

**Supplementary Material for: Micro- and Nano-structures Formed in Silicon Germanium
Undergoing Laser Melting for Additive Manufacturing**

Ryan Welch, Bengisu Şişik, Saniya LeBlanc

The George Washington University, Department of Mechanical and Aerospace Engineering
800 22nd St. NW, Suite 3000, Washington DC, 20052, USA

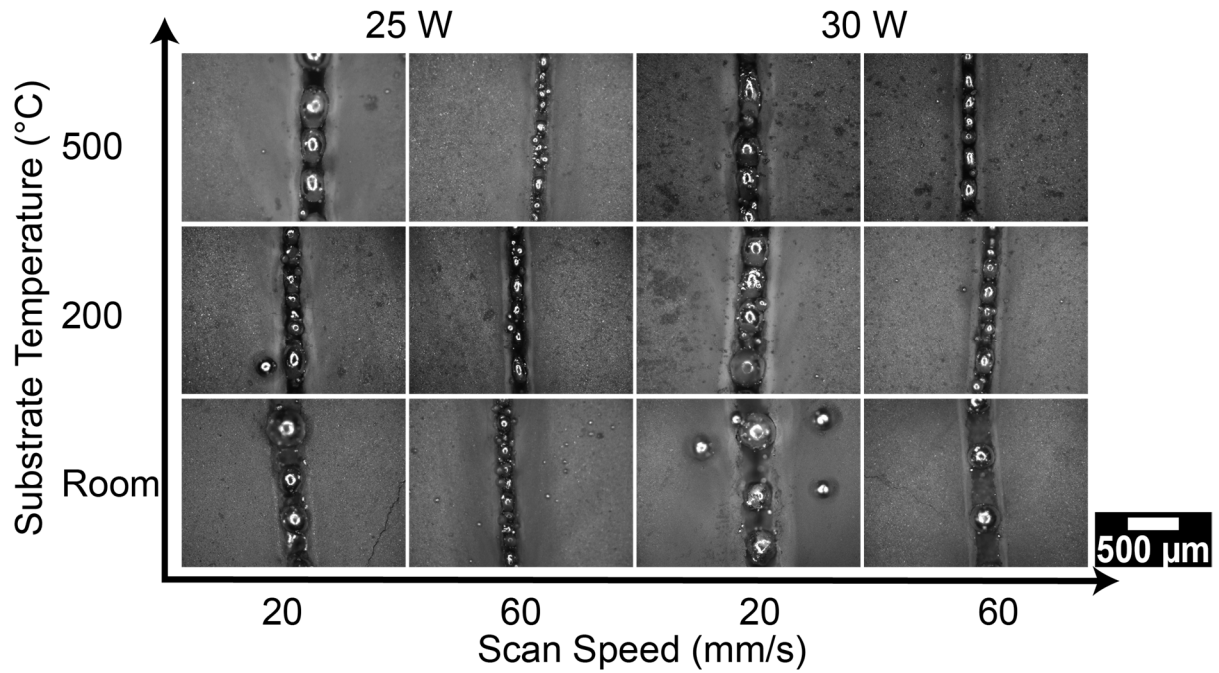


Figure S1: Results of Si₅₀Ge₅₀ melt pools processed at 25 W and 30 W with the substrate at room temperature, 200 °C, and 500 °C. There was no marked improvement in melt line quality from preheating up to 500 °C. Spherical balling defects and ejected material remain prevalent.