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i3DP, a powerful approach expanding 3D printing to 4D printing

3D printing has been leading to a new revolution in manufacturing and material engineering. The technology, with the capability of substantially changing the way in which materials are turned into devices, is becoming a powerful manufacturing technology for creating sophisticated and bespoke 3D objects. Several 3D printing techniques such as selective laser sintering, fused deposition modeling, polymer jet deposition, granular materials binding and stereolithography have been developed. However, these techniques are limited to a few choices of materials. Therefore, printing structural materials along with a series of post-printing processes for material modification is a highly-desirable way for 3D printing. In this presentation, we will introduce a method, called i3DP (initiator integrated 3D printing), which is a robust yet simple approach enabling versatile material modification and functionalization, extending 3D printing to 4D printing.

Biography

Jun Yang is Professor in Mechanical & Materials Engineering and Biomedical Engineering, and Director of WIN 4.0 (Western's Industry 4.0 Network) at Western University (The University of Western Ontario). His research interests include Additive Manufacturing/3D Printing, Printed Electronics, Internet of Things, Metamaterials, MEMS, Flexible/Wearable Electronics, Sensors and Actuators, Biophysics and Surface Science. He has published more than 120 papers including multiple cover articles in high-quality journals. He has given ~ 80 plenary/keynote/invited talks on conferences, symposiums, and workshops. He has received numerous awards. Three of his inventions have been transferred to industries for mass production.

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