

# PROCEEDINGS OF SPIE

## ***Laser 3D Manufacturing***

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*Editors*

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## Introduction

The Laser 3D Manufacturing conference was newly established at SPIE Photonics West 2014 with the intent to provide a forum for professionals in materials science, laser processing physics/chemistry, mechanical engineering, design tools, software modeling, characterization, and metrology to share and discuss the latest advances in the field of laser-based manufacturing. The gathering offered a unique opportunity to discuss the development and implementation of the next generation of laser-based 3D manufacturing processes that will accelerate the mass-customization of products. The Laser 3D Manufacturing conference goals were to merge ideas and approaches used in free-form fabrication that not only involves both additive and subtractive techniques, but also to explore light-matter interaction phenomena that achieve transformative effects.

The conference hopes to spurn the development of materials that have protean (mutable, changeable) properties that could be induced via light-matter interaction "upon command." The conference also hopes to generate interest within the process control disciplines that will enable the reliable 3D manufacturing of structures that have localized functionality.

The full two-day event was marked with overflow sessions. The program schedule and submitted papers of the inaugural meeting follows.

**Henry Helvajian**  
**Alberto Piqué**  
**Martin Wegener**  
**Bo Gu**

