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Autore	Sharon Maheshwar
Titolo	An introduction to the physics and electrochemistry of semiconductors : fundamentals and applications / / Maheshwar Sharon
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ISBN	1-119-27435-4 1-119-27434-6 1-119-27436-2
Descrizione fisica	1 online resource (342 p.)
Disciplina	537.6/22
Soggetti	Semiconductors - Electric properties Semiconductors - Materials
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	Cover; Title Page; Copyright Page; Dedication; Contents; Foreword; Preface; 1 Our Universe and the Sun; 1.1 Formation of the Universe; 1.2 Formation of Stars; 1.2.1 Formation of Energy in the Sun; 1.2.2 Description of the Sun; 1.2.3 Transfer of Solar Rays through the Ozone Layer; 1.2.4 Transfer of Solar Layers through Other Layers; 1.2.5 Effect of Position of the Sun vis-a-vis the Earth; 1.2.6 Distribution of Solar Energy; 1.2.7 Solar Intensity Calculation; 1.3 Summary; Reference; 2 Solar Energy and Its Applications; 2.1 Introduction to a Semiconductor; 2.2 Formation of a Compound 2.2.1 A Classical Approach2.2.2 Why Call It a Band and Not a Level?; 2.2.3 Quantum Chemistry Approach; 2.2.3.1 Wave Nature of an Electron in a Fixed Potential; 2.2.3.2 Wave Nature of an Electron under a Periodically Changing Potential; 2.2.3.3 Concept of a Forbidden Gap in a Material; 2.2.4 Band Model to Explain Conductivity in Solids; 2.2.4.1 Which of the Total Electrons Will Accept the External Energy for Their Excitation?; 2.2.4.2 Density of States; 2.2.4.3 How Do We Find the Numbers of Electrons in These Bands?; 2.2.5 Useful Deductions; 2.2.5.1 Extrinsic Semiconductor

2.2.5.2 Role of Dopants in the Semiconductor; 2.3 Quantum Theory Approach to Explain the Effect of Doping; 2.3.1 A Mathematical Approach to Understanding This Problem; 2.3.2 Representation of Various Energy Levels in a Semiconductor; 2.4 Types of Carriers in a Semiconductor; 2.4.1 Majority and Minority Carriers; 2.4.2 Direction of Movement of Carriers in a Semiconductor; 2.5 Nature of Band Gaps in Semiconductors; 2.6 Can the Band Gap of a Semiconductor Be Changed?; 2.7 Summary; Further Reading; 3 Theory of Junction Formation; 3.1 Flow of Carriers across the Junction
3.1.1 Why Do Carriers Flow across an Interface When n- and p-Type Semiconductors Are Joined Together with No Air Gap? 3.1.2 Does the Vacuum Level Remain Unaltered, and What Is the Significance of Showing a Bend in the Diagram?; 3.1.3 Why Do We Draw a Horizontal or Exponential Line to Represent the Energy Level in the Semiconductor with a Long Line?; 3.1.4 What Are the Impacts of Migration of Carriers toward the Interface?; 3.2 Representing Energy Levels Graphically; 3.3 Depth of Charge Separation at the Interface of n- and p-Type Semiconductors; 3.4 Nature of Potential at the Interface
3.4.1 Does Any Current Flow through the Interface? 3.4.2 Effect of Application of External Potential to the p:n Junction Formed by the Two Semiconductors; 3.4.2.1 Flow of Carriers from n-Type to p-Type; 3.4.2.2 Flow of Carriers from p-Type to n-Type; 3.4.2.3 Flow of Current due to Holes; 3.4.2.4 Flow of Current due to Electrons; 3.4.3 What Would Happen If Negative Potential Were Applied to a p-Type Semiconductor?; 3.4.3.1 Flow of Majority Carriers from p- to n-Type Semiconductors; 3.4.3.2 Flow of Majority Carriers from n- to p-Type Semiconductors; 3.4.3.3 Flow of Minority Carrier from p- to n-Type Semiconductors

2.	Record Nr.	UNICAMPANIAVAN0191247
	Titolo	Quantum [Un]Speakables II] : Half a Century of Bell's Theorem / Reinhold Bertlmann, Anton Zeilinger editors
	Pubbl/distr/stampa	Cham, : Springer, 2017
	Titolo uniforme	Quantum [Un]Speakables II : Half a Century of Bell's Theorem
	Descrizione fisica	xvii, 533 p. : ill. ; 24 cm
	Soggetti	81-XX - Quantum theory [MSC 2020] 81P10 - Logical foundations of quantum mechanics; quantum logic (quantum-theoretic aspects) [MSC 2020] 81P45 - Quantum information, communication, networks (quantum-theoretic aspects) [MSC 2020]
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
3.	Record Nr.	UNINA9910375802703321
	Autore	Garcia Alessandro
	Titolo	Proceedings of the 15th Workshop on Early Aspects
	Pubbl/distr/stampa	[Place of publication not identified], : Association for Computing Machinery, 2009
	Descrizione fisica	1 online resource (52 p.;)
	Collana	ACM Conferences
	Soggetti	Information Technology - Computer Science (Hardware & Networks)
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