

Supporting Information

Interface Design for Enhancing the Wettability of Liquid Metal to Polyacrylate for Intrinsically Soft Electronics

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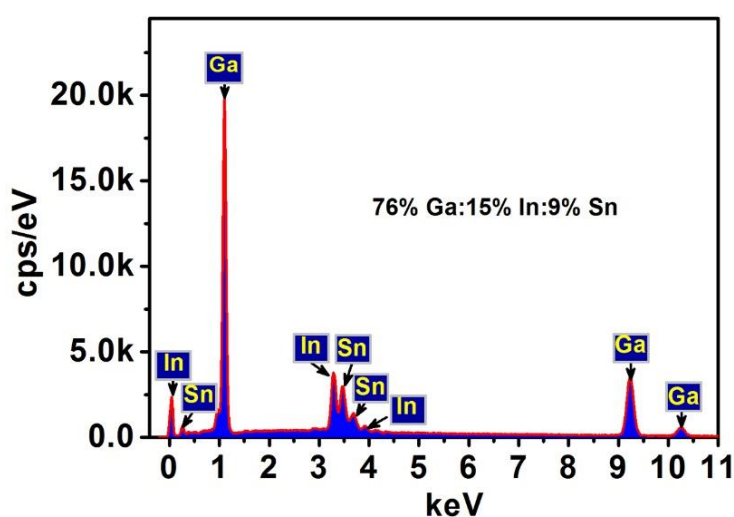


Figure S1. The chemical ingredient analysis of EGaInSn with the ratio of Ga weight content to In and Sn is 76: 15: 9.

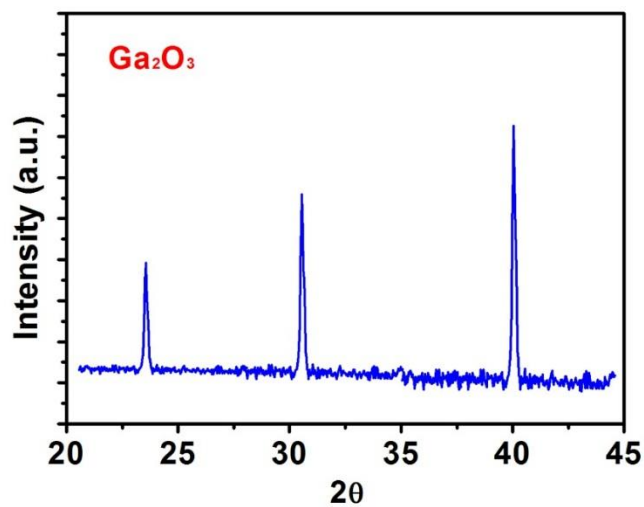


Figure S2. XRD spectrum of the gallium-oxide, which rapidly formed on LM surface when exposed to oxygen, and the atomically thin film of gallium-oxide is very robust and can mechanically stabilize the liquid metal against deformations.

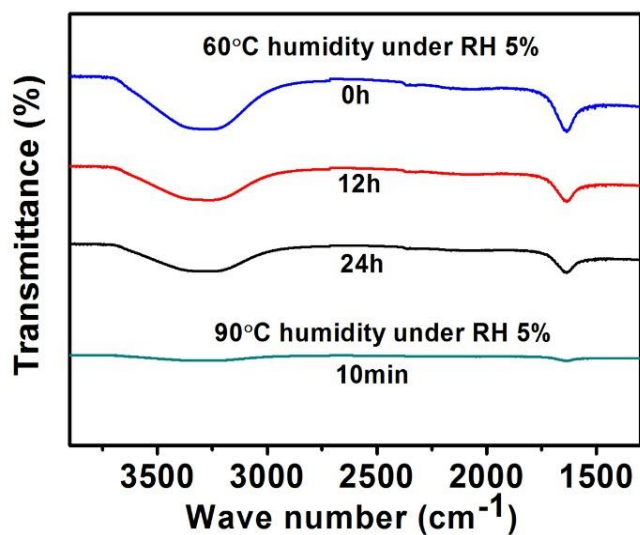


Figure S3. the stability of water molecules sticking on Ga_2O_3 surface at 60°C and 90°C and under RH 5%.

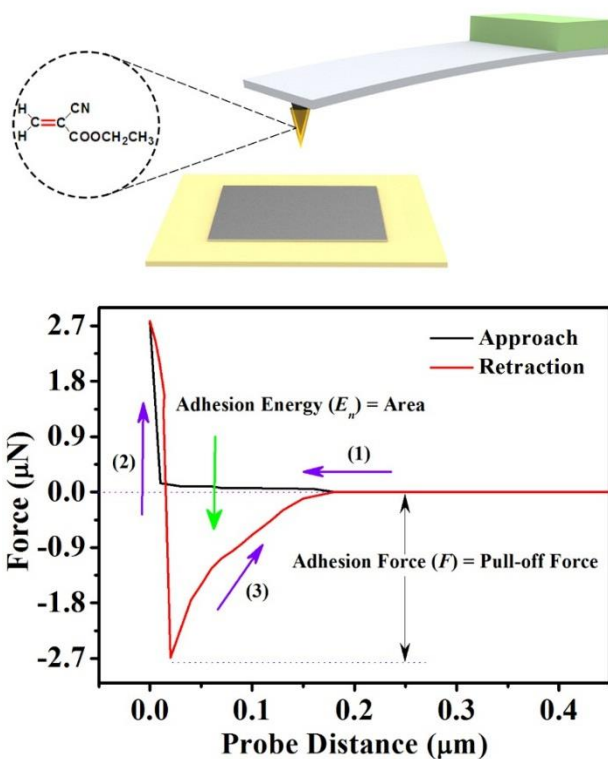


Figure S4. The force-distance curve of the probe coated with ethyl-2-cyanoacrylate approached the EGaInSn without absorbed hydron, the the adhesion force still in low value of 2.7 μ N due to the non-interfacial polymerization of ethyl-2-cyanoacrylate.

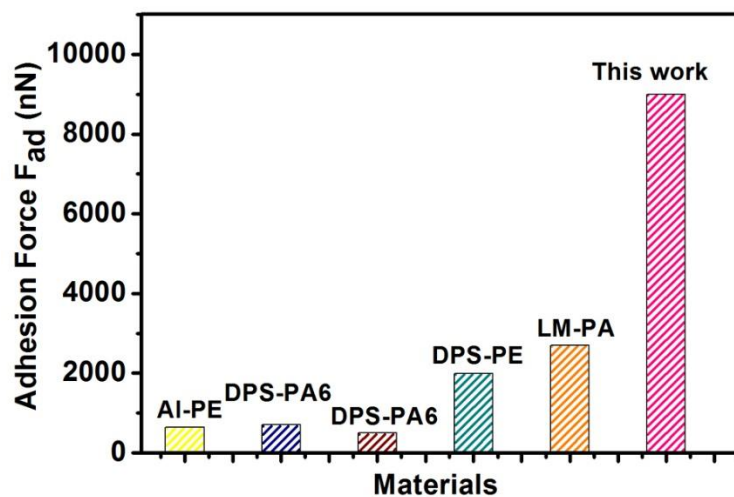


Figure S5. Comparison of different adhesion force between PE/PA6 substrate and Al/DPS/LM, noticeably, PACA can effectively enhance the adhesion force between LM and PA in our work.²⁷

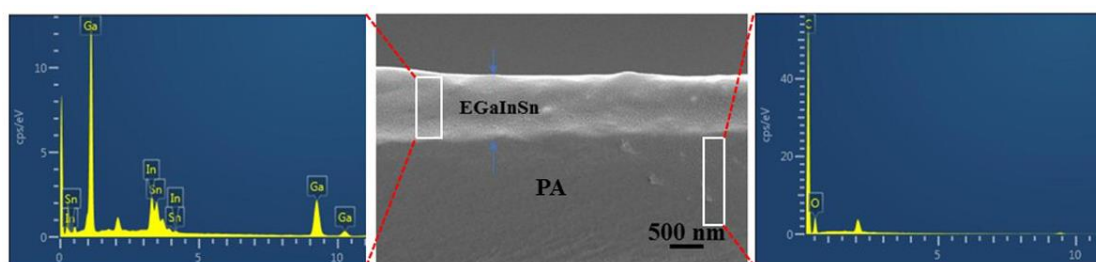


Figure S6. The morphology and the elements analysis of EGaInSn@PA showing that EGaInSn conductive layer the thickness was about 1 μm without the adhesive layer.