

Semiconductor Fundamentals

Session 3

Team



Postgraduate Program on Telecommunication Engineering
Institut Sains dan Teknologi Nasional, Jakarta
INDONESIA

Lecture 3

OUTLINE

- Semiconductor Fundamentals (cont'd)
 - Thermal equilibrium
 - Fermi-Dirac distribution
 - Boltzmann approximation
 - Relationship between E_f and n, p
 - Degenerately doped semiconductor

Reading: Pierret 2.4-2.5; Hu 1.7-1.10



Postgraduate Program on Telecommunication Engineering

Semiconductor Fundamentals Instructor Guide

CH Cherryholmes



Semiconductor Fundamentals Instructor Guide:

Semiconductor Fundamentals Buck Engineering Co., Inc, Lab-Volt (Québec), 1988 Semiconductor Fundamentals, Instructor Guide Lab-Volt Systems, Incorporated, 2003-08-01 *Fundamentals of Semiconductors* Peter YU, Manuel Cardona, 2007-05-08 This third updated edition of Fundamentals of Semiconductors attempts to fill the gap between a general solid state physics textbook and research articles by providing detailed explanations of the electronic vibrational transport and optical properties of semiconductors The approach is physical and intuitive rather than formal and pedantic Theories are presented to explain experimental results This textbook has been written with both students and researchers in mind Its emphasis is on understanding the physical properties of Si and similar tetrahedrally coordinated semiconductors The explanations are based on physical insights Each chapter is enriched by an extensive collection of tables of material parameters figures and problems Many of these problems lead the student by the hand to arrive at the results

Instructor's Manual for Understanding Fiber Optics Fifth Edition Jeff Hecht, 2022-08-02 An instruction manual for use with the fifth edition of Understanding Fiber Optics by Jeff Hecht This book includes an overview for instructors answers to quizzes and questions to think about published in the book worked out solutions to selected problems with equations and additional material to supplement the book This is the original manual prepared and published in 2006 along with the fifth edition of Understanding Fiber Optics with only minimal updates *Catalog of Copyright Entries. Third Series* Library of Congress. Copyright Office, 1961 Includes Part 1 Number 1 2 Books and Pamphlets Including Serials and Contributions to Periodicals January December **Trade and Industrial Education** , 1972 *Trade and Industrial Education; Instructional Materials* Ohio State University. Center for Vocational and Technical Education, 1972 **Resources in Education** , 1998

Monthly Catalogue, United States Public Documents , 1985 *Monthly Catalog of United States Government Publications* United States. Superintendent of Documents, 1985 February issue includes Appendix entitled Directory of United States Government periodicals and subscription publications September issue includes List of depository libraries June and December issues include semiannual index *Heterogeneous Catalysis* Giovanni Palmisano, Samar Al Jitan, Corrado Garlisi, 2022-01-08 Approx 320 pages Approx 320 pages **Paperbound Books in Print** , 1991 **School Shop** , 1986

American Vocational Journal , 1978 **Instructor's Manual for Use with Fundamentals of Semiconductor and Tube Electronics and Laboratory Manual** Harry Alex Romanowitz, 1962 ENC Focus , 2003 **Mathematics and Science for Students with Special Needs** Eisenhower National Clearinghouse for Mathematics and Science Education, 2003 **The Publishers' Trade List Annual** , 1980 **Catalog of Copyright Entries, Third Series** Library of Congress. Copyright Office, 1976 The record of each copyright registration listed in the Catalog includes a description of the work copyrighted and data relating to the copyright claim the name of the copyright claimant as given in the application for registration the copyright date the copyright registration number etc **Catalog of Copyright Entries, Fourth Series**

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