

The applications of conductive nanomaterials in the biomedical field

Datenbank

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Deskriptoren

Biosensor; Tissue Engineering; Wirkstofffreisetzung; Leiterwerkstoff; Protein; Biomaterial; Flächeninhalt; elektrisches Signal; Volumen Kennzahl; biomedizinische Anwendung

Freie Begriffe

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Abstract

As their name suggests, conductive nanomaterials (CNMs) are a type of functional materials, which not only have a high surface area to volume ratio, but also possess excellent conductivity. Thus far, CNMs have been widely used in biomedical applications, such as effectively transferring electrical signals, and providing a large surface area to adsorb proteins and induce cellular functions. Recent works propose further applications of CNMs in biosensors, tissue engineering, neural probes, and drug delivery. This review focuses on common types of CNMs and elaborates on their unique properties, which indicate that such CNMs have a potential to develop into a class of indispensable biomaterials for the diagnosis and therapy of human diseases.

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