1. Record Nr. UNINA9910907082203321 **Titolo** New Orleans tribune Pubbl/distr/stampa New Orleans [La.]:,:[Tribune],, 1864-Descrizione fisica 1 online resource 071.3 Disciplina Soggetti African Americans - Louisiana - New Orleans African American newspapers - Louisiana African American newspapers African Americans Newspapers. New Orleans (La.) Newspapers Louisiana Louisiana New Orleans Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Periodico

English content is different from the French content.

Note generali

Record Nr. UNINA9910864192503321 Autore Ikram Muhammad **Titolo** Carbon-Based Nanomaterials for Environmental Applications / / by Muhammad Ikram, Ali Haider, Sawaira Moeen, Junaid Haider Cham:,: Springer Nature Switzerland:,: Imprint: Springer,, 2024 Pubbl/distr/stampa **ISBN** 9783031593901 3031593901 Edizione [1st ed. 2024.] Descrizione fisica 1 online resource (126 pages) Collana Engineering Materials, , 1868-1212 Altri autori (Persone) HaiderAli MoeenSawaira HaiderJunaid Disciplina 620.11 Soggetti Materials science Nanotechnology Microbiology **Photocatalysis**

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Introduction -- Synthesis Protocol -- Dye Degradation Application --Nota di contenuto

Photocatalytic Application -- Antibacterial Application -- Conclusion,

Challenges and Future Perspectives.

Sommario/riassunto This book delves into the incredible potential of carbon-based

> nanomaterials to solve critical ecological problems. Over the last few decades, substantial research has been conducted on the design and development of advanced nanomaterials for efficient energy storage, wastewater treatment, and antibacterial activities. Carbon-based materials have drawn increasing attention owing to their intriguing physicochemical properties and broad range of promising applications. Learn how these innovative materials are transforming our planet for improvements in areas as diverse as pollution management, purging water, and renewable energy. In this book, the authors briefly introduce the classification of carbon-based materials followed by describing in

detail the various synthetic methods classified in two categories, i.e., bottom-up methods and top-down methods. After introducing the synthesis, environmental applications including water purification, air purification, and energy storage and antibacterial activity are explained. Finally, the challenges and opportunities in this promising research area are also proposed. In the current book, carbon-based nanomaterials are addressed in aim for sufficient energy production, wastewater treatment, and as an antibacterial agent. In Chapters 1 and 2, the authors overview the introduction and classifications of carbonbased nanomaterials with its fabrication process. In the next section, the authors review the water purification applications and improvement in the dve degradation activity of carbon-based materials including doping, increasing surface area, and many others. Chapter 4 covers the air purification and energy applications of carbon-based materials along with their experimental and theoretical studies. Moreover, the next chapter explores carbon-based materials for antibacterial activity. This book is specially designed for research purposes and helps the beginners, post-graduate students, and experienced researchers who are working on carbon-based materials and their applications. The book sheds critical light on the ways in which these materials might help make the world a better, more sustainable place.