Breakthroughs in Imprint Lithography and 3D Additive Fabrication

Joseph M. DeSimone
Departments of Chemistry and Pharmacology
Institute for Advanced Materials
Institute for Nanomedicine
Lineberger Comprehensive Cancer Center
University of North Carolina at Chapel Hill
and
Department of Chemical and Biomolecular Engineering
North Carolina State University

There is a renaissance underway today in research that is being fueled by the DIY (do-it-yourself) culture that is generally referred to as the “Makers Movement”. The maker culture exploits new tools for fabrication and encourages invention and rapid prototyping. Such tools in combination with an innovative mindset will make major impacts in many fields, including in tissue engineering. This lecture will describe breakthroughs in the Makers Movement—including an off-shoot of imprint lithography used to mold individual particles, and a pioneering advance in 3D additive manufacturing that is rapid, continuous and no longer layer-by-layer.