1. Record Nr. UNISALENTO991000406209707536

Autore	Eisenstadt, Shmuel Noah
Titolo	Society, culture, and urbanization / S. N. Eisenstadt, A. Shachar
Pubbl/distr/stampa	Newbury Park [etc.] : Sage, c1987
ISBN	080392478X
Descrizione fisica	391 p. ; 24 cm
Altri autori (Persone)	Shachar, Arie
Soggetti	Urbanizzazione - Società - Cultura - Studi Società - Urbanizzazione - Cultura - Studi Sociologia urbana
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia

2. Record Nr. UNINA9910973111203321

Autore	Warner Jamie H
Titolo	Graphene : fundamentals and emergent applications / / Jamie H. Warner ... [et al.]
Pubbl/distr/stampa	Amsterdam ; ; New York, : Elsevier, 2013
ISBN	9781283836890 1283836890 9780123948274 0123948274
Edizione	[1st ed.]
Descrizione fisica	1 online resource (461 p.)
Altri autori (Persone)	WarnerJamie H
Disciplina	546/.681 546.681
Soggetti	Graphene Graphene - Industrial applications
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 and index.
Nota di contenuto	Front Cover; Graphene: Fundamentals and Emergent Applications; Copyright; Contents; Chapter 1 - Introduction; 1.1. ABOUT THE BOOK; REFERENCES; Chapter 2 - The Atomic Structure of Graphene and Its Few-layer Counterparts; 2.1. GRAPHENE; 2.2. BILAYER, TRILAYER AND FEW-LAYER GRAPHENE; 2.3. RELATIONSHIP OF GRAPHENE TO CARBON NANOTUBES; 2.4. OTHER LAYERED 2D CRYSTALS; 2.5. NANOSTRUCTURED GRAPHENE; REFERENCES; Chapter 3 - Properties of Graphene; 3.1 - Electronic Properties; 3.1.1. INTRODUCTION; 3.1.2. THE BAND STRUCTURE OF GRAPHENE; 3.1.3. TRANSPORT EXPERIMENTS IN GRAPHENE; REFERENCES 3.2 - Chemical Properties of Graphene3.2.1. INTRODUCTION; 3.2.2. COVALENT FUNCTIONALISATION OF GRAPHENE; 3.2.3. NONCOVALENT FUNCTIONALISATION OF GRAPHENE; 3.2.4. SUMMARY; REFERENCES; 3.3 - Electron Spin Properties of Graphene; 3.3.1. INTRODUCTION; 3.3.2. SPIN AND MAGNETISM IN GRAPHITE; 3.3.3. MAGNETISM AND SPIN IN GRAPHENE; 3.3.4. SUMMARY; REFERENCES; 3.4 - The Mechanical Properties of Graphene; 3.4.1. ELASTIC PROPERTIES AND INTRINSIC STRENGTH; 3.4.2. ADHESION, TEARING AND CRACKING OF GRAPHENE; 3.4.3. THE ROLE OF DEFECTS AND STRUCTURAL MODIFICATION ON THE MECHANICAL PROPERTIES 3.4.4. GRAPHENE DERIVATIVES3.4.5. GRAPHENE-BASED COMPOSITES; REFERENCES; 3.5 - The Thermal Properties of Graphene; 3.5.1. THERMAL CONDUCTIVITY; REFERENCES; Chapter 4 - Methods for Obtaining Graphene; 4.1 - Mechanical Exfoliation; 4.1.1. INTRODUCTION TO MECHANICAL EXFOLIATION; 4.1.2. MICROMECHANICAL EXFOLIATION; 4.1.3. MECHANICAL CLEAVAGE OF GRAPHITE; 4.1.4. MECHANICAL MILLING OF GRAPHITE; 4.1.5. SUMMARY; REFERENCES; 4.2 - Chemical Exfoliation; 4.2.1. INTRODUCTION TO CHEMICAL EXFOLIATION; 4.2.2. REVIEW OF CHEMICAL EXFOLIATION; 4.2.3. DIFFERENT TYPES OF GRAPHITE 4.2.4. DIFFERENT TYPES OF SOLVENTS4.2.5. DIFFERENT TYPES OF SONICATION; 4.2.6. HOW TO CHARACTERISE CHEMICALLY EXFOLIATED GRAPHENE; 4.2.7. OTHER 2D CRYSTALS; 4.2.8. SUMMARY; REFERENCES; 4.3 - Reduced Graphene Oxide; 4.3.1. GRAPHENE OXIDE; 4.3.2. CHEMICAL REDUCTION OF GRAPHENE OXIDE; 4.3.3. HEAT TREATMENT OF GRAPHENE OXIDE; 4.3.4. ELECTROCHEMICAL REDUCTION OF GRAPHENE OXIDE; 4.3.5. SUMMARY; REFERENCES; 4.4 - Bottom-up Synthesis of Graphene From Molecular Precursors; 4.4.1. INTRODUCTION; 4.4.2. SOLUTION-BASED APPROACHES; 4.4.3. SOLUBILISATION STRATEGIES 4.4.4. SOLVOTHERMAL SYNTHESIS AND SONICATION4.4.5. CHEMO-THERMAL BASED APPROACHES; 4.4.6. SELF-ASSEMBLY OF GRAPHENE OXIDE NANOSHEETS; REFERENCES; 4.5 - Chemical Vapour Deposition Using Catalytic Metals; 4.5.1. INTRODUCTION; 4.5.2. CHEMICAL VAPOUR DEPOSITION (CVD) BASICS; 4.5.3. SUBSTRATE SELECTION; 4.5.4. SUBSTRATE PRE-TREATMENT; 4.5.5. GRAPHENE OVER NI AND CU; 4.5.6. EARLY GROWTH; 4.5.7. THE ROLE OF HYDROGEN IN THE CVD REACTION; 4.5.8. GRAPHENE-OTHER METALS AND ALLOYS; 4.5.9. SEGREGATION ROUTES; REFERENCES; 4.6 - CVD Synthesis of Graphene Over Nonmetals; 4.6.1. INTRODUCTION 4.6.2. ASPECTS TO CONSIDER WITH NONMETAL CATALYSTS
Sommario/riassunto	Providing fundamental knowledge necessary to understand graphene's atomic structure, band-structure, unique properties and an overview of groundbreaking current and emergent applications, this new handbook is essential reading for materials scientists, chemists and physicists.

Since the 2010 physics Nobel Prize awarded to Geim and Novosolev for their groundbreaking work isolating graphene from bulk graphite, there has been a huge surge in interest in the area. This has led to a large number of news books on graphene. However, for such a vast inflow of new entrants, the current liter