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Laser 3D Manufacturing IV

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Contents

POSTER SESSION

Authors

Numbers in the index correspond to the last two digits of the six-digit citation identifier (CID) article numbering system used in Proceedings of SPIE. The first four digits reflect the volume number. Base 36 numbering is employed for the last two digits and indicates the order of articles within the volume. Numbers start with 00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 0A, 0B...0Z, followed by 10-1Z, 20-2Z, etc.

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1 Laser Direct Writing and LIFT
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Introduction

Laser Additive Manufacturing(LAM), or 3D Laser Printing, has opened up new opportunities while facing up to many challenges. Market analysts valued the global 3D printing market at $2.3B in 2013 and are projecting global revenues of $8.6B by 2020—an impressive compound annual growth rate of more than 20% over seven years! At the same time, it is estimated that 3D printing will become 50% less expensive and 400% faster over the next five years. However, 3D printing technology can only reach its economic potential and fulfill its promise of revolutionizing manufacturing across multiple industries if a number of significant real-world structural challenges are addressed. The Laser 3D Printing Manufacturing Conference at Photonics West provides such a forum to discuss and address some of these challenges. It has become the conference where professionals from multiple disciplines share and discuss the latest advances in the field of laser-based digital manufacturing and the development and implementation of next generation laser-based 3D manufacturing processes. We believe that this type of cross talk and communication amongst conference speakers and attendees from all fields related to LAM, which include material science, laser processing physics/chemistry, mechanical engineering, software and designing tools, modeling, characterization and metrology, is not only necessary for maturing the field but very much needed to spark new ideas.

Potentially a disruptive game changer, 3D Laser Printing is still a relatively new technology and definitely needs further development. While it has already been disrupting the manufacturing value chain and allowing a path to mass producing customized products, and in some applications it has already reached a tipping point of maturity. However, many issues remain that need to be tackled. We will continue to encourage researchers and engineers to submit their work to this conference to help fully reach LAM potential.

Finally, we would like to thank all of the speakers and attendees for their great contribution to the conference. We hope that more people will come and share their work and exchange ideas at this unique platform next year. After all, this is what this conference is all about--it is for you.

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