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| Autore | Lubguban Arnold A |
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| Soggetti | Surfaces (Physics)<br>Biomaterials<br>Bioremediation<br>Biophysics<br>Membranes (Biology)<br>Surface and Interface and Thin Film<br>Environmental Biotechnology<br>Membrane Biophysics<br>Biological Membranes |
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| Nota di contenuto | -- Introduction to Oil Spill and Sorbents. -- Bio based Foam Sorbents Chemistry Synthesis and Properties. -- Factors Affecting Foam Sorbent Performance. -- Properties of Bio based Foam Sorbents. -- Scalability and Other Considerations of Biobased Foam Sorbents. -- Future Directions and Innovations. |
| Sommario/riassunto | This book highlights the advantages of using sorbents in oil spill cleanup while dealing with the challenges of limited capacity and disposal. Bio-based foam sorbents are new but promising sorbents to oil spill cleanup. They are environmentally friendly materials derived from renewable resources such as vegetable oil and biomass, designed to absorb or adsorb oil and other pollutants from water, coastal areas, wetlands, ice-covered waters, and urban surfaces. These foams offer a sustainable alternative to traditional petroleum-based sorbents, with |

comparable or even superior performance in oil adsorption capacity, recyclability, and biodegradability. Moreover, a bio-based foam sorbent with inherent hydrophobic property is discussed, opening a new pathway for bio-based foam sorbents that usually need surface modification. This book is a good read for environmental scientists, engineers, sustainability experts, and researchers offering insights in related to the chemistry, performance, and commercialization potential of bio-based foam sorbents. It explores various methods for synthesizing bio-based foam sorbents, providing a detailed examination of the underlying chemistry involved in these processes.