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Nota di contenuto	Intro -- Series Editor's Preface -- Preface -- Acknowledgements -- Introduction -- Contents -- Editors and Contributors -- 1 Introduction, History, and Origin of Two Dimensional (2D) Materials -- 1 Introduction -- 2 Evolution of 2D Materials -- 3 Growing Interest in 2D Materials -- 4 Challenges and Opportunities -- References -- 2 Different Types and Intense Classification of 2D Materials -- 1 Introduction -- 2 Types -- 2.1 Graphene Family -- 2.2 2D Oxides -- 2.3 2D Chalcogenides -- 3 Conclusion -- References -- 3 Different Techniques for Designing and Fabrication of 2D Materials -- 1 Introduction -- 2 Approaches for Graphene Synthesis and Its Modification -- 2.1 Synthesis of Graphene -- 2.2 Production of GO -- 2.3 Structure of Graphene Oxide -- 2.4 GO Characteristics and Applications -- 2.5 Some Very Important Surface Modification of Graphene -- 3 Conclusion -- References -- 4 2D Graphene Oxide-Based Composites and Their Application in Catalysis and Sensing -- 1 Introduction -- 2 Background of Graphene Oxide -- 3 Characterization and Structural Features of Graphene Oxide -- 4 Application in Sensor -- 5 Application in Catalysis -- 6 Conclusion -- 7 Future Aspects -- References -- 5 Nanostructured 2D Materials as Nano Coatings and Thin Films -- 1 Introduction -- 2 The 2D Material Coatings -- 2.1 Graphene -- 2.2 Transition Metal Dichalcogenides (TMDs) -- 2.3 Hexagonal Boron Nitride (H-BN) -- 2.4 Black Phosphorous (BP) -- 3 Conclusions --

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