Electronic Supplementary Information

Low Temperature-Cured, Electrically Conductive Pastes for Interconnection on Electronic Devices

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Table S1. Electrical characteristics of conductive pastes with various compositions of the mixture and curing temperatures

NP Size	Hardener & Additive	Curing Temperature (°C)	Resistance (Ω)	Surface Resistance (Ω/sq)	Volume Resistance (Ω·cm)	Conductivity (S/cm)
80 nm	MeTHPA – BDMA	200 °C	8.612E-03	2.777E-02	4.428E-05	2.260E04
		230 °C	6.643E-03	2.142E-02	3.615E-05	2.768E04
		250 °C	5.468E-03	1.763E-02	2.657E-05	3.768E04
30 nm	MeTHPA – BDMA	200 °C	1.502E-02	4.842E-02	4.987E-05	2.008E04
		230 °C	9.046E-03	2.917E-02	2.911E-05	3.441E04
		250 °C	5.798E-03	1.863E-02	1.740E-05	5.765E04
30 nm	MeHHPA - TPP	200 °C	8.939E-03	2.882E-02	3.879E-05	2.599E04
		230 °C	3.313E-03	1.068E-02	1.435E-05	7.001E04
		250 °C	2.271E-03	7.322E-03	**8.984E-06**	**1.125E05**

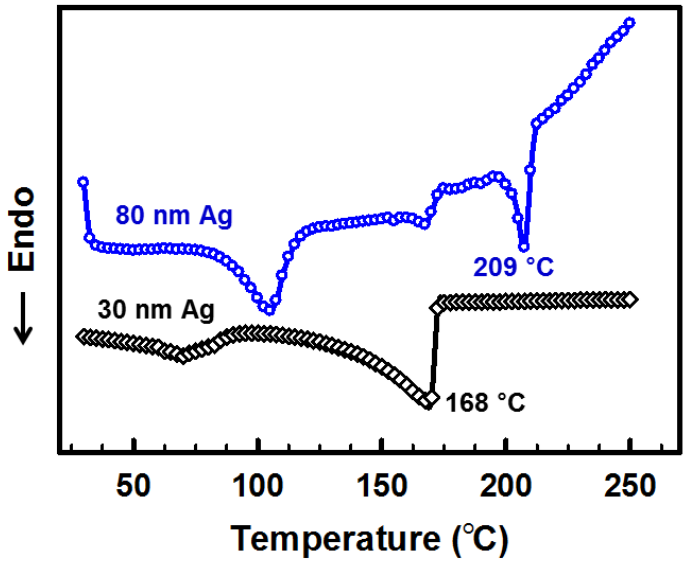

Figure S1. DSC thermograms of silver nanoparticles with diameters of 80 nm and 30 nm.

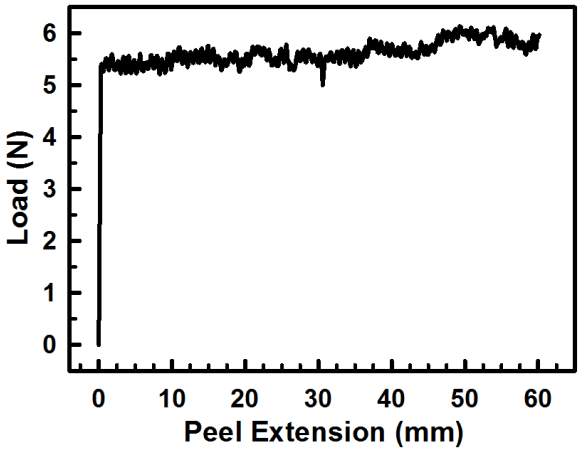

Figure S2. Load-peel distance curves for cured **paste C** between two copper foils by a 90 °-pull test.

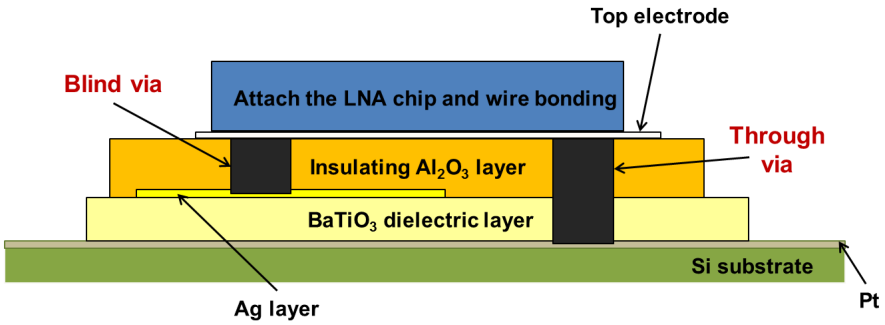

Figure S3. Schematic representation of a blind via hole and a through via hole on non-sintered hybrid substrates for electronic applications.

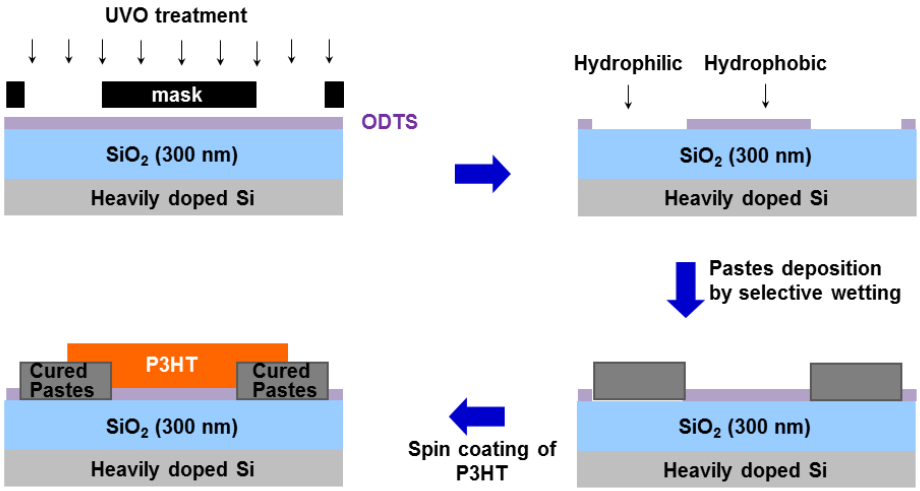

Figure S4. Schematic representation for the fabrication of OFETs using the cured silver pastes as a source and electrode. A highly doped n-type Si wafer with a thermally grown 300 nm thick oxide layer was used as the substrate. The source-drain electrode was patterned on a hydrophobic octadecyltrichlorosilane (ODTS)-treated substrate by an exposure of UV-ozone through a shadow mask. Consecutively, the conductive pastes were selectively deposited on the patterned substrate, followed by curing at 250 °C for 2 h in a convection oven. Finally, a poly(3-hexyl thiophene) (P3HT) solution was spin-coated onto top of the patterned electrode.