The potential offered by carbon nanomaterials and its innovative applications is attracting increasing interest from various sectors, both academic and industrial, especially application as nanoadsorbent. Carbon nanomaterials can play an important role in this context, and therefore, an emerging research area is the development of new nanomaterials with promisingly high affinity, capacity, and selectivity for adsorption. The removal of obstacles to the use of carbon nanomaterials, enabling products based on nanostructured materials to be available soon to society, will take place as advances occur in the interaction between industry, research centers, and the development of human resources. Therefore, it is essential to exchange information and experiences in these areas. This book “Carbon Nanomaterials as Adsorbents for Environmental and Biological Applications” shall consider this context.

This book presents a development of the current knowledge available regarding the application of this broad and versatile family for water treatment, drug delivery systems, and nanosensors. The first chapter elucidates aspects of the adsorption process. Afterward, we present the characteristics and properties of fascinating carbon nanomaterials for adsorption application. The subsequent chapter of this book presents the kinetic and equilibrium models of adsorption, processing of experimental data, and adsorption process peculiarities. Environmental and biological applications of carbon nanomaterials are discussed in the last chapter.

The clear language and the application-oriented perspective from which this book is written make it suitable for both students and researchers that wish to discover more captivating applications of carbon nanomaterials as nanoadsorbents.

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