1. Record Nr. UNINA9910812217703321

Autore	Sharon Maheshwar
Titolo	An introduction to the physics and electrochemistry of semiconductors : fundamentals and applications / / Maheshwar Sharon
Pubbl/distr/stampa	Hoboken, New Jersey : , : John Wiley & Sons Beverly, Massachusetts : , : Scrivener Publishing, , [2016] ©2016
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