Special Issue

3D/4D Bioprinting

Message from the Guest Editor

Three-dimensional (3D) bioprinting is the main technique in tissue engineering and regenerative medicine, in which biomaterials are printed into complex 3D functional structures via various additive manufacturing approaches. Four-dimensional (4D) bioprinting features the 3D bioprinting of “smart biomaterials” that can transform in a pre-programmed way in response to an external stimulus, and the fourth dimension refers to time. The highly interdisciplinary topics in 3D/4D bioprinting field require the integration of manufacturing, materials science, biology, and biomedical engineering. The associated challenges and complexities include manufacturing challenges related to the printability of biomaterials and sensitivities of living cells, normal and/or stimuli-responsive biomaterial design and selection, interaction between cells and printed structures, and design and optimization of tissue and organ constructions, to name a few. Original research reports, review articles, communications, perspectives, etc. are welcome in all areas pertinent to 3D/4D bioprinting.

Guest Editor

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Message from the Editor-in-Chief

Machines is an international, peer reviewed journal on machinery and engineering. It publishes research articles, reviews and communications.
Our aim is to encourage scientists to publish their experimental and theoretical results in as much detail as possible. There is no restriction on the length of the papers. Full experimental and/or methodical details must be provided.
There are, in addition, unique features of this journal: Manuscripts regarding research proposals and research ideas will be particularly welcomed; Electronic files or software regarding the full details of the calculation and experimental procedure - if unable to be published in a normal way can be deposited as supplementary material.

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