Two-Dimensional Nanostructures is written by Mahmood Aliofkhazraei in English language. Release on 2012-05-02, this book has 321 page count that contain helpful information with easy reading structure. The book was publish by CRC Press, it is one of best technology & engineering book genre that gave you everything love about reading. You can find Two-Dimensional Nanostructures book with ISBN 9781439866658.

After the 2010 Nobel Prize in Physics was awarded to Andre Geim and Konstantin Novoselov “for groundbreaking experiments regarding the two-dimensional material graphene,” even more research and development efforts have been focused on
two-dimensional nanostructures. Illustrating the importance of this area in future applications, Two-Dimensional Nanostructures covers the fabrication methods and properties of these materials. The authors begin with discussions on the properties, size effect, applications, classification groups, and growth of nanostructures. They then describe various characterization and fabrication methods, such as spectrometry, low-energy electron diffraction, physical and chemical vapor deposition, and molecular beam epitaxy. The remainder of the text focuses on mechanical, chemical, and physical properties and fabrication methods, including a new mechanical method for fabricating graphene layers and a model for relating the features and structures of nanostructured thin films. With companies already demonstrating the capabilities of graphene in a flexible touch-screen and a 150 GHz transistor, nanostructures are on their way to replacing silicon as the materials of choice in electronics and other areas. This book aids you in understanding the current chemical, mechanical, and physical processes for producing these “miracle materials.”

Two Dimensional Nanostructures Related Books

Nanostructures and Nanomaterials
This is the 2nd edition of the original "Nanostructures and Nanomaterials" written by Guozhong Cao and published by Imperial College Press in 2004. This important book focuses not only on the synthesis and fabrication of nanostructures and nanomaterials, but also includes properties and applications of nanostructures and nanomaterials, particularly inorganic nanomaterials. It provides balanced and comprehensive coverage of the fundamentals and processing techniques with regard to synthesis, char...

Biomedical Nanostructures
Learn to Use Nanoscale Materials to Design Novel Biomedical Devices and Applications Discover how to take full advantage of nanoscale materials in the design and fabrication of leading-edge biomedical devices. The authors introduce you to a variety of possible clinical applications such as drug delivery, diagnostics, and cancer therapy. In addition, the authors explore the interface between micron and nanoscale materials for the development of applications such as tissue engineering. Finally, th...

Characterization of Nanostructures
The techniques and methods that can be applied to materials characterization on the microscale are numerous and well-established. Divided into two parts, Characterization of Nanostructures provides thumbnail sketches of the most widely used techniques and methods that apply to nanostructures, and discusses typical applications to single nanoscale objects, as well as to ensembles of such objects. Section I: Techniques and Methods overviews the physical principles of the main techniques and descri...

Functional Nanostructures
Nanocrystalline materials exhibit outstanding structural and mechanical properties. However, future progress in this emerging field is critically dependent upon the development of new methods of understanding and analyzing the underlying nanoscale and interface effects causing their unique mechanical properties. This exceptionally well-researched volume in Nanostructure Science and Technology serves both as an introduction to structural nanocrystalline materials as well as a monograph providing...

Dynamical Symmetries for Nanostructures
Group theoretical concepts elucidate fundamental physical phenomena, including excitation spectra of quantum systems and complex geometrical structures such as molecules and crystals. These concepts are extensively covered in numerous textbooks. The aim of the present monograph is to illuminate more subtle aspects featuring group theory for quantum mechanics, that is, the concept of dynamical symmetry. Dynamical symmetry groups complement the conventional groups: their elements induce transition...
Handbook of Less-Common Nanostructures

As nanotechnology has developed over the last two decades, some nanostructures, such as nanotubes, nanowires, and nanoparticles, have become very popular. However, recent research has led to the discovery of other, less-common nanoforms, which often serve as building blocks for more complex structures. In an effort to organize the field, the Handbook of Less-Common Nanostructures presents an informal classification based mainly on the less-common nanostructures. A small nanotechnological encyclo...

Semiconductor Nanostructures for Optoelectronic Devices

This book presents the fabrication of optoelectronic nanodevices. The structures considered are nanowires, nanorods, hybrid semiconductor nanostructures, wide bandgap nanostructures for visible light emitters and graphene. The device applications of these structures are broadly explained. The book deals also with the characterization of semiconductor nanostructures. It appeals to researchers and graduate students.

Graphene, Carbon Nanotubes, and Nanostructures

Graphene, Carbon Nanotubes, and Nanostructures: Techniques and Applications offers a comprehensive review of groundbreaking research in nanofabrication technology and explores myriad applications that this technology has enabled. The book examines the historical evolution and emerging trends of nanofabrication and supplies an analytical understanding of some of the most important underlying nanofabrication technologies, with an emphasis on graphene, carbon nanotubes (CNTs), and nanowires. Featur...

Advances in Synthesis, Processing, and Applications of Nanostructures

With contributed papers from the 2011 Materials Science and Technology symposia, this is a useful one-stop resource for understanding the most important issues in advances in the synthesis, processing, and applications of nanostructures. Logically organized and carefully selected, the articles cover the themes of the symposia: Nanotechnology for Energy, Healthcare and Industry; Controlled Synthesis Processing and Applications of Structural and Functional Nanomaterials; and Synthesis, Properties,...

Topological Modelling of Nanostructures and Extended Systems

Topological Modelling of Nanostructures and Extended Systems completes and expands upon the previously published title within this series: The Mathematics and Topology of Fullerenes (Vol. 4, 2011) by gathering the latest research and advances in materials science at nanoscale. It introduces a new speculative area and novel concepts like topochemical reactions and colored reactive topological indices and provides a better understanding of the physical-chemical behaviors of extended systems. Moreo...

Related Topics

5th Dimensional Life

Fifth Dimensional Living

Two Dimensional Spline Interpolation

The Physics Of Low Dimensional Semiconductors Pdf

The Physics Of Low-dimensional Semiconductors An Introduction

Three Dimensional Surface Topography Book

One Dimensional Spline Interpolation Algorithms Helmuth Späth