

Philip DePond

Ph.D. Student in Mechanical Engineering, admitted Autumn 2018

Publications

PUBLICATIONS

- **High absorptivity nanotextured powders for additive manufacturing.** *Science advances*
Tertuliano, O. A., DePond, P. J., Lee, A. C., Hong, J., Doan, D., Capaldi, L., Brongersma, M., Gu, X. W., Matthews, M. J., Cai, W., Lew, A. J.
2024; 10 (36): eadp0003
- **Melt-Pool Dynamics and Microstructure of Mg Alloy WE43 under Laser Powder Bed Fusion Additive Manufacturing Conditions** *CRYSTALS*
Soderlind, J., Martin, A. A., Calta, N. P., DePond, P. J., Wang, J., Vrancken, B., Schaeublin, R. E., Basu, I., Thampy, V., Fong, A. Y., Kiss, A. M., Berry, J. M., Perron, et al
2022; 12 (10)
- **A laser powder bed fusion system for operando synchrotron x-ray imaging and correlative diagnostic experiments at the Stanford Synchrotron Radiation Lightsource.** *The Review of scientific instruments*
Martin, A. A., Wang, J., DePond, P. J., Strantza, M., Forien, J., Gorgannejad, S., Guss, G. M., Thampy, V., Fong, A. Y., Weker, J. N., Stone, K. H., Tassone, C. J., Matthews, et al
2022; 93 (4): 043702
- **Nanoparticle-enhanced absorptivity of copper during laser powder bed fusion** *ADDITIVE MANUFACTURING*
Tertuliano, O. A., DePond, P. J., Doan, D., Matthews, M. J., Gu, X., Cai, W., Lew, A. J.
2022; 51
- **Laser-metal interaction dynamics during additive manufacturing resolved by detection of thermally-induced electron emission** *COMMUNICATIONS MATERIALS*
DePond, P. J., Fuller, J. C., Khairallah, S. A., Angus, J. R., Guss, G., Matthews, M. J., Martin, A. A.
2020; 1 (1)
- **Subsurface Cooling Rates and Microstructural Response during Laser Based Metal Additive Manufacturing.** *Scientific reports*
Thampy, V., Fong, A. Y., Calta, N. P., Wang, J., Martin, A. A., Depond, P. J., Kiss, A. M., Guss, G., Xing, Q., Ott, R. T., van Buuren, A., Toney, M. F., Weker, et al
2020; 10 (1): 1981
- **Laser-Induced Keyhole Defect Dynamics during Metal Additive Manufacturing** *ADVANCED ENGINEERING MATERIALS*
Kiss, A. M., Fong, A. Y., Calta, N. P., Thampy, V., Martin, A. A., Depond, P. J., Wang, J., Matthews, M. J., Ott, R. T., Tassone, C. J., Stone, K. H., Kramer, M. J., van Buuren, et al
2019
- **An instrument for in situ time-resolved X-ray imaging and diffraction of laser powder bed fusion additive manufacturing processes.** *The Review of scientific instruments*
Calta, N. P., Wang, J., Kiss, A. M., Martin, A. A., Depond, P. J., Guss, G. M., Thampy, V., Fong, A. Y., Weker, J. N., Stone, K. H., Tassone, C. J., Kramer, M. J., Toney, et al
2018; 89 (5): 055101