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Title: **Liquid-Suspended and Liquid-Bridged Liquid Metal Microdroplets**

Abstract: Liquid metals (LMs) and alloys have been attracting increasing attention owing to their combined advantages of high conductivity and fluidity, and have shown promising results in various emerging applications. Patterning technologies using LMs are being actively researched; among them, direct ink writing (DIW) is considered a potentially viable approach for efficient LM additive manufacturing. However, true LM additive manufacturing with arbitrary printing geometries remained challenging because of the intrinsically low rheological strength of LMs. Herein, colloidal suspensions of LM droplets amenable to additive manufacturing (or “3D printing”) are realized using formulations containing minute amounts of liquid capillary bridges. The resulting LM suspensions exhibit exceptionally high rheological strength with yield stress values well above 1000 Pa, attributed to inter-droplet capillary attraction mediated by the liquid bridged adsorbed on the oxide skin of the LM droplets. Such liquid-bridged LM suspensions, as extrudable ink-type filaments, are based on uncurable continuous-phase liquid media, have a long pot-life and outstanding shear-thinning properties and shape retention, demonstrating excellent rheological processability suitable for 3D printing. These findings will enable the emergence of a variety of new advanced applications that necessitate LM patterning into highly complicated multidimensional structures.