

# Supporting Information

## **Increasing the Thermoelectric Power Factor of Solvent-Treated PEDOT:PSS Thin Films on PDMS by Stretching**

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Seebeck coefficient and Resistance measuring equipment.....	S1
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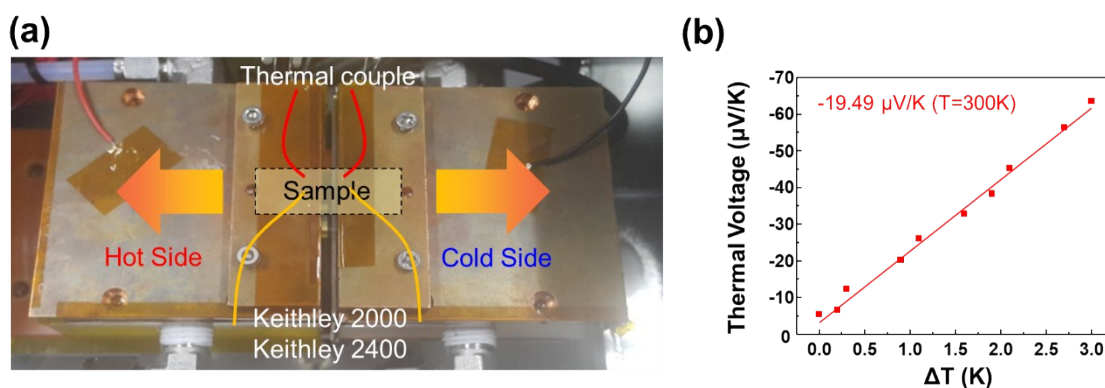


Fig. S1 (a) Photographic images of the custom-built resistance and Seebeck measurement setup. (b) Thermal voltage values of the PEDOT:PSS thin films depending on  $\Delta T$ . The Seebeck coefficient was determined by the slope of the linear fitting.

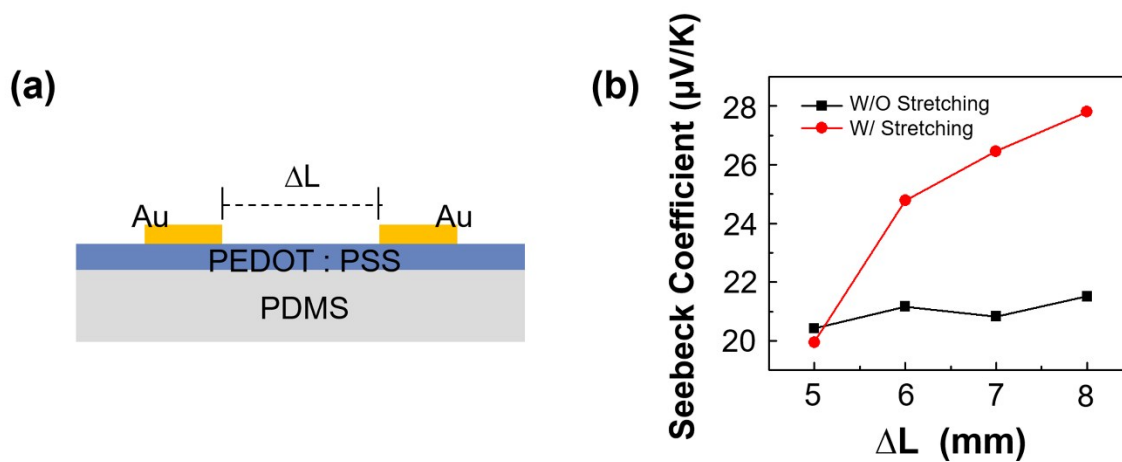


Fig. S2 (a) Schematic image of the experiment used to investigate the change in the Seebeck coefficient depending on the electrode distance. (b) Seebeck coefficients at different electrode distances measured with and without stretching.

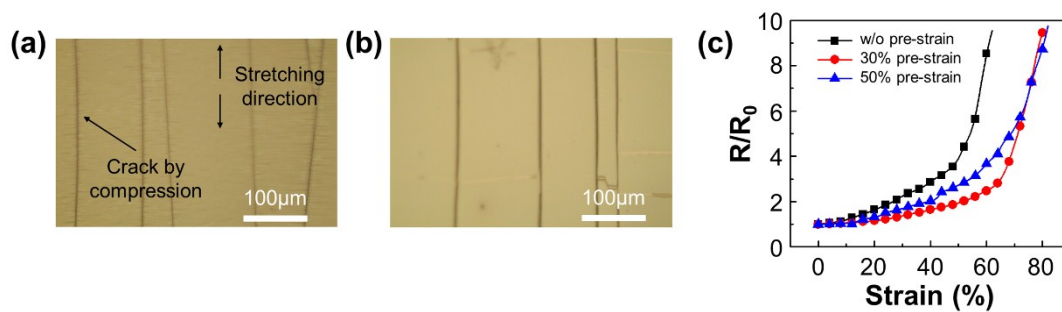


Fig. S3 Optical microscopy images of (a) the surface of a PEDOT:PSS thin film coated on 50% pre-strained PDMS and then released, (b) and after being stretched to 50% again. (c) Change in the normalized resistances of pre-strained PEDOT:PSS thin films.

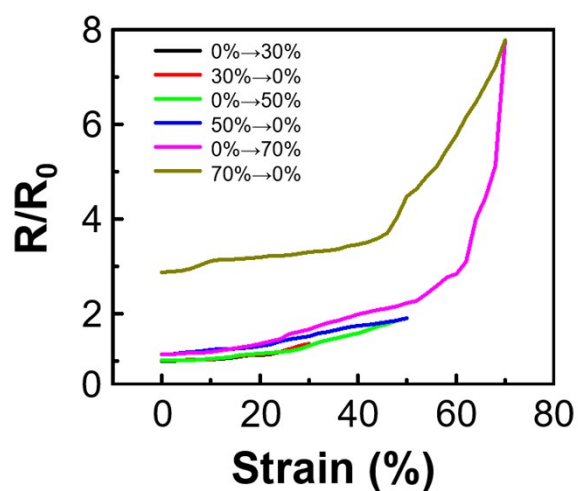


Fig. S4 Normalized resistance of PEDOT:PSS thin films coated on 30% pre-strained PDMS when stretched from 0% →30%→0%→50%→0%→70%→0%.

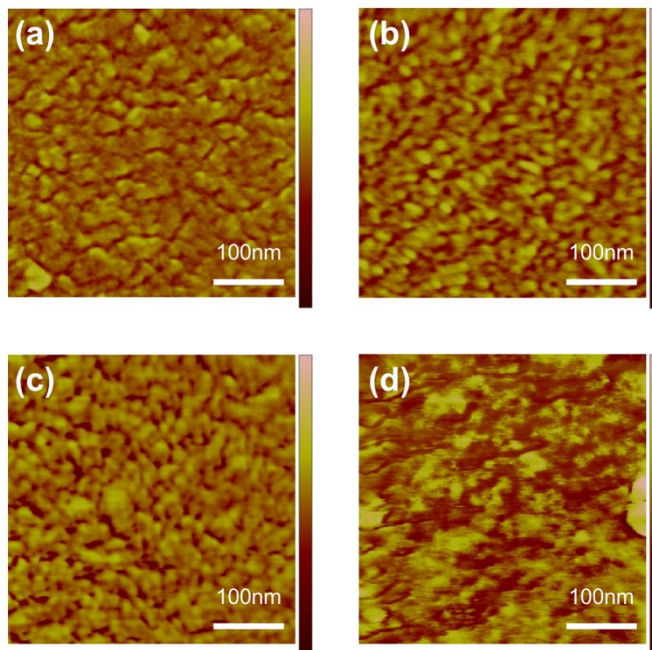


Fig. S5 Phase AFM image of (a) DMSO, (b) MeOH, (c) EG and (d) H<sub>2</sub>SO<sub>4</sub> treated PEDOT:PSS thin films

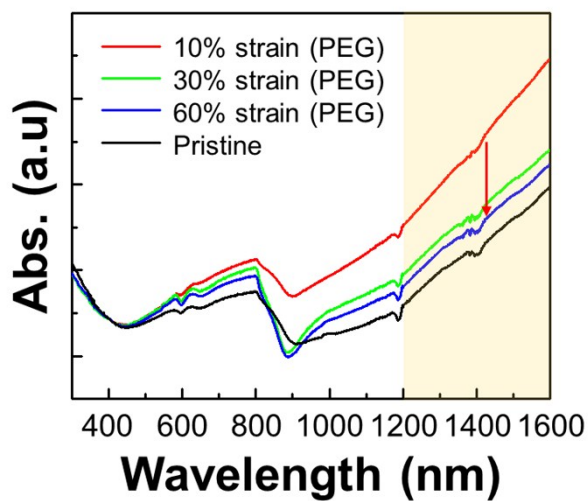


Fig. S6 UV-Vis spectra of PEG treated PEDOT : PSS thin films with different strain and pristine PEDOT:PSS thin films

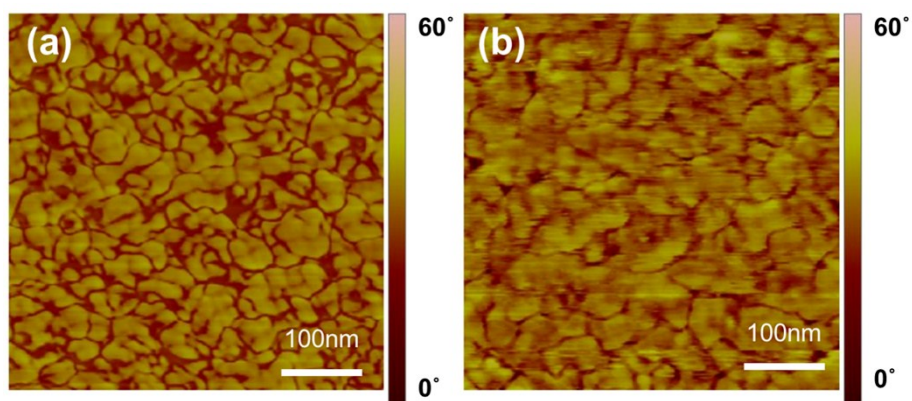


Fig. S7 Phase AFM image of pristine PEDOT:PSS thin films (a) under free-strained state and (b) 30% strained state.