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## **Supplementary Information**

## Transparent, Pressure-Sensitive, and Healable E-Skin from a UV-Cured Polymer

## **Comprising Dynamic Urea Bonds**

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Figure S1. Schematic setup of the pressing test.



Figure S2. <sup>1</sup>H NMR spectrum of 2 in CDCl<sub>3</sub>.



Figure S3. FTIR spectrum of 4.



Figure S4. <sup>13</sup>C NMR spectrum of 3.



Figure S5. <sup>13</sup>C NMR spectrum of 4.



**Figure S6.** Surface profiles across the cutting marks before and after heat treatment at 60 °C for 30 min for (a) A-0, (b) A-1, (c) A-2, (d) A-3, and (e) A-4.

Polymer	E-modulus (MPa)	Maximum strength ( <i>MPa</i> )	Fracture strain (%)
A-0	19.8	5.1	52.7
A-1	175.4	12.8	36.1
A-2	301.3	19.4	21.5
A-3	697.7	24.3	14.9
A-4	832.1	33.9	5.9

Table S1. Summary of the mechanical properties of the polymers.



**Figure S7.** Stress-strain curve of A-2 recorded under the conditions of repeated loading and unloading for two cycles. The second cycle was performed 15 min after the first cycle.



**Figure S8.** Resistance change of AgNWs/polymer as a function of bending cycle number. A curvature radius of 1 mm was used for testing.



**Figure S9.** (a), (b), and (c): FESEM micrographs of the pristine AgNWs/polymer (A-2) electrode obtained for different samples.



**Figure S10.** Low-magnification confocal micrographs (top) and surface profiles (bottom) of an electrode (a) cut and (b) healed by 12 rounds of IPL irradiation (same sample).



**Figure S11.** Change of electrode resistance after each damage/heal sequence (one healing treatment =12 IPL pulses).



**Figure S12.** Schematic illustration of the capacitance variation mechanism, with (a) and (b) showing the system before and during pressing, respectively. During pressing, the sensor was bent without any internal deformation of the polymer, which resulted in additional electromagnetic coupling between partially confronting electrodes.