

Complete Publications (111):

1. DePond, P.J., G. Guss, S. Ly, N.P. Calta, D. Deane, S. Khairallah, and M.J. Matthews, *In situ measurements of layer roughness during laser powder bed fusion additive manufacturing using low coherence scanning interferometry*. *Materials & Design*, 2018. **154**: p. 347-359.
2. Calta, N.P., J. Wang, A.M. Kiss, A.A. Martin, P.J. Depond, G.M. Guss, V. Thampy, A.Y. Fong, J.N. Weker, K.H. Stone, C.J. Tassone, M.J. Kramer, M.F. Toney, A. Van Buuren, and M.J. Matthews, *An instrument for in situ time-resolved X-ray imaging and diffraction of laser powder bed fusion additive manufacturing processes*. *Review of Scientific Instruments*, 2018. **89**(5).
3. Martin, A.A., P.J. Depond, M. Bagge-Hansen, J.R.I. Lee, J.H. Yoo, S. Elhadj, M.J. Matthews, and T. van Buuren, *Rapid feedback of chemical vapor deposition growth mechanisms by operando X-ray diffraction*. *Journal of Vacuum Science & Technology B*, 2018. **36**(2).
4. Bertoli, U.S., A.J. Wolfer, M.J. Matthews, J.P.R. Delplanque, and J.M. Schoenung, *On the limitations of Volumetric Energy Density as a design parameter for Selective Laser Melting*. *Materials & Design*, 2017. **113**: p. 331-340.
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8. Matthews, M.J., J. Trapp, G. Guss, and A. Rubenchik. *Energy coupling efficiency and melt pool dynamics associated with the laser melting of metal powder layers*. in *Conference on Lasers and Electro-Optics*. 2017. San Jose, California: Optical Society of America.
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10. Bertoli, U.S., G. Guss, S. Wu, M.J. Matthews, and J. Scheonung, *In-Situ Characterization of Laser-Powder Interaction and Cooling Rates through High-Speed Imaging of Powder Bed Fusion Additive Manufacturing*. 2017.
11. Slaughter, A., M. Yampolskiy, M. Matthews, W.E. King, G. Guss, and Y. Elovici. *How to Ensure Bad Quality in Metal Additive Manufacturing: In-Situ Infrared Thermography from the Security Perspective*. in *12th International Conference on Availability, Reliability and Security*. 2017. Reggio Calabria, Italy.
12. Weichec, M., B. Baker, T. McNelley, M. Matthews, A. Rubenchik, M. Rotter, R. Beach, and S. Wu, *Analysis of High-Power Diode Laser Heating Effects on HY-80 Steel for Laser Assisted Friction Stir Welding Applications*. *World Journal of Engineering and Technology*, 2017. **5**(1): p. 97-112.
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