**Supporting Information** 

## Large-Sized Sandpaper Coated with Solution-Processed Aluminum for a Triboelectric Nanogenerator with Reliable Durability

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- 7. Video for simultaneously lighting up 120 green LEDs with serial connection

1. The nucleated Al growth on various substrates by using the SC method



Figure S1. Digital snapshots for various substrates dipped in Al precursor solution.



2. Various Al-coated substrates by use of solution-processed coating

**Figure S2.** Digital snapshots of the various Al-coated substrates. The area of the prepared sample is 2 cm by 3 cm.



3. SEM images of various Al-coated sandpapers with the various grit numbers

Figure S3. Morphology of Al-coated sandpaper with various grit numbers by using scanning electron microscope (SEM). All scale bars are  $25 \mu m$ .

## 4. Switching test of the open-circuit voltage



**Figure S4.** The open-circuit voltage of the Al-coated sandpaper with the grit number of 15k when connected (left) forwardly and (right) reversely.



5. The waveforms of open-circuit voltage in various Al-coated substrates

**Figure S5.** The open-circuit voltage of various Al-coated sandpapers with grit number of 150, 4k, 15k, and common A4-sized paper.



6. Comparison with sheet resistance before/after Scotch tape test

Figure S6. Normalized sheet resistance ratio of the Al-coated paper according to the number of adhesion test.

## 7. Video for simultaneously lighting up 120 green LEDs with serial connection

Video S1. Simultaneously lighting up green 240 LEDs. All LEDs are connected in serial.