Electronic Supplementary Information

All-Solution-Processed Transparent Electrodes Consisting of Ag NW/PEDOT:PSS Composites on PVDF-HFP Flexible Substrates for 2.5V-Operating Wearable Heaters

Ji-Young You†, Gyu-Seon Hwang†, Eun-Ha Kim, and Tae-Jun Ha*

† These authors contributed equally to this work

Department of Electronic Materials Engineering, Kwangwoon University, Seoul 01897, Republic of Korea

**Corresponding author E-mail address: taejunha0604@gmail.com*

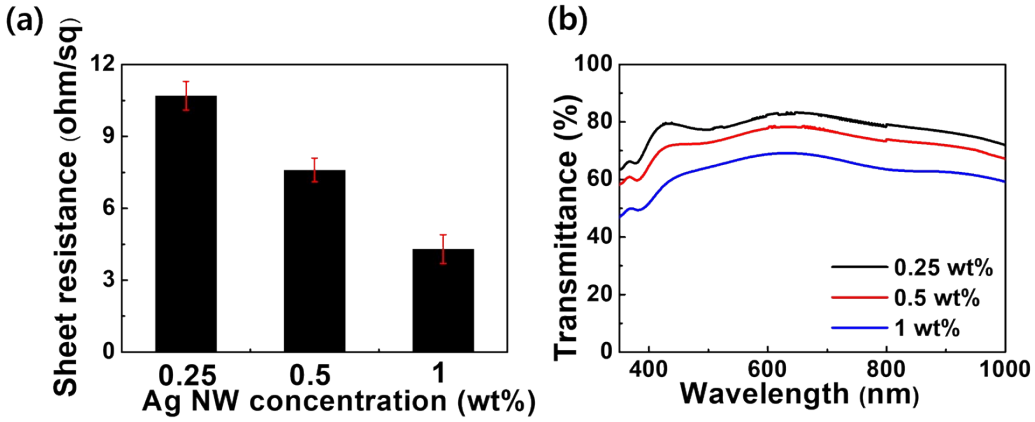

Fig. S1. (a) Sheet resistance and (b) optical transmittance of Ag NW electrodes synthesized with different Ag NW concentrations.

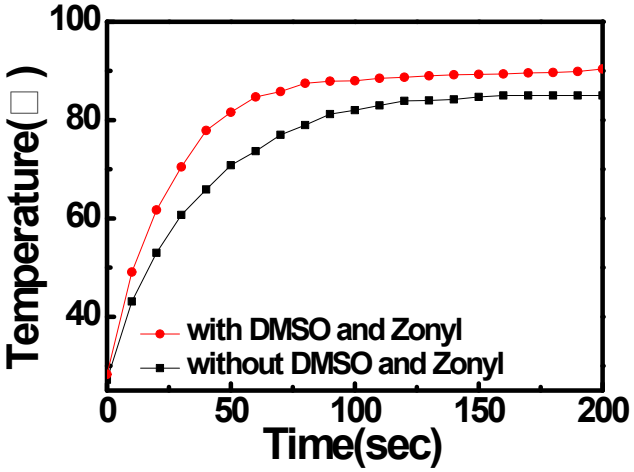

Fig. S2. Temperature profiles of Ag NW/PEDOT:PSS composite-based heaters with and without DMSO and Zonyl.

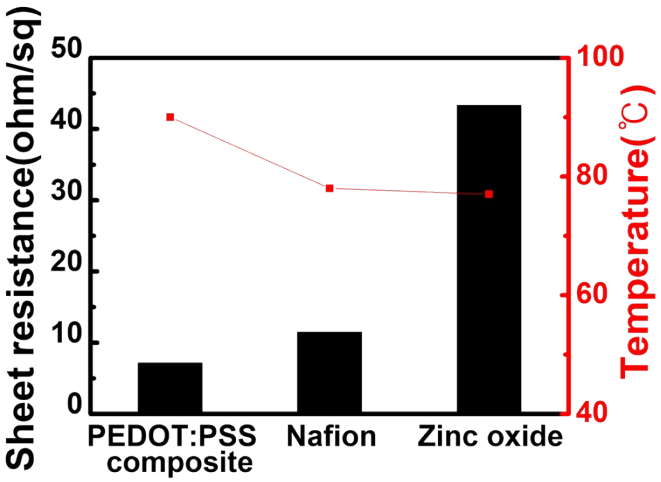

Fig. S3. Comparison of sheet resistance and steady-state temperature of Ag NW electrodes synthesized with different passivation materials.

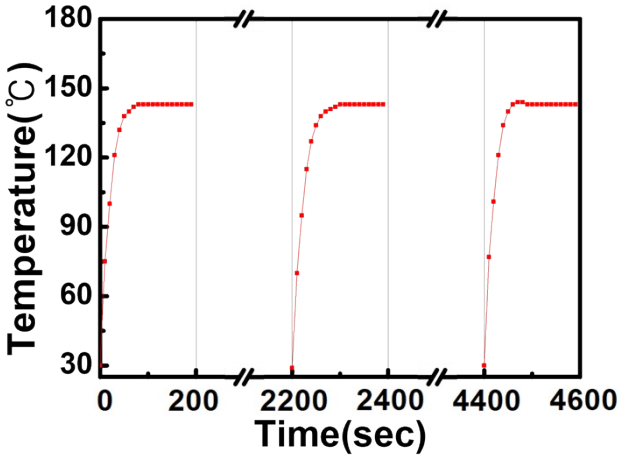

Fig. S4. Repeatability test of the Ag NW/PEDOT:PSS composite-based heater during three consecutive on/off heating cycles at 7 V.

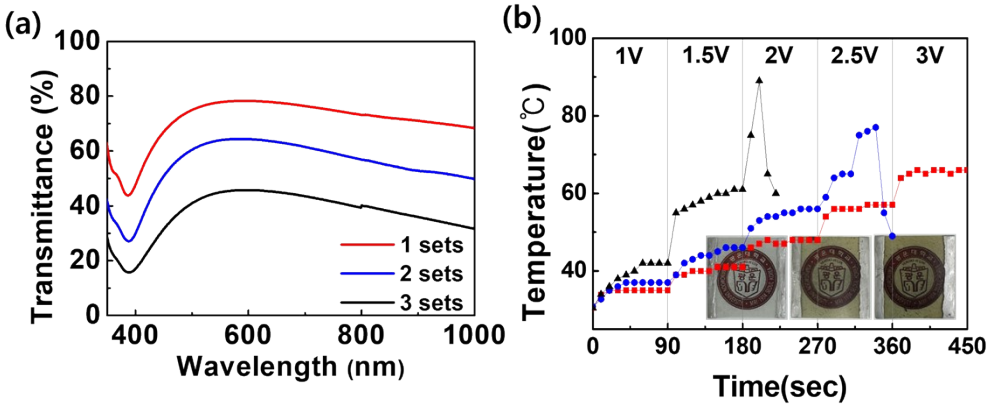

Fig. S5. (a) Optical transmittance spectra and (b) heating performance of Ag NW/PEDOT:PSS composite-based films with different coating sets.

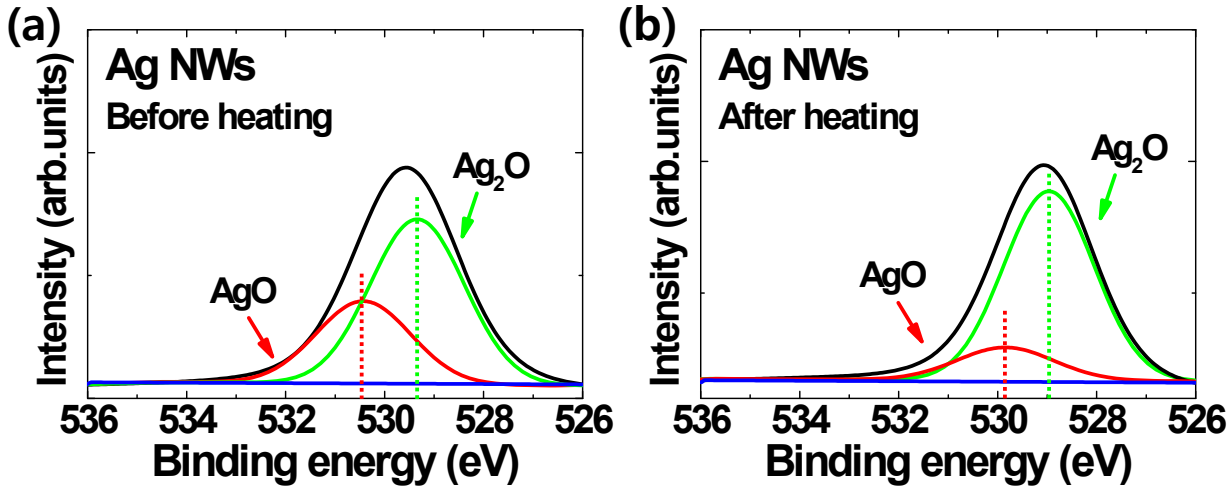

Fig. S6. O1s spectra of the AgxO species in the Ag NWs (a) before and (b) after heating.

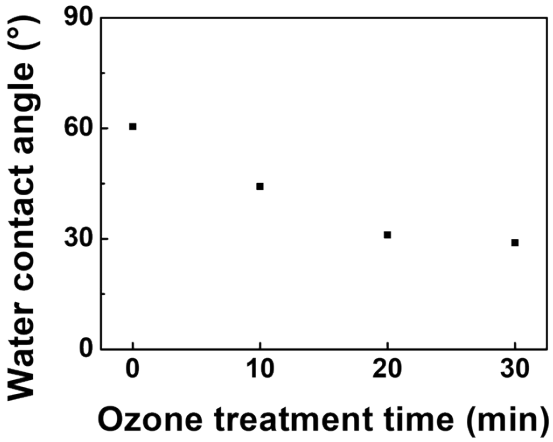

Fig. S7. Water contact angle of the PVDF-HFP substrate as a function of ozone-treatment time.

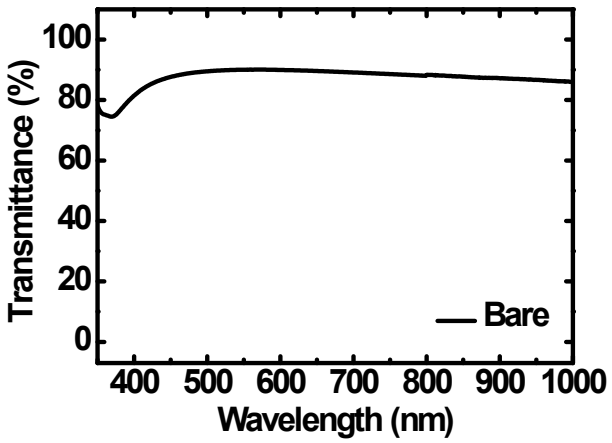

Fig. S8. Optical transmittance of the bare PVDF-HFP flexible substrate.

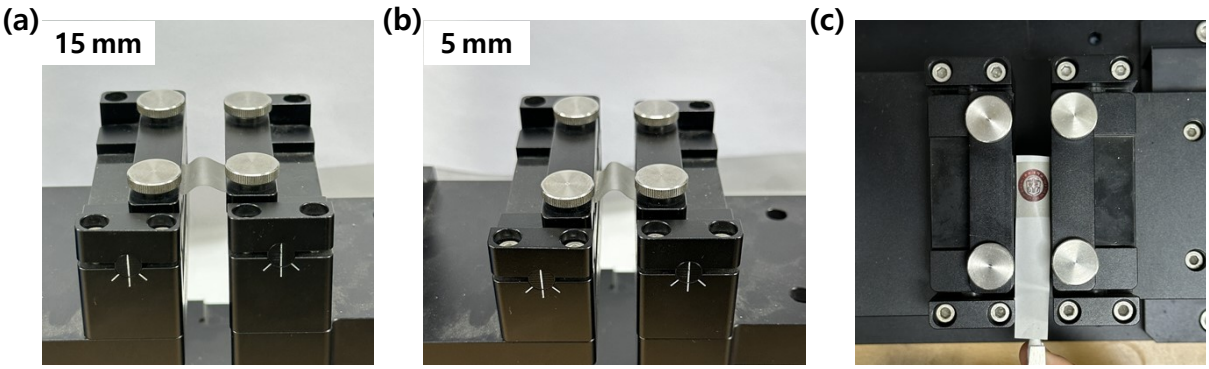

Fig. S9. Photographs of the instrument used for strain measurements during cyclic bending with a bending radius of (a) 15 and (b) 5 mm. (c) Photograph confirming the optical transparency of the wearable heater during the bending test.