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Biomaterials and Their Applications
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Abstract

Biomaterials are synthetic or natural materials that are used to directly replace, change or improve the living tissues which have been damaged by diseases, trauma, accidents, etc. This biomaterial can be single or in combination with other materials which are used in living tissues at different times. Although a lot of efforts have been done on improving the quality and efficiency of biomaterials, there is a long way to achieve an ideal biomaterial with minimum side effects. This book is an overview of the types of biomaterial (such as bioceramics, biopolymers, metals and biocomposites) and especially nano-biomaterials, their applications in different tissues (drug delivery systems, tissue engineering, implants, etc.) and also to give an overall view in new trends in the biomaterial field the during last decades.

Keywords Biomaterial · Biocompatibility · Tissue engineering · Drug delivery systems · Meso-porous materials · Biocomposite · Surface modification · Implants · Dental material