

1. Record Nr.	UNINA9910585939803321
Autore	Gonzalez-Dominguez Jose Miguel
Titolo	Properties and Applications of Graphene and Its Derivatives
Pubbl/distr/stampa	Basel, : MDPI - Multidisciplinary Digital Publishing Institute, 2022
Descrizione fisica	1 electronic resource (378 p.)
Soggetti	Research & information: general Earth sciences, geography, environment, planning
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	<p>Graphene is a two-dimensional, one-atom-thick material made entirely of carbon atoms, arranged in a honeycomb lattice. Because of its distinctive mechanical (e.g., high strength and flexibility) and electronic (great electrical and thermal conductivities) properties, graphene is an ideal candidate in myriad applications. Thus, it has just begun to be engineered in electronics, photonics, biomedicine, and polymer-based composites, to name a few. The broad family of graphene nanomaterials (including graphene nanoplatelets, graphene oxide, graphene quantum dots, and many more) go beyond and aim higher than mere single-layer ('pristine') graphene, and thus, their potential has sparked the current Special Issue. In it, 18 contributions (comprising 14 research articles and 4 reviews) have portrayed probably the most interesting lines as regards future and tangible uses of graphene derivatives. Ultimately, understanding the properties of the graphene family of nanomaterials is crucial for developing advanced applications to solve important challenges in critical areas such as energy and health.</p>