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The progress of society has led to an improvement of the quality of life of a significant number of people. On the other hand, anthropogenic pollution dramatically increased, with serious consequences for the environment and human health. Controlling and remedying environmental pollution is one of the main challenges of our century. Fundamental and applicative research are called to collaborate. involving scientists in the development of realistic and effective systems for the prevention and the removal of pollutants from the environment. Spreading knowledge is among the missions of researchers and this is the aim of this book, offering an updated view on innovative materials and methods for pollutant treatment. It is composed of 18 articles, among them 5 reviews and 13 original articles, dedicated to new adsorbent materials (inorganic, organic, and hybrid materials) for the capture of pollutant species and for their catalytic conversion into non-toxic substances, and to bioremediation approaches to treat contaminated media. Water, air, and soil pollution was investigated, both at the lab and large scale, with special relevance for wastewater treatments for the removal of heavy metals and organic pollutants. We are grateful to "Molecules" for the opportunity to edit the Special Issue on "Innovative Materials and Methods for the Removal of Pollutants from the Environment". We created, for this book, an original cover image, dedicated to the efforts of chemistry to defend the beauty of environment, represented by flowers, against every prejudice that considers chemistry an enemy of life.