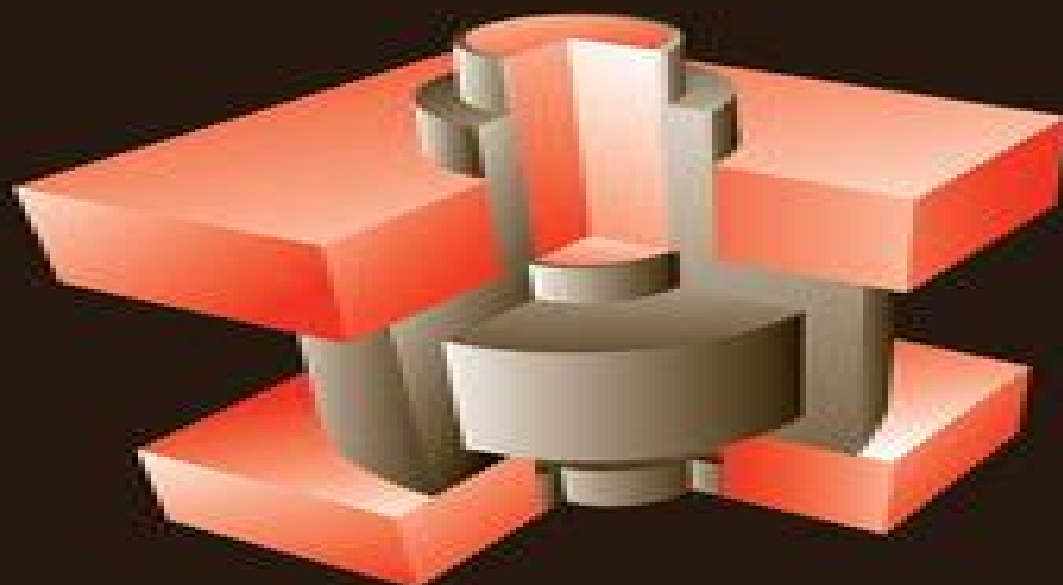


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review of basic solid state physics then goes on to describe the properties of semiconductors including energy bands the concept of effective mass carrier concentr

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semiconductor materials Computer Science students interested in custom VLSI design and professionals in the semiconductor industry **Electronic and Optoelectronic Properties of Semiconductor Structures** Jasprit Singh, 2007-03-26 A graduate textbook presenting the underlying physics behind devices that drive today's technologies The book covers important details of structural properties bandstructure transport optical and magnetic properties of semiconductor structures Effects of low dimensional physics and strain two important driving forces in modern device technology are also discussed In addition to conventional semiconductor physics the book discusses self assembled structures mesoscopic structures and the developing field of spintronics The book utilizes carefully chosen solved examples to convey important concepts and has over 250 figures and 200 homework exercises Real world applications are highlighted throughout the book stressing the links between physical principles and actual devices **Electronic and Optoelectronic Properties of Semiconductor Structures** provides engineering and physics students and practitioners with complete and coherent coverage of key modern semiconductor concepts A solutions manual and set of viewgraphs for use in lectures are available for instructors from solutions cambridge org **Semiconductor Power Devices** Josef Lutz, Heinrich Schlangenotto, Uwe Scheuermann, Rik De Doncker, 2018-02-16 Halbleiter Leistungsbaulemente sind das Kernstück der Leistungselektronik Sie bestimmen die Leistungsfähigkeit und machen neuartige und verlustarme Schaltungen erst möglich In dem Band wird neben den Halbleiter Leistungsbaulementen selbst auch die Aufbau und Verbindungstechnik behandelt von den physikalischen Grundlagen und der Herstellungstechnologie über einzelne Bauelemente bis zu thermomechanischen Problemen Zerstörungsmechanismen und Störungseffekten Die 2. bearbeitete Auflage berücksichtigt technische Neuerungen und Entwicklungen **Electronic Materials Handbook** , 1989-11-01 Volume 1 Packaging is an authoritative reference source of practical information for the design or process engineer who must make informed day to day decisions about the materials and processes of microelectronic packaging Its 117 articles offer the collective knowledge wisdom and judgement of 407 microelectronics packaging experts authors co authors and reviewers representing 192 companies universities laboratories and other organizations This is the inaugural volume of ASM's all new Electronic Materials Handbook series designed to be the Metals Handbook of electronics technology In over 65 years of publishing the Metals Handbook ASM has developed a unique editorial method of compiling large technical reference books ASM's access to leading materials technology experts enables to organize these books on an industry consensus basis Behind every article is an author who is a top expert in its specific subject area This multi author approach ensures the best most timely information throughout Individually selected panels of 5 and 6 peers review each article for technical accuracy generic point of view and completeness Volumes in the Electronic Materials Handbook series are multidisciplinary to reflect industry practice applied in integrating multiple technology disciplines necessary to any program in advanced electronics Volume 1 Packaging focusing on the middle level of the electronics technology size spectrum offers the greatest practical value to the largest and broadest group of users Future

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