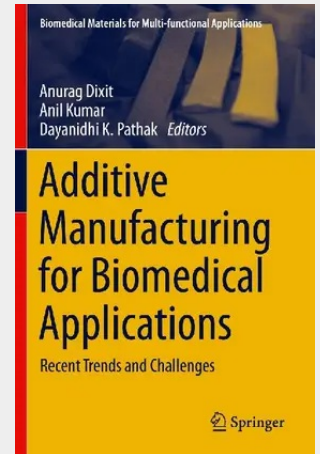


Additive Manufacturing for Biomedical Applications

Recent Trends and Challenges

New fabrication techniques and biomaterials have advanced significantly as attention toward healthcare innovations in recent decades has increased. This book provides a comprehensive overview of the application of additive manufacturing for biomedical devices. The book focuses on the use of biomaterial for hard and soft tissue engineering. These materials can imitate the mechanical, structural, and biological characteristics of the parent tissue, repairing or replacing its functioning. It provides details on the use of various biomaterials for different biomedical applications. It highlights the present trends and potential of various techniques and materials for various applications. The chapters in this book written by eminent experts highlight recent developments in additive manufacturing for biological mimicking and surgical planning. It discusses latest advances in various 3D printing technologies in the fabrication of biomedical devices for orthopaedic and cardiovascular applications, along with rising trends in designing and creating tissue replacement substitute simulants. This book can serve as a fundamental textbook for research in additive manufacturing, fabrication of implants or scaffolds and medical device development, biomaterials, tissue engineering, and biomedical engineering. This book can be a valuable resource for mechanical and biomedical engineers, academicians, healthcare researchers, and professionals interested in tissue engineering.

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