

1. Record Nr.	UNINA9910346679903321
Autore	Avila Samuel
Titolo	Integration of 2D Materials for Electronics Applications / Samuel Avila, Jens Eriksson, Sushant Sonde, Filippo Giannazzo
Pubbl/distr/stampa	MDPI - Multidisciplinary Digital Publishing Institute, 2019 Basel, Switzerland : , : MDPI, , 2019
ISBN	9783038976073 3038976075
Descrizione fisica	1 electronic resource (264 p.)
Soggetti	Chemistry
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	<p>Two-dimensional (2D) materials and their vertical/lateral heterostructures are currently the subject of massive research interests, both for fundamental science and for technological applications in diverse fields, such as electronics, optoelectronics, quantum metrology, spintronics, membranes, energy conversion/storage, and sensing. Integration of 2D materials within real device structures currently represents the main challenge to move from the laboratory stage to industrial applications, especially in the fields of electronics/optoelectronics. This Book is a collection of 9 papers, covering the different key topics of this rapidly developing research field. These include: synthesis of 2D materials, progress in relevant processing issues (contact, doping and mobility engineering), advanced characterization techniques, novel device applications based on the integration of these 2D materials. Many of the papers of this collection are review papers, providing the general introductory information and a broad overview of the most recent advances in the specific topic. Hence, this book can serve both as a general introduction for non-experts in the field and as a guide for scientists/engineers working in the field of 2D materials integration.</p>

