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Titolo	Two-dimensional carbon : fundamental properties, synthesis, characterization, and applications // edited by Yihong Wu, Zexiang Shen, Ting Yu
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Descrizione fisica	1 online resource (342 p.)
Collana	Pan Stanford Series on Carbon-Based Nanomaterials
Disciplina	541.39
Soggetti	Carbon compounds Nanostructured materials Graphene Nanotechnology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record
Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Front Cover; Contents; Preface; Chapter 1: Introduction; Chapter 2: Electronic Band Structure and Properties of Graphene; Chapter 3: Growth of Epitaxial Graphene on SiC; Chapter 4: Chemical Vapor Deposition of Large-Area Graphene on Metallic Substrates; Chapter 5: Growth and Electrical Characterization of Carbon Nanowalls; Chapter 6: Structural Characterization of Carbon Nanowalls and Their Potential Applications in Energy Devices; Chapter 7: Raman and Infrared Spectroscopic Characterization of Graphene; Chapter 8: Graphene-Based Materials for Electrochemical Energy Storage Chapter 9: Chemical Synthesis of Graphene and Its Applications in Batteries Chapter 10: Photonic Properties of Graphene Device; Chapter 11: Graphene Oxides and Reduced Graphene Oxide Sheets: Synthesis, Characterization, Fundamental Properties, and Applications
Sommario/riassunto	After a brief introduction to the fundamental properties of graphene, this book focuses on synthesis, characterization and application of various types of two-dimensional (2D) nanocarbons ranging from single/few layer graphene to carbon nanowalls and graphene oxides.

Three major synthesis techniques are covered: epitaxial growth of graphene on SiC, chemical synthesis of graphene on metal, and chemical vapor deposition of vertically aligned carbon nanosheets or nanowalls. One chapter is dedicated to characterization of 2D nanocarbon using Raman spectroscopy. It provides extensive coverage for a

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