubbl/distr/stampa	Chapel Hill, : University of North Carolina Press, c2010
ISBN	1-4696-0395-0 0-8078-9565-2
Descrizione fisica	1 online resource (429 p.)
Collana	Civil War America
Disciplina	973.7/13
Soggetti	American literature - Southern States - History and criticism Regionalism - Southern States - History - 19th century Group identity - Southern States - History - 19th century Electronic books. Southern States Intellectual life 19th century Confederate States of America Intellectual life Southern States Civilization 19th century United States History Civil War, 1861-1865 Social aspects
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	An intellectual call to arms -- The Confederate critique of northern culture -- The birth of Confederate literature -- The campaign for Confederate educational independence -- The high-water mark -- Searching for a Confederate "literature of power" -- Are we a highly civilized people? -- Conclusion: independent in nothing, neutral in everything.
Sommario/riassunto	During the Civil War, Confederates fought for much more than their political independence. They also fought to prove the distinctiveness of the Southern people and to legitimate their desire for a separate national existence through the creation of a uniquely Southern literature and culture. In this important new book, Michael Bernath follows the activities of a group of Southern writers, thinkers, editors, publishers, educators, and ministers--whom he labels Confederate cultural nationalists--in order to trace the rise and fall of a cultural

movement dedicated to liberating the South from its

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Autore	Kumar Shiv, Dr.
Titolo	Fiber optic communications : fundamentals and applications / / Shiva Kumar and M. Jamal Deen
Pubbl/distr/stampa	Chichester, [England] : , : Wiley, , 2014 ©2014
ISBN	1-118-68343-9 1-118-68420-6
Descrizione fisica	1 online resource (573 p.)
Classificazione	TEC030000
Disciplina	621.36/92
Soggetti	Optical fiber communication Fiber optics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Cover; Title Page; Copyright; Contents; Preface; Acknowledgments; Chapter 1 Electromagnetics and Optics; 1.1 Introduction; 1.2 Coulomb's Law and Electric Field Intensity; 1.3 Ampere's Law and Magnetic Field Intensity; 1.4 Faraday's Law; 1.4.1 Meaning of Curl; 1.4.2 Ampere's Law in Differential Form; 1.5 Maxwell's Equations; 1.5.1 Maxwell's Equation in a Source-Free Region; 1.5.2 Electromagnetic Wave; 1.5.3 Free-Space Propagation; 1.5.4 Propagation in a Dielectric Medium; 1.6 1-Dimensional Wave Equation; 1.6.1 1-Dimensional Plane Wave; 1.6.2 Complex Notation; 1.7 Power Flow and Poynting Vector 1.8 3-Dimensional Wave Equation 1.9 Reflection and Refraction; 1.9.1 Refraction; 1.10 Phase Velocity and Group Velocity; 1.11 Polarization of Light; Exercises; Further Reading; References; Chapter 2 Optical Fiber Transmission; 2.1 Introduction; 2.2 Fiber Structure; 2.3 Ray Propagation in Fibers; 2.3.1 Numerical Aperture; 2.3.2 Multi-Mode and Single-Mode Fibers; 2.3.3 Dispersion in Multi-Mode Fibers; 2.3.4 Graded-Index Multi-Mode Fibers; 2.4 Modes of a Step-Index Optical Fiber*; 2.4.1 Guided Modes; 2.4.2 Mode Cutoff; 2.4.3 Effective Index;

2.4.4 2-Dimensional Planar Waveguide Analogy
2.4.5 Radiation Modes 2.4.6 Excitation of Guided Modes; 2.5 Pulse Propagation in Single-Mode Fibers; 2.5.1 Power and the dBm Unit; 2.6 Comparison between Multi-Mode and Single-Mode Fibers; 2.7 Single-Mode Fiber Design Considerations; 2.7.1 Cutoff Wavelength; 2.7.2 Fiber Loss; 2.7.3 Fiber Dispersion; 2.7.4 Dispersion Slope; 2.7.5 Polarization Mode Dispersion; 2.7.6 Spot Size; 2.8 Dispersion-Compensating Fibers (DCFs); 2.9 Additional Examples; Exercises; Further Reading; References; Chapter 3 Lasers; 3.1 Introduction; 3.2 Basic Concepts; 3.3 Conditions for Laser Oscillations; 3.4 Laser Examples
3.4.1 Ruby Laser 3.4.2 Semiconductor Lasers; 3.5 Wave-Particle Duality; 3.6 Laser Rate Equations; 3.7 Review of Semiconductor Physics; 3.7.1 The PN Junctions; 3.7.2 Spontaneous and Stimulated Emission at the PN Junction; 3.7.3 Direct and Indirect Band-Gap Semiconductors; 3.8 Semiconductor Laser Diode; 3.8.1 Heterojunction Lasers; 3.8.2 Radiative and Non-Radiative Recombination; 3.8.3 Laser Rate Equations; 3.8.4 Steady-State Solutions of Rate Equations; 3.8.5 Distributed-Feedback Lasers; 3.9 Additional Examples; Exercises; Further Reading; References
Chapter 4 Optical Modulators and Modulation Schemes 4.1 Introduction; 4.2 Line Coder; 4.3 Pulse Shaping; 4.4 Power Spectral Density; 4.4.1 Polar Signals; 4.4.2 Unipolar Signals; 4.5 Digital Modulation Schemes; 4.5.1 Amplitude-Shift Keying; 4.5.2 Phase-Shift Keying; 4.5.3 Frequency-Shift Keying; 4.5.4 Differential Phase-Shift Keying; 4.6 Optical Modulators; 4.6.1 Direct Modulation; 4.6.2 External Modulators; 4.7 Optical Realization of Modulation Schemes; 4.7.1 Amplitude-Shift Keying; 4.7.2 Phase-Shift Keying; 4.7.3 Differential Phase-Shift Keying; 4.7.4 Frequency-Shift Keying
4.8 Partial Response Signals*

Sommario/riassunto

Fiber-optic communication systems have advanced dramatically over the last four decades, since the era of copper cables, resulting in low-cost and high-bandwidth transmission. Fiber optics is now the backbone of the internet and long-distance telecommunication. Without it we would not enjoy the benefits of high-speed internet, or low-rate international telephone calls. This book introduces the basic concepts of fiber-optic communication in a pedagogical way. The important mathematical results are derived by first principles rather than citing research articles. In addition, physical i