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Soft Science

1 Supplementary Materials

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3 Soft Schottky diodes for skin-interfaced electronics enabled by entirely soft
4 components

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19 Supplementary Figure 1. The schematic fabrication process of the fully soft Schottky20 diode.

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Α







Supplementary Figure 2. The hydrophobicity modification of PEDOT:PSS solution 24 25 through the addition of tergitol. (A) Chemical structure of tergitol; (B) the contact PEDOT:PSS solution 26 angles of with various tergitol weight ratios (PEDOT:PSS:tergitol = 100:x, w/w). 27



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Supplementary Figure 3. Evaluation of the coating quality of the PEDOT:PSS films after spin-casting. (A and B) Optical and microscopic images of PEDOT:PSS films without tergitol (A), and with tergitol (B).

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36 Supplementary Figure 4. Resistance hysteresis loop of the soft PEDOT:PSS

37 electrodes.

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40 Supplementary Figure 5. *J-V* characteristics of all diodes configured in 5×5 the fully

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⁴¹ soft diodes array.



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43 Supplementary Figure 6. Hysteresis curves of the fully soft Schottky diode under the

44 various mechanical strains of 0%, 10%, 20%, 30%, and 0% (released).



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46 Supplementary Figure 7. V_{out} of the fully soft rectifier under various V_{in} of $\pm 1, \pm 3, \pm$ 47 5, and ± 10 V at *f* of 50, 100, 200, 500, and 1,000 Hz.



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49 Supplementary Figure 8. V_{out} of the fully soft rectifier at $\varepsilon = 30\%$ with various f of 50,

50 100, 200, 500, and 1,000 Hz ($V_{in} = \pm 10$ V).

Α	OR gate					
	V _{in, A}	V _{in, B}	V _{out} (0%)	V _{out} (30%)	V _{out} (0% Re.)	
	0	0	0	0	0	
	1	0	1	1	1	
	0	1	1	1	1	
	1	1	1	1	1	



AND gate

V _{in, A}	V _{in, B}	V _{out} (0%)	V _{out} (30%)	V _{out} (0% Re.)
0	0	0	0	0
1	0	0	0	0
0	1	0	0	0
1	1	1	1	1

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52 Supplementary Figure 9. Truth tables of the fully soft logic gates. (A and B) truth

53 table of OR (A) and AND (B) gates.

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56 Supplementary Figure 10. An optical image of entire circuit of the energy harvesting

57 system.