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Nanomaterials for drug delivery application -- Waste derived carbon nanotubes (CNTs): A revolutionary product towards energy applications -- Waste-derived Carbon Nanomaterials for Solar Cell Applications -- Waste-derived carbon nanomaterials for Microbial Fuel Cells -- Waste-derived Graphene: A new avenue for Supercapacitors.

Sommario/riassunto

This contributed volume focuses on the development of waste-derived carbon nanostructures (WD-CNs) from various waste materials, such as municipal garbage, plastics, industrial waste, and agricultural residues, highlighting their potential for recycling in a circular economy. It explores synthetic processes that convert waste into valuable carbon nanomaterials, reducing the need for cleansing and lowering the carbon footprint compared to traditional methods. The book also examines the functionalization of WD-CNs for diverse applications in energy, environment, and biology, promoting sustainable innovation and commercialization of green technologies. It is a useful tool for researchers, graduate students and professionals working in the fields of materials science, nanotechnology, environmental science, and chemical engineering. .