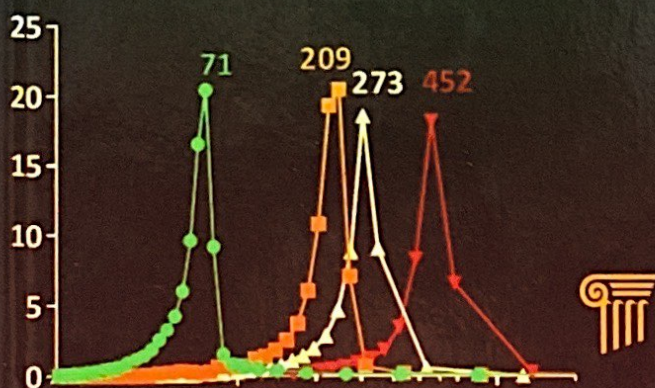
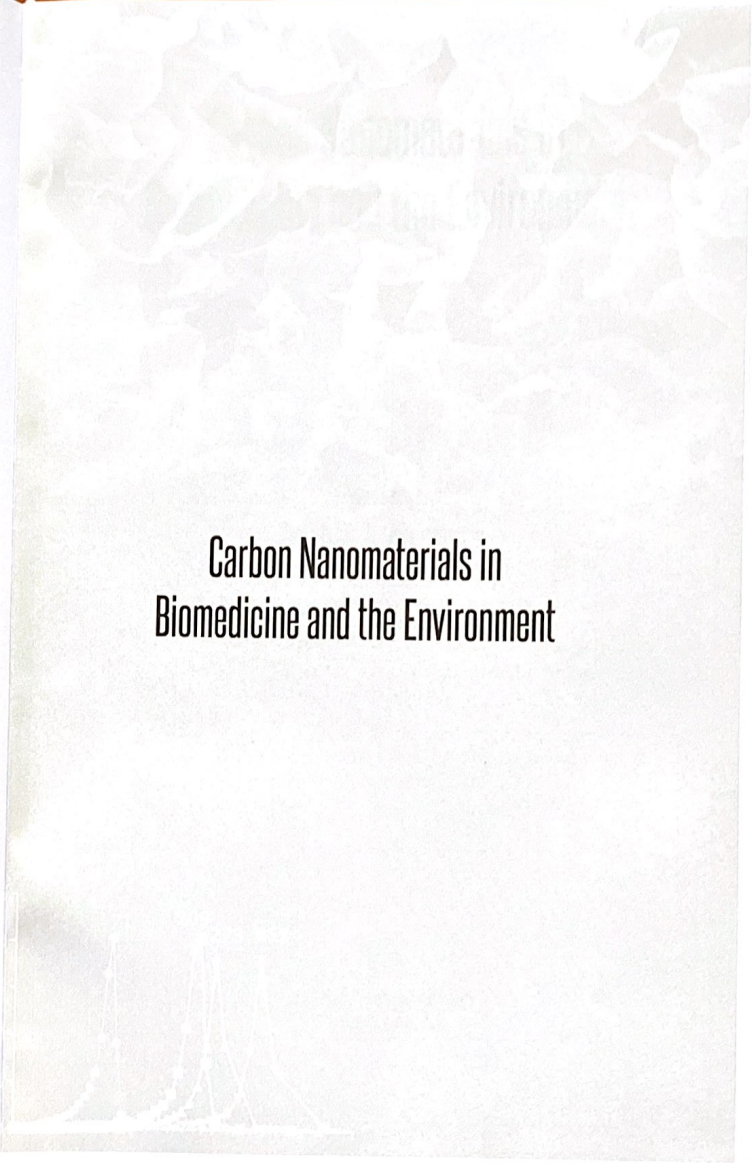


edited by
Zulhair A. Mansurov

Carbon Nanomaterials in Biomedicine and the Environment





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"This book summarizes the recent advances in the use of carbon materials in modern medicine. First, it introduces nanocarbon materials, focusing on those derived from waste biomass, which is followed by their characterization methods. A very important chapter on applications addresses the use of carbons with adsorbed fusicoccin as anticancer drugs or on carbons as entero- and vulnerosorbents, or as blood purification agents. The book presents interesting approaches and certainly can be used as a reference by the professionals and students interested in carbon science or in the medical applications of these important adsorbents."

Prof. Teresa J. Bandoz
The City College of New York, USA

"I enjoyed reading this book, especially because it highlights some very interesting aspects and applications of carbon nanomaterials that are often overlooked in most publications. These materials can indeed play a key role in the remediation of major health care problems such as the handling of septic wounds, blood purification, and even cancer treatment. Combined with their more traditional use in environmental remediation, which is also addressed in this work, it clearly demonstrates the wide versatility of carbon nanomaterials."

Prof. Peter Lodewyckx
Royal Military Academy, Belgium

"This book follows the latest achievements and frontiers of the development of contemporary carbon nanomaterials, systematically expounds the theory and application of carbon nanomaterials science, and comprehensively introduces the research results in this field and the latest progress in the world."

Prof. Xintai Su
South China University of Technology, China

Carbon nanomaterials possess special physical and chemical properties. As adsorbents, they are widely used for the purification of water and other liquids, recovery of valuable substances from liquid and gaseous media, and oil refining and also in petrochemical, wine, oil and fat, and other industries. They can be used in medicine, both for the creation of hemosorption systems that are capable of performing specific purification of blood and other physiological fluids, including removal of various exo- and endotoxins, and for the construction of highly effective adsorbed probiotics.

The creation of nanostructured carbon-containing materials is one of many rapidly developing research fields and also the theme of this book. The book focuses on the recent developments in the synthesis of nanostructured carbon multifunctional sorbents and covers topics such as fusicoccin compounds as anticancer agents, entero- and vulnerosorption, and blood purification. It will be useful for scientists, chemical industry specialists, professors, and master's and PhD students of chemical, physical, and biological sciences.



Zulkhair A. Mansurov is professor at Al-Farabi Kazakh National University, Kazakhstan, and councilor of the general director of the Institute of Combustion Problems of the Ministry of Education and Science of the Republic of Kazakhstan. His scientific work includes the investigation of the kinetics and mechanisms of hydrocarbon combustion, soot formation, nanotechnology, petrochemistry, and carbon nanomaterials for biomedicine and environment applications. He is the editor-in-chief of *Eurasian Chemico-Technological Journal* (English, indexed at Scopus) and *Combustion and Plasma Chemistry* (Russian).

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