

Supporting Information

Biodegradable polylactic acid emulsion ink based on carbon nanotubes and silver for printed pressure sensors

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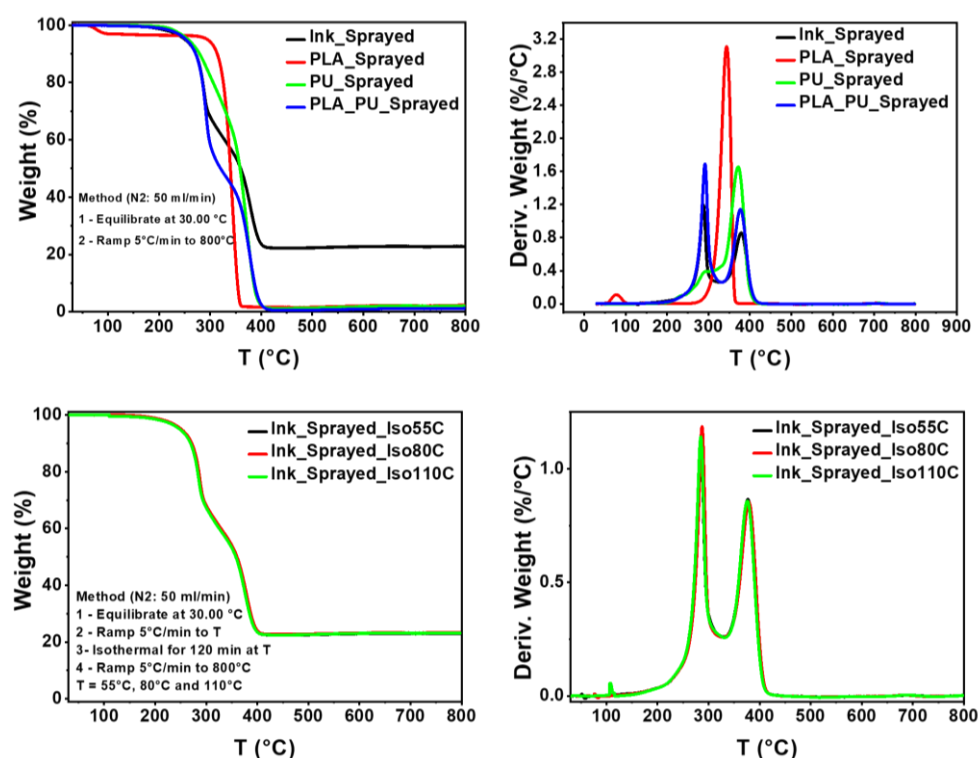


Figure S1. Thermogravimetric Analysis (TGA) graph of the coating and its ingredients.

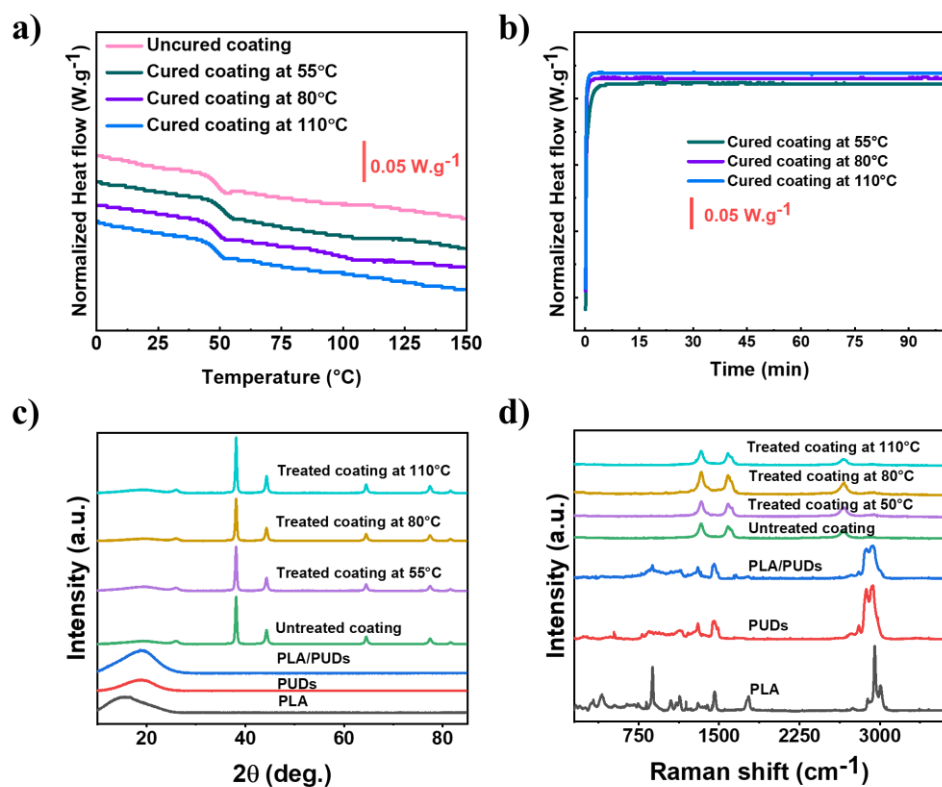


Figure S2. a) Differential scanning calorimetry (DSC) measurement (second heating run) at 5°C/min for untreated and treated coating. b) Isothermal treatment performed during 100 minutes at 55 °C, 80 °C and 110 °C. c) XRD measurements of the coating annealed at different temperatures (Reference code:98-005-3761). d) Micro Raman analysis for coating annealed at different temperatures.

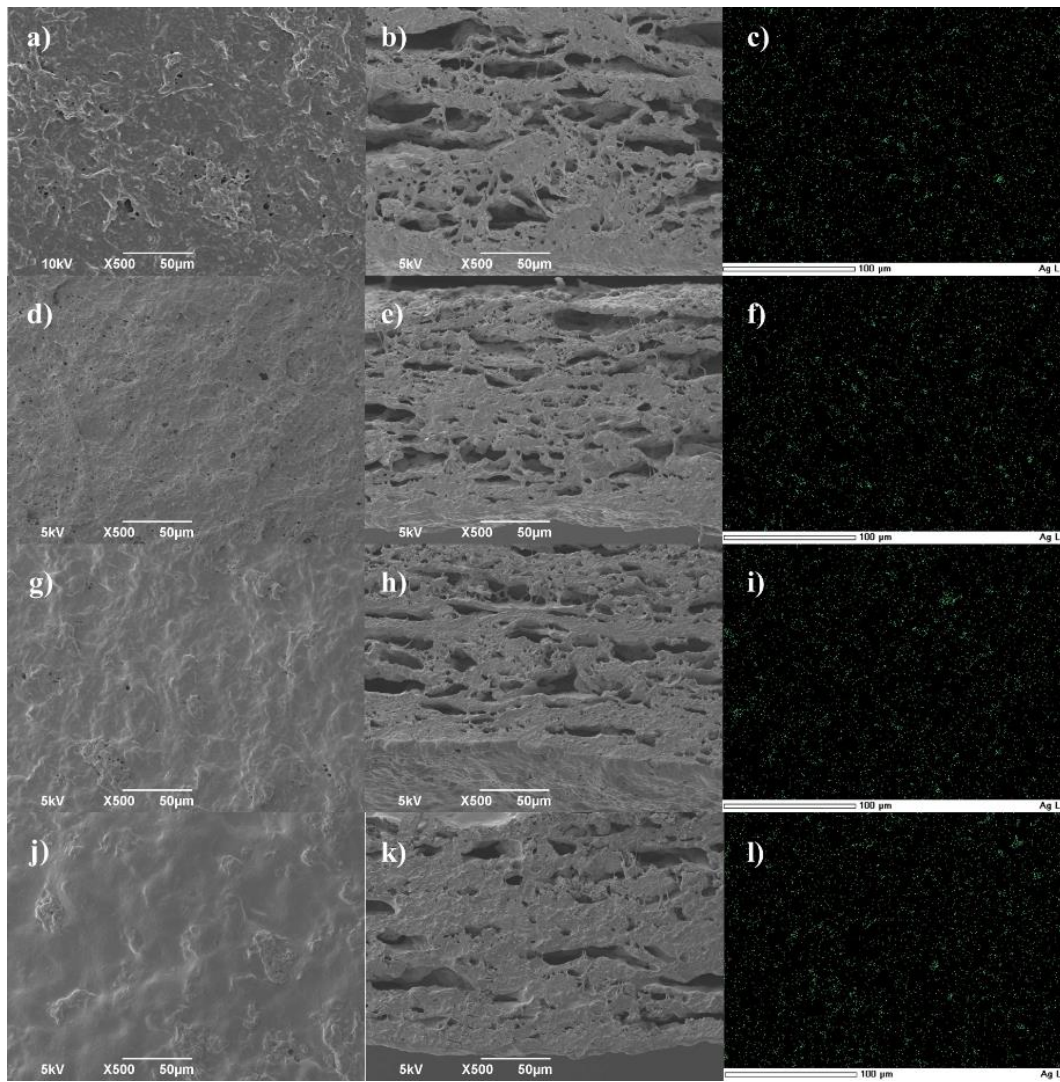


Figure S3. SEM images and EDS analyses of the microstructural evolution of the coatings: a, b, and c) before the thermal treatment. After thermal treatment at different temperatures: d, e, and f) 55°C. g, h, and i) 80°C. j, k, and l) 110°C.

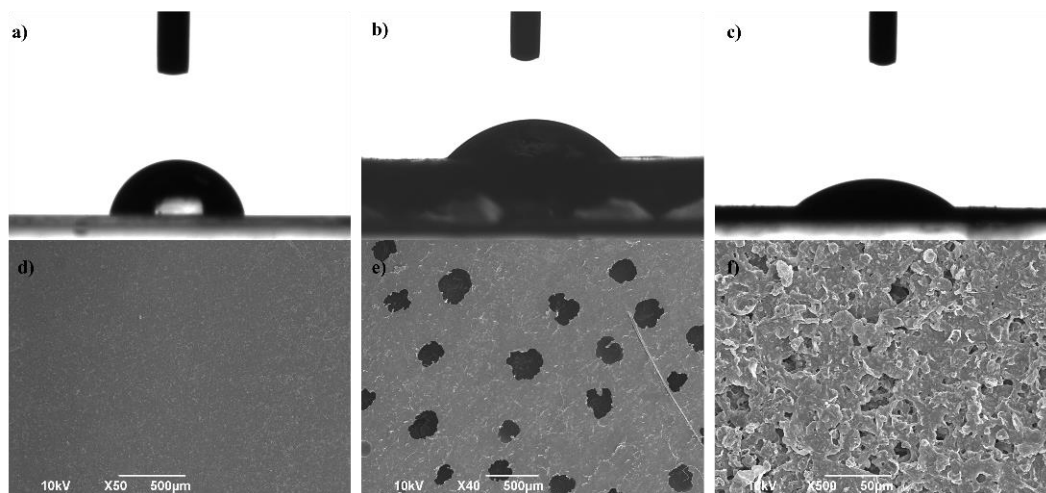


Figure S4. Surface wettability measurement immediately after disposing of water on a) PLA. b) PUDs and c) PLA/PUDs. SEM images of the surface after drying in the ambient environment: d) PLA e) PUDs. f) PLA/PUDs.

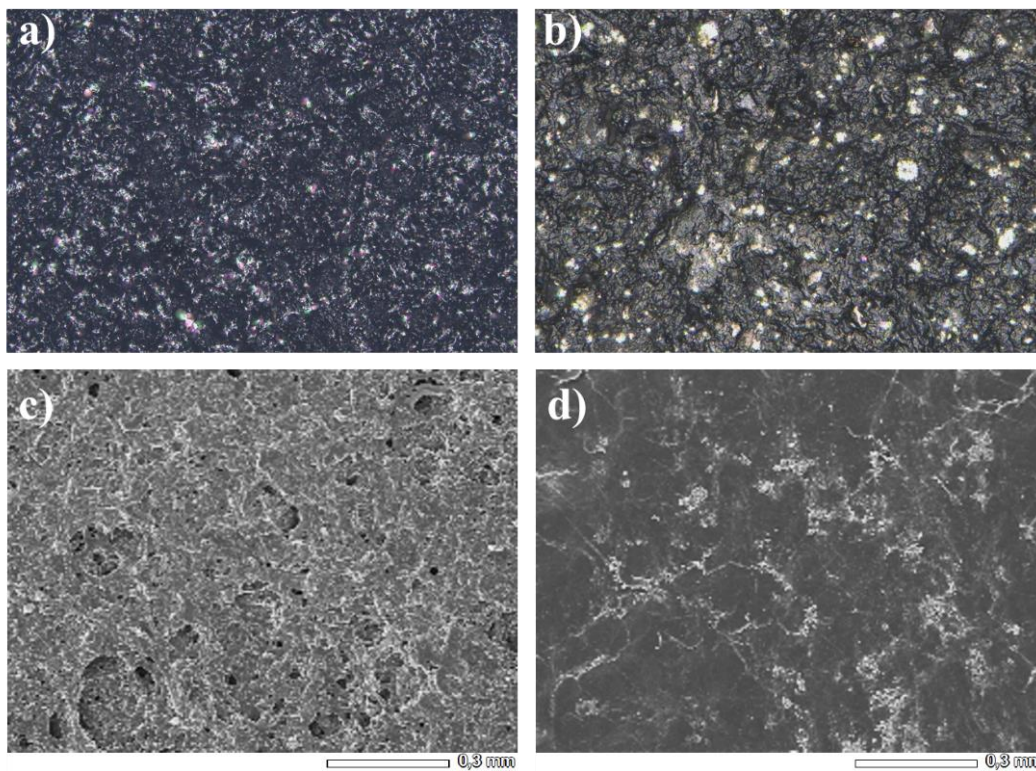


Figure S5. Zeta profilometer images of the coating: a) before the BOD test. b) following the BOD test. SEM images of the coating's surface components: c) before the BOD test. d) following the BOD test.

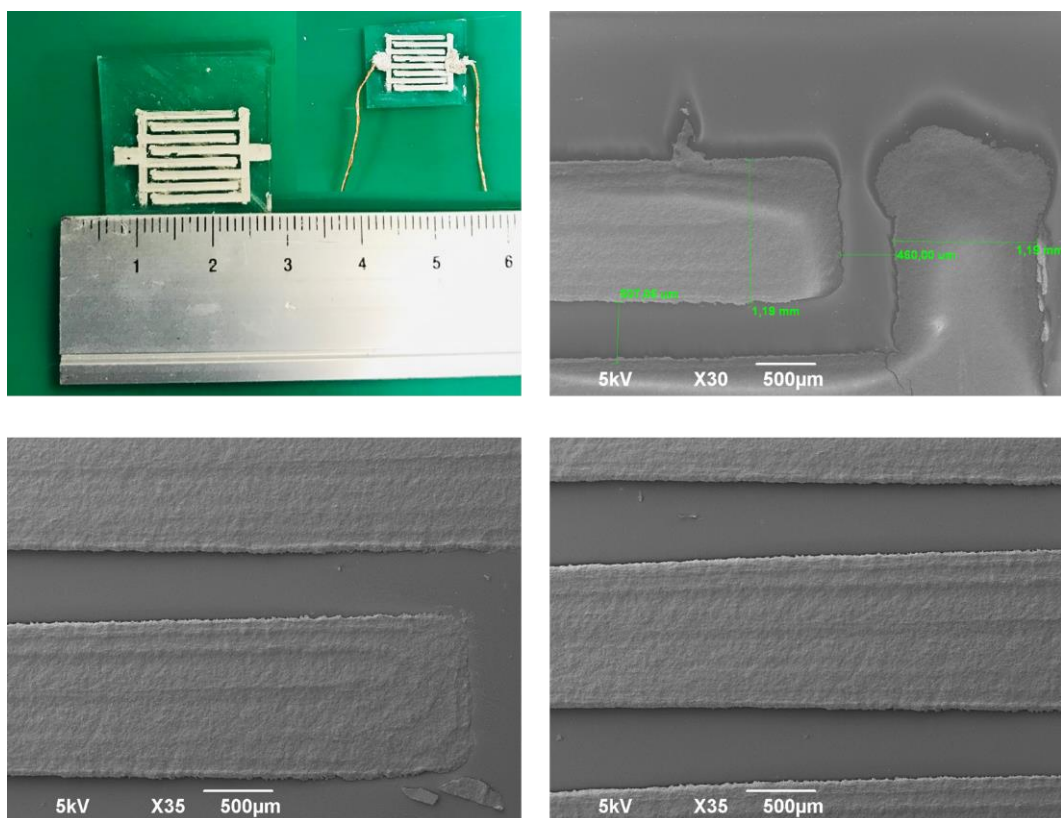


Figure S6. Printed layout on the PDMS substrate and following SEM images of it.

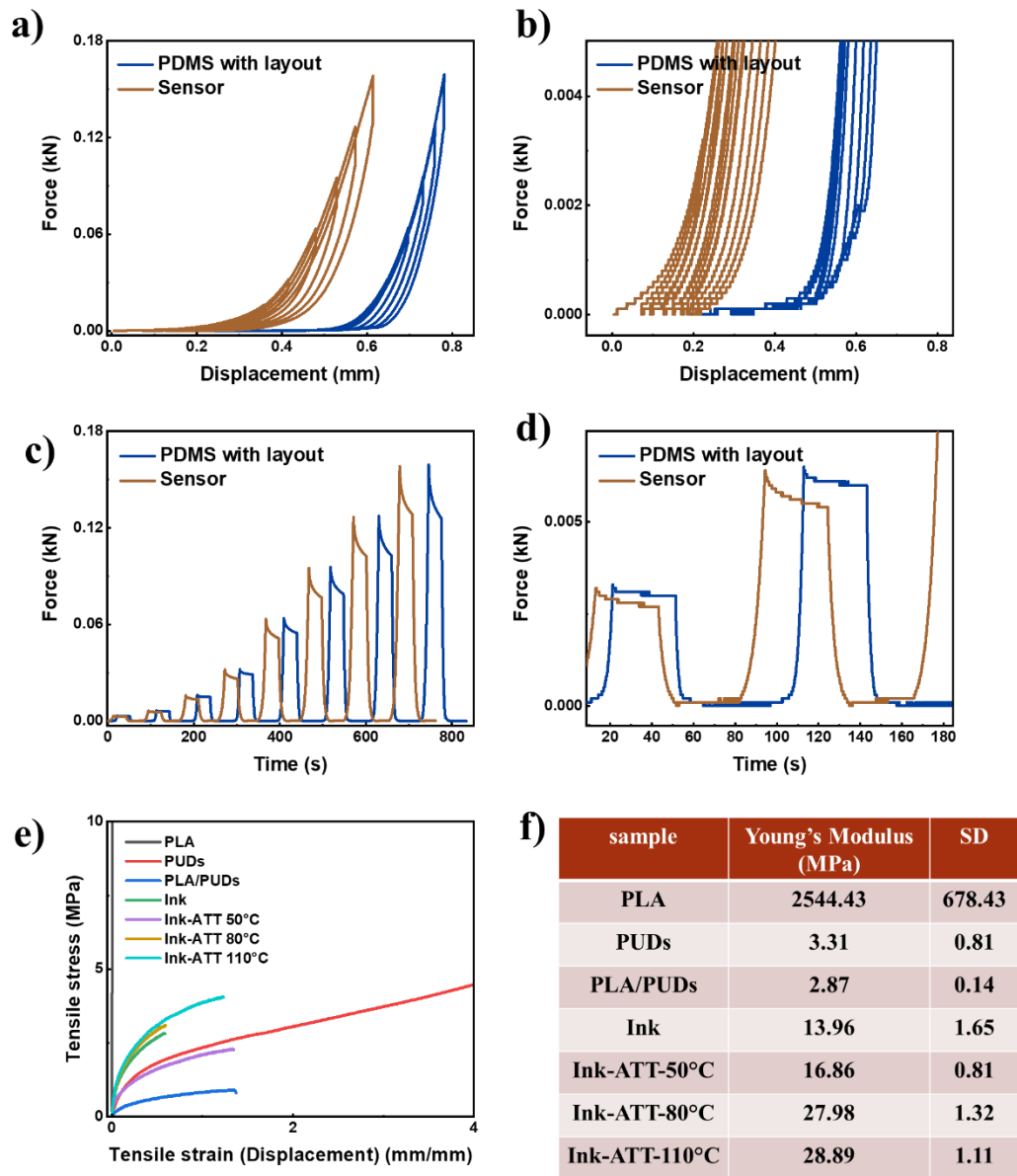


Figure S7. a-d) Hysteresis loop for the sensor and PDMS printed with the layout. e-f) Mechanical properties of the ink and its ingredients