Supporting Information

for

Self-Deployable Current Sources Fabricated from Edible Materials

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Sodium ion (Na⁺) loaded activated carbon (AC) anode

The PGScin/AgNW device containing Na⁺ loaded AC/ λ -MnO₂ affords to deliver the electric current of 10 μ A over 3 hr by virtue of the loaded Na⁺ on the AC anode. On the contrary, the device with as-made AC and λ -MnO₂ cell displays the faster decays with 0.5 hr. The operation time of the device is closely dependent on the loading of Na⁺ on AC anode.



Fig. S1. Discharge potential profile obtained from PGScin/AgNW devices with two different cell configurations at -10 μ A: (1) as-made AC/ λ -MnO₂ cell (-Na⁺) and (2) sodium ion-loaded AC/ λ -MnO₂ (+Na⁺) cell.

Current Profiles of PGScin/AgNW Current Sources

Various current profiles under multiple contact conditions were illustrated for the operation time of the devices in Fig. S2 (a-c), which are the overall view of Fig. 3 (c-e).



Fig. S2. (a-c) Specific current supplying profiles of PGScin/AgNW devices for their operational time under different interfacial contacts. Inset in (a) displays the detailed current profiles exhibited from 0 to 2 mA g_{AC}^{-1} . Measured currents shown in light grey and 100 point moving averaged values are shown in black line.