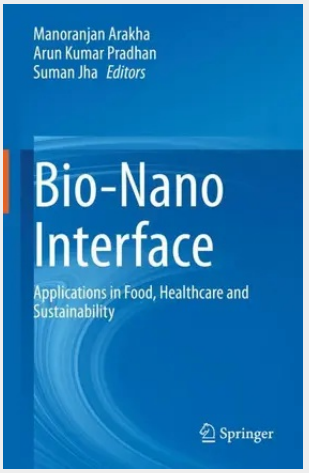
Arakha / Pradhan / Jha

Bio-Nano Interface

Applications in Food, Healthcare and Sustainability



This book discusses the unique interactions of nanoparticles with various biomolecules under different environmental conditions. It describes the consequences of these interactions on other biological aspects like flora and fauna of the niche, cell proliferation, etc. The book provides information about the novel and eco-friendly nanoparticle synthesis methods, such as continuous synthesis of nanoparticles using microbial cells. Additionally, the book discusses nanoparticles' potential impact in different areas of biological sciences like food, medicine, agriculture, and the environment. Due to their advanced physicochemical properties, nanoparticles have revolutionized biomedical and pharmaceutical sciences. Inside the biological milieu, nanoparticles interact with different moieties to adopt stable shape, size, and surface functionalities and form nano-biomolecular complexes. The interaction pattern at the interface form complexes determines the fate of interacting biomolecules and nanoparticles inside the biological system. Understanding the interaction pattern at the nano-bio interface is crucial for the safe use of nanoparticles in natural sciences. This book rightly addresses all questions about the interaction and the ensuing structure and function of these nano-biomolecular complexes.

This book caters to students and researchers in the area of biotechnology, microbiology, and pharmaceutical sciences.

This book discusses the unique interactions of nanoparticles with various biomolecules under different environmental conditions. It describes the consequences of these interactions on other biological aspects like flora and fauna of the niche, cell proliferation, etc. The book provides information about the novel and eco-friendly nanoparticle synthesis methods, such as continuous synthesis of nanoparticles using microbial cells. Additionally, the book discusses nanoparticles' potential impact in different areas of biological sciences like food, medicine, agriculture, and the environment. Due to their advanced physicochemical properties, nanoparticles have revolutionized biomedical and pharmaceutical sciences. Inside the biological milieu, nanoparticles interact with different moieties to adopt stable shape, size, and surface functionalities and form nano-biomolecular complexes. The interaction pattern at the interface form complexes determines the fate of interacting biomolecules and nanoparticles inside the biological system. Understanding the interaction pattern at the nano-bio interface is crucial for the safe use of nanoparticles in natural sciences. This book rightly addresses all questions about the interaction and the ensuing structure and function of these nano-biomolecular complexes. This book caters to students and researchers in the area of biotechnology, microbiology, and pharmaceutical sciences.

171,19 €
159,99 € (zzgl. MwSt.)

Lieferfrist: bis zu 10 Tage

Artikelnummer: 9789811625152
Medium: Buch
ISBN: 978-981-16-2515-2
Verlag: Springer Nature Singapore
Erscheinungstermin: 28.11.2021
Sprache(n): Englisch
Auflage: 1. Auflage 2022
Produktform: Gebunden
Gewicht: 717 g
Seiten: 355
Format (B x H): 160 x 241 mm