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Nota di contenuto	Preface; Contents; Chapter 1 Graphene: Synthesis, Functionalization and Properties C. N. R. Rao, K. S. Subrahmanyam, H. S. S. Ramakrishna Matte and A. Govindaraj; 1. Introduction; 2. Synthesis; 3. Functionalization and Solubilization; 4. Surface Properties; 5. Interaction with Electron Donor and Acceptor Molecules; 6. Decoration of Graphene with Metal Nanoparticles; 7. Magnetic Properties; 8. Inorganic Graphene Analogues; References; Chapter 2 Synthesis and Characterization of Exfoliated Graphene- and Graphene Oxide-Based Composites K. R. Rasmi, K. Chakrapani and S. Sampath; 1. Introduction 2. Experimental Section 2.1. Materials; 2.2. Synthesis of exfoliated graphene oxide; 2.3. Synthesis of EGO- Au-Ag alloy composites; 2.3. Synthesis of GO-Co ₃ O ₄ composite; 2.4. Synthesis of EGO-RuO _x composite; 2.5. Materials characterization; 3. Results and Discussion; 3.1. Electrochemical detection of dopamine using graphene-alloy nanocomposites; 3.2. Composites of exfoliated graphene oxide- and Co ₃ O ₄ or RuO _x ; 4. Summary; Acknowledgments; References; Chapter 3 Singlet Open-Shell Character of Polyperiacenes A. Shimizu, A. Konishi,

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6. Spontaneous Lattice Distortion

Sommario/riassunto

Graphene, a single sheet of graphite, has an unconventional electronic structure that can be described in terms of massless Dirac Fermions. This interesting electronic feature is not only an important fundamental issue in condensed matter physics but also
