

Supporting Information

Supercooling Suppression of Phase Changing Liquid Metal-Polydimethylsiloxane Soft Composites

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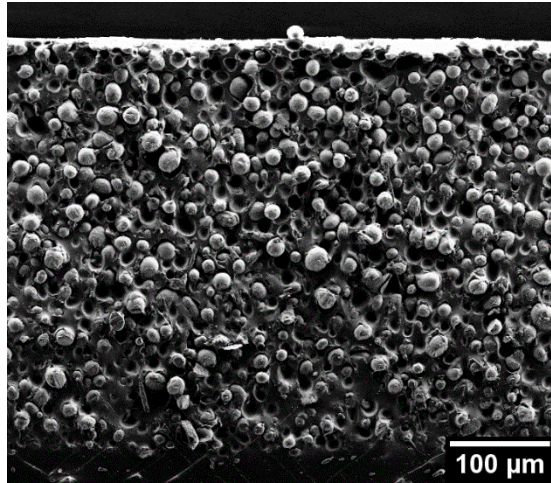


Fig. S1. SEM image for the cross section of a FM-PDMS composite. The particle sizes are in the range of 9-17 μm .

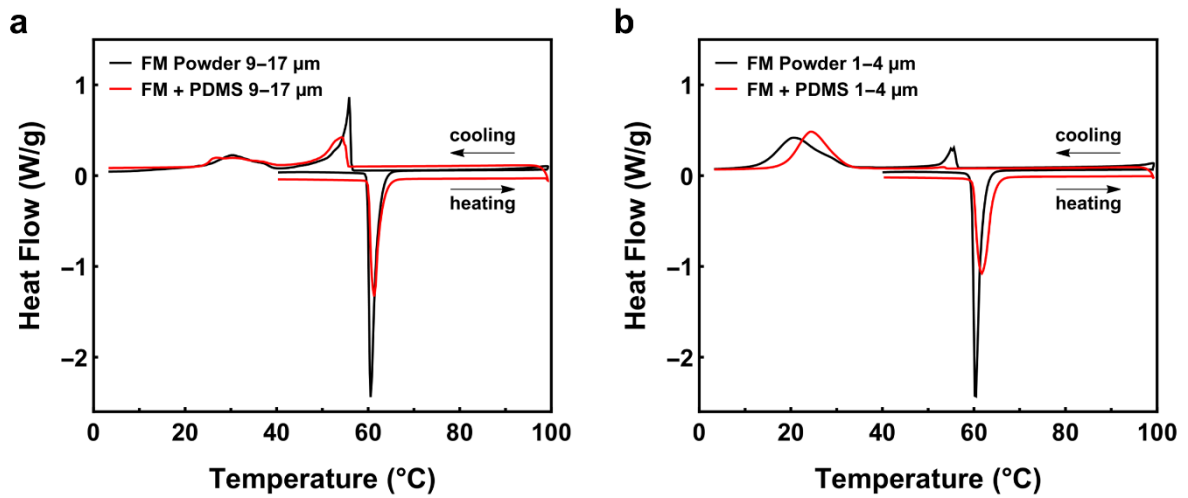


Fig. S2. Comparison between the DSC curves of FM powders and their composites with different particle sizes: (a) 9-17 μm , and (b) 1-4 μm .

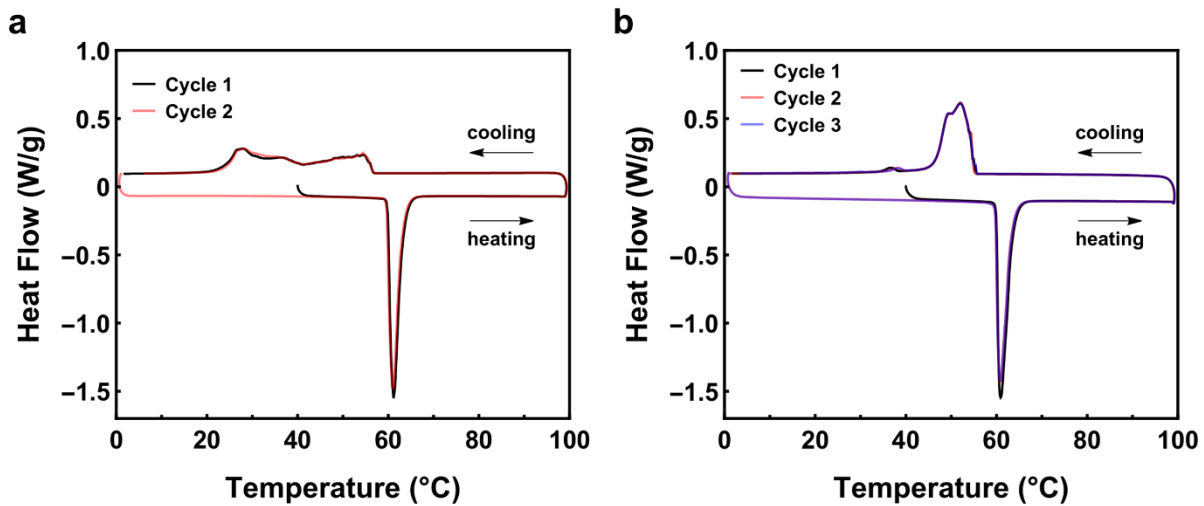


Fig. S3. DSC results of thermal cycling: (a) FM-PDMS composite (particle size: 6-17 μm) and (b) BiInSnZn-PDMS composite with native oxides (particle size: 9-17 μm).

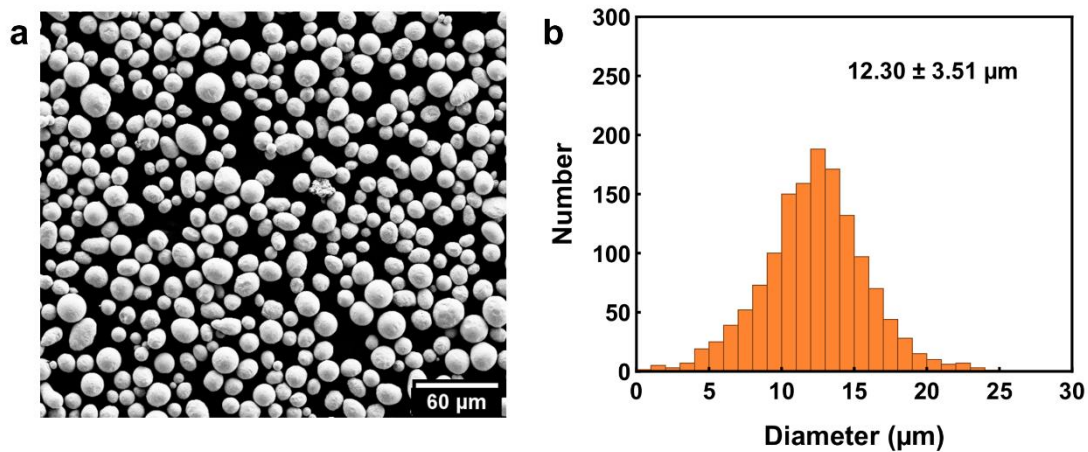


Fig. S4. (a) SEM image and (b) size distribution (after filtration) of BiInSnZn powders with oxide flakes.

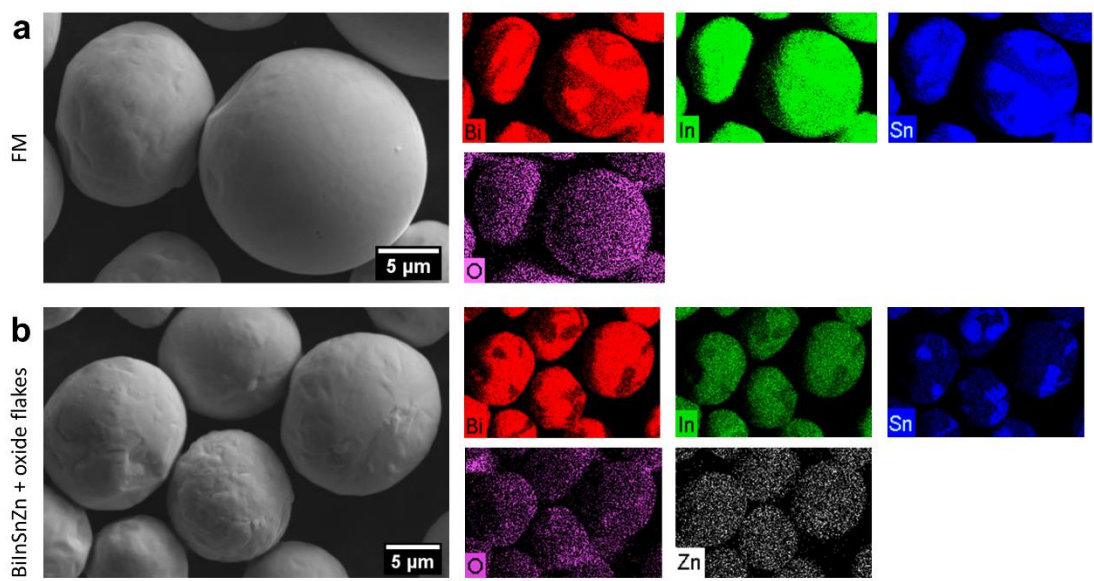


Fig. S5. SEM-EDS mapping of LM powders: (a) FM and (b) BiInSnZn with oxide flakes.

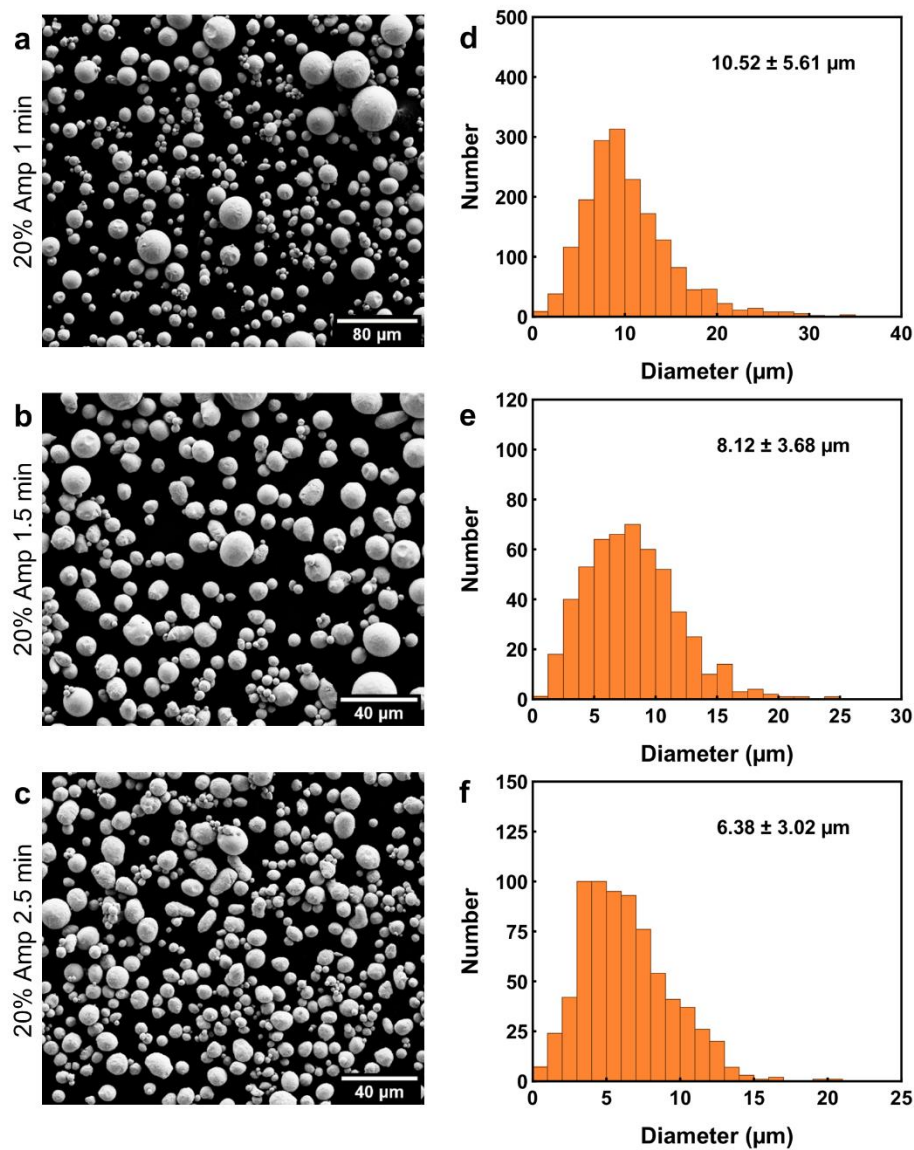


Fig. S6. Particle size analysis of BiInSnZn powders. (a-c) SEM images and (d-f) size distribution of LM prepared by sonication at (a,d) 20% amplitude for 1 min, (b,e) 20% amplitude for 1.5 min, and (c,f) 20% amplitude for 2.5 min.

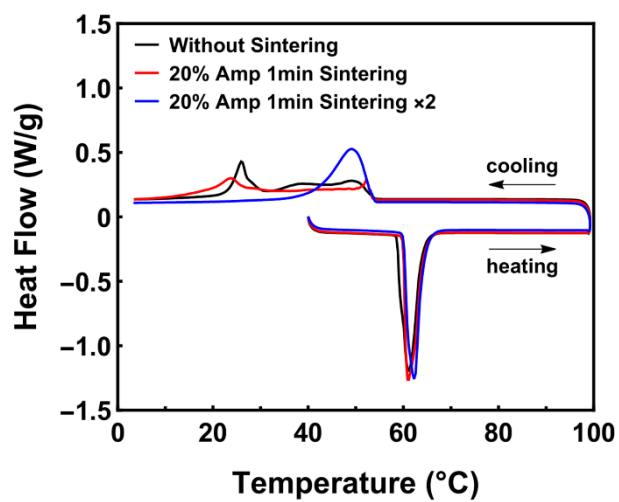


Fig. S7. DSC curves for composites with different amount of oxide flakes dispersed in BiInSnZn powders. Besides tuning the particle size before sintering, more oxide flakes can also be introduced into the LM by repeating the sonication and sintering process for the same piece of bulk material.