

Supporting Information

Ultralight, elastic, hybrid aerogel for flexible/ wearable piezoresistive sensor and solid-solid/ gas-solid coupled triboelectric nanogenerator

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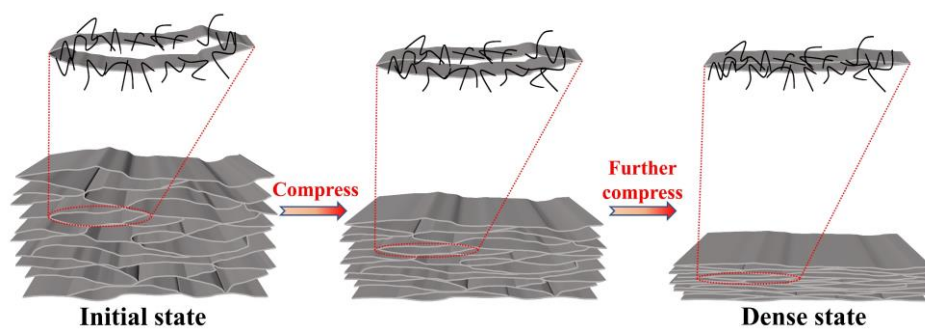


Figure S1. Schematic diagram of structure of aerogel under compression.

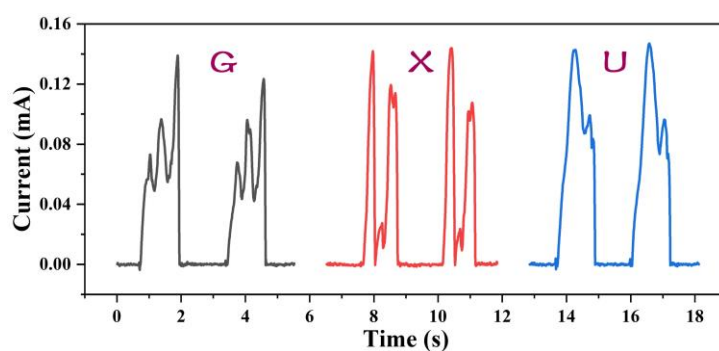


Figure S2. The signals of writing different word.

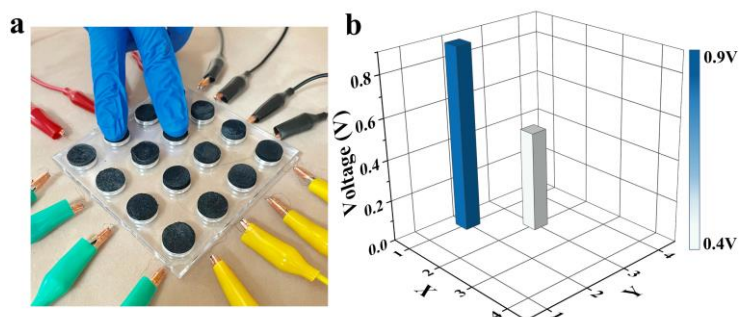


Figure S3. (a) Photograph of the 4x4 sensor array touched by two fingers. (b)Corresponding 3D display diagram.

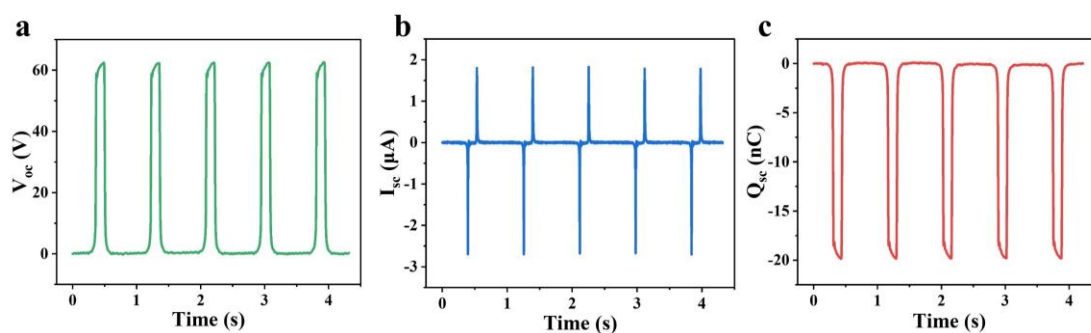


Figure S4. (a-c) V_{OC} , I_{SC} and Q_{SC} of Copper-TENG.

Table S1. compared the power density of TENG with the state-of-the-art in the literature reports.

Triboelectric materials	Power density (mW/m²)	Ref
PDMS/liquid crystalline poly	0.03	[43]
PTFE/PI/Oil	1.23	[44]
md-PI/Al	1.42	[45]
PTFE/Human skin	3.8	[46]
Cu/Kapton	5.17	[47]
Cu/PTFE		
PDMS/PI	6.2	[48]
Al/PP fabric	18	[49]
Aerogel/PTFE	127	[38]
TPU/PDMS	200	[50]
PTEF/ butyronitrile	288	This work
Aerogel/air		

Video 1. Compress recovery properties of GO/CNT HA.

Video 2. The compress recovery of GO/CNT HA control the brightness of LED.

Video 3. GO/CNT HA-TENG driven electronic watch.