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Author: Lien Chin Wei Lili E. Ehrlich Matthew J. Powell-Palm Colt Montgomery Jack Beuth Jonathan A. Malen

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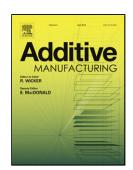
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## ACCEPTED MANUSCRIPT

- 1. Thermal conductivities of metal powders for additive manufacturing were measured.
- 2. Infiltrating gas pressure and composition influence the powder thermal conductivity.
- 3. He infiltration yields 200% higher thermal conductivity than Ar or N2 at 1 ATM.
- 4. Powder thermal conductivities depend weakly on temperature from 295 K to 470 K.
- 5. Gas-enhanced thermal conductivity is consistent with an effective medium model.

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