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3D/4D Printing for Biomedical Applications: Materials, Techniques and Emerging Trends

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Message from the Guest Editor

Dear Colleagues,

3D printing technologies offer ground-breaking tools that enable the fabrication of highly customizable, reproducible, and accurate structures for different biomedical applications, including tissue engineering, biosensors, and medical devices. In the last few decades, several innovations have been introduced in the field of 3D printing biomedical, such as multi-material and multi-scale 3D printing, bioprinting, and 4D printing. Indeed, 4D printing, which integrates the 4th dimension (i.e., time) into 3D printed structures, enables us to fabricate dynamic structures that are programmed to change their properties and shape according to environmental stimuli (e.g., heat, humidity, electric fields, etc.). Moreover, 4D-printed objects accomplish their function without using external driving mechanisms, instead relying on safer and contactless actuation, enabling their use in harsh environments, such as the human body.

In this Special Issue, we will focus on original research papers and comprehensive reviews, reporting the most innovative works in the 3D and 4D printing fields with regard to their biomedical applications.



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Special Issue



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Message from the Editor-in-Chief

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