

1. Record Nr.	UNINA9910130959703321
Autore	Deen M. Jamal
Titolo	Silicon photonics [[electronic resource]] : fundamentals and devices / / M.J. Deen, P.K. Basu
Pubbl/distr/stampa	Chichester, West Sussex, UK ; ; Hoboken, N.J., : Wiley, 2012
ISBN	1-119-94090-7 1-280-78468-7 9786613695079 1-119-94515-1 1-119-94516-X
Edizione	[1st edition]
Descrizione fisica	1 online resource (455 p.)
Collana	Wiley Series in Materials for Electronic & Optoelectronic Applications
Altri autori (Persone)	BasuP. K (Prasanta Kumar)
Disciplina	621.38152
Soggetti	Silicon - Optical properties Optoelectronic devices Photonics
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	Silicon Photonics: Fundamentals and Devices; Contents; Series Preface; Preface; 1 Introduction to Silicon Photonics; 1.1 Introduction; 1.2 VLSI: Past, Present, and Future Roadmap; 1.3 The Interconnect Problem in VLSI; 1.4 The Long-Haul Optical Communication Link; 1.4.1 Basic Link and Components; 1.4.2 Materials and Integration; 1.5 Data Network; 1.6 Conclusions; 1.7 Scope of the Book; References; 2 Basic Properties of Silicon; 2.1 Introduction; 2.2 Band Structure; 2.2.1 E-k Diagram: General Considerations; 2.2.2 Band Properties near Extremas; 2.2.3 Refined Theory for Band Structures 2.2.4 Temperature- and Pressure-Dependent Band Gap 2.2.5 Band Structure in Ge; 2.3 Density-of-States Function; 2.4 Impurities; 2.4.1 Donors and Acceptors; 2.4.2 Isoelectronic Impurities; 2.5 Alloys of Silicon and Other Group IV Elements; 2.5.1 Different Alloy Systems; 2.5.2 Lattice Constants; 2.5.3 Band Structures of Unstrained Alloys; 2.6 Heterojunctions and Band Lineup; 2.7 Si-Based Heterostructures; 2.7.1 Lattice-Mismatched Heteroepitaxy; 2.7.2 Pseudomorphic Growth and Critical Thickness; 2.7.3 Elasticity Theory: Stress and Strain; 2.7.4

Expressions for Critical Thickness

2.7.5 Strain Symmetric Structures and Virtual Substrates 2.7.6 Band Offsets and Band Lineup; 2.7.7 Electronic Properties of SiGe/Si Heterostructures; 2.8 Direct Gap: Ge/SiGeSn Heterojunctions; 2.8.1 Structures; 2.8.2 Band Edges and Band Lineup; Problems; References; Suggested Readings; 3 Quantum Structures; 3.1 Introduction; 3.2 Quantum Wells; 3.2.1 Condition for Quantum Confinement; 3.2.2 A Representative Structure; 3.2.3 Simplified Energy Levels; 3.2.4 Density-of-States in Two Dimensions; 3.2.5 Finite Quantum Well; 3.2.6 Refined Methods; 3.2.7 Different Band Alignments 3.3 Quantum Wires and Dots 3.3.1 Subbands and DOS in Quantum Wires; 3.3.2 Quantum Dots; 3.4 Superlattices; 3.5 Si-Based Quantum Structures; 3.5.1 Electron Subband Structure; 3.5.2 Hole Subbands; 3.5.3 Quantum Wells and Barriers; 3.6 Effect of Electric Field; Problems; References; Suggested Readings; 4 Optical Processes; 4.1 Introduction; 4.2 Optical Constants; 4.3 Basic Concepts; 4.3.1 Absorption and Emission; 4.3.2 Absorption and Emission Rates; 4.4 Absorption Processes in Semiconductors; 4.5 Fundamental Absorption in Direct Gap; 4.5.1 Conservation Laws 4.5.2 Calculation of Absorption Coefficient 4.6 Fundamental Absorption in Indirect Gap; 4.6.1 Theory of Absorption; 4.6.2 Absorption Spectra in Si; 4.6.3 Absorption Spectra in Ge; 4.7 Absorption and Gain; 4.8 Intervalence Band Absorption; 4.9 Free-carrier Absorption; 4.10 Recombination and Luminescence; 4.10.1 Luminescence Lifetime; 4.10.2 Carrier Lifetime: Dependence on Carrier Density; 4.10.3 Absorption and Recombination; 4.10.4 Microscopic Theory of Recombination; 4.11 Nonradiative Recombination; 4.11.1 Recombination via Traps; 4.11.2 Auger Recombination; 4.11.3 Surface Recombination 4.11.4 Recombination of Complexes

Sommario/riassunto

The creation of affordable high speed optical communications using standard semiconductor manufacturing technology is a principal aim of silicon photonics research. This would involve replacing copper connections with optical fibres or waveguides, and electrons with photons. With applications such as telecommunications and information processing, light detection, spectroscopy, holography and robotics, silicon photonics has the potential to revolutionise electronic-only systems. Providing an overview of the physics, technology and device operation of photonic devices using exclusively silicon

2. Record Nr.	UNINA9910783384103321
Autore	Lieberman Robbie <1954->
Titolo	Prairie power [[electronic resource]] : voices of 1960s Midwestern student protest / / Robbie Lieberman
Pubbl/distr/stampa	Columbia, : University of Missouri Press, c2004
ISBN	0-8262-6256-2
Descrizione fisica	1 online resource (282 p.)
Disciplina	378.1/98/10977
Soggetti	Student movements - Middle West - History - 20th century Student protesters - Middle West
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references (p. 259-264).
Nota di contenuto	Introduction : student protest and the New Left of the 1960s revisited -- Oral histories I, national SDS leaders. Carl Davidson. Jane Adams. Jeff Shero Nightbyrd -- Three prairie power campuses -- Oral histories II, local leaders. Rory Ellinger. Bill Ebert. Ray Lenzi. Dan Viets -- Oral histories III, grassroots activists. Larry Vaughn. Wayne Sailor. Trish Vandiver. Larry Bennett. Pat Harris. Caroljean Brune.

3. Record Nr.	UNINA9910886078403321
Autore	Onizuka Makoto
Titolo	Database Systems for Advanced Applications : 29th International Conference, DASFAA 2024, Gifu, Japan, July 2–5, 2024, Proceedings, Part VI / / edited by Makoto Onizuka, Jae-Gil Lee, Yongxin Tong, Chuan Xiao, Yoshiharu Ishikawa, Sihem Amer-Yahia, H. V. Jagadish, Kejing Lu
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2024
ISBN	981-9755-72-7
Edizione	[1st ed. 2024.]
Descrizione fisica	1 online resource (510 pages)
Collana	Lecture Notes in Computer Science, , 1611-3349 ; ; 14855
Altri autori (Persone)	LeeJae-Gil TongYongxin XiaoChuan IshikawaYoshiharu Amer-YahiaSihem JagadishH. V LuKejing
Disciplina	006.31
Soggetti	Machine learning Application software Computers Computer networks Computers, Special purpose Machine Learning Computer and Information Systems Applications Computing Milieux Computer Communication Networks Special Purpose and Application-Based Systems
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Intro -- Preface -- Organization -- Contents - Part VI -- Graph and Network -- Cascading Graph Convolution Contrastive Learning Networks for Multi-behavior Recommendation -- 1 Introduction -- 2 Related Work -- 3 Problem Definition -- 4 Proposed Model -- 4.1

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 uTransfer: Unified Transferability Metric Incorporating Heterogeneous
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 Synthesizing Nodes and Contrastive Learning -- 4.8 Decoupled Cluster
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 Experiment Results -- 5.2 Ablation Study -- 5.3 Discrepancy Functions
 -- 5.4 Integrate Contrastive Learning.
 5.5 Sparse Graph.

Sommario/riassunto

The seven-volume set LNCS 14850-14856 constitutes the proceedings
 of the 29th International Conference on Database Systems for
 Advanced Applications, DASFAA 2024, held in Gifu, Japan, in July 2024.
 The total of 147 full papers, along with 85 short papers, presented
 together in this seven-volume set was carefully reviewed and selected
 from 722 submissions. Additionally, 14 industrial papers, 18 demo
 papers and 6 tutorials are included. The conference presents papers on
 subjects such as: Part I: Spatial and temporal data; database core
 technology; federated learning. Part II: Machine learning; text
 processing. Part III: Recommendation; multi-media. Part IV: Privacy and
 security; knowledge base and graphs. Part V: Natural language
 processing; large language model; time series and stream data. Part VI:
 Graph and network; hardware acceleration. Part VII: Emerging
 application; industry papers; demo papers.
