Self-sintering liquid metal ink with laponite for flexible electronics

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Supplementary Text

Figure S1. Conductive paths formed by LML ink on PDMS, PET, cardboard, and PVC.

Figure S2. The difference between LM ink with laponite and without laponite after evaporation.

Figure S3. Post-sintering effect of laponite aqueous dispersion on LM droplets.

Figure S4. Post-sintering effect of laponite aqueous dispersion on LM droplets wrapped with sodium alginate.

Figure S5. The Mg, Ga, Si elemental mapping of LM droplets.

Figure S6. Changes of LM particle size distribution with ultrasonic time.

Figure S7. The optical images of laponite powder and laponite transparent dispersion.

Figure S8. Conductive paths formed after LML ink evaporating to dryness.

Figure S9. Optical microscope image of the minimum line-width prepared with LML ink.

Movie S1. Tensile experiment without encapsulation layer.
**Figure S1.** LML ink can sintered on PDMS (A), PET (B), cardboard (C), and PVC (D) to form conductive paths.

**Figure S2.** The difference between LM ink with laponite and without laponite after evaporation. The leaf is used to show the mirror-like back side.
Figure S3. Laponite aqueous dispersion can post-sinter LM nanoparticles. The LM nanoparticles were precipitates formed after LM ink evaporating to dryness, and the LM ink was prepared by sonicating the mixture of bulk LM and water in ice-water bath for 30 minutes.

Figure S4. Laponite aqueous dispersion post-sintered LM nanoparticles wrapped with sodium alginate.
Figure S5. The Mg, Ga, Si elemental mapping of LM droplets.

Figure S6. Changes of liquid metal particle size distribution with ultrasonic time, with LM concentration of 40mg/ml and laponite concentration of 1% (w/v).
Figure S7. The optical images of laponite powder and laponite transparent dispersion. Laponite transparent dispersion exhibits Tyndall effect.

Figure S8. Conductive paths formed after LML ink evaporating to dryness.

Figure S9. Optical microscope image of the minimum line-width prepared with LML ink.