Supporting Information

All-Cellulose Nanofibers-Based Sustainable Triboelectric Nanogenerators for Enhanced Energy Harvesting

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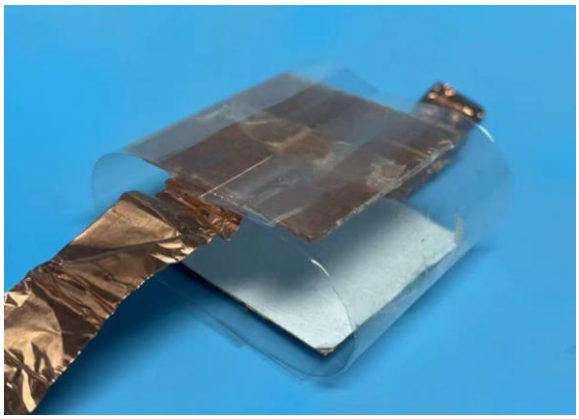


Figure S1. Photograph of the FC-TENG.

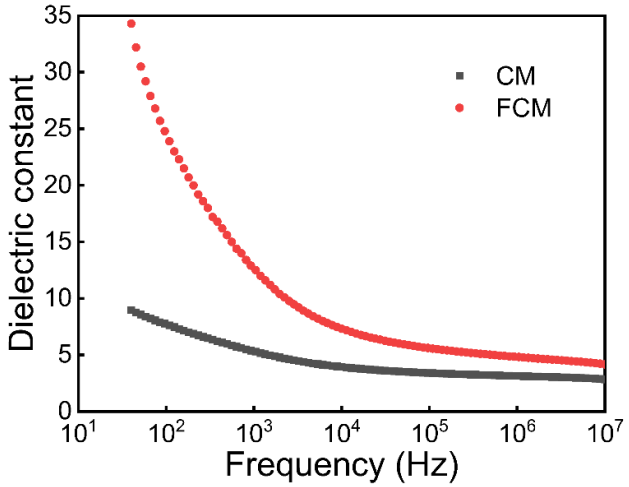


Figure S2. Dielectric constant curves of the membranes.

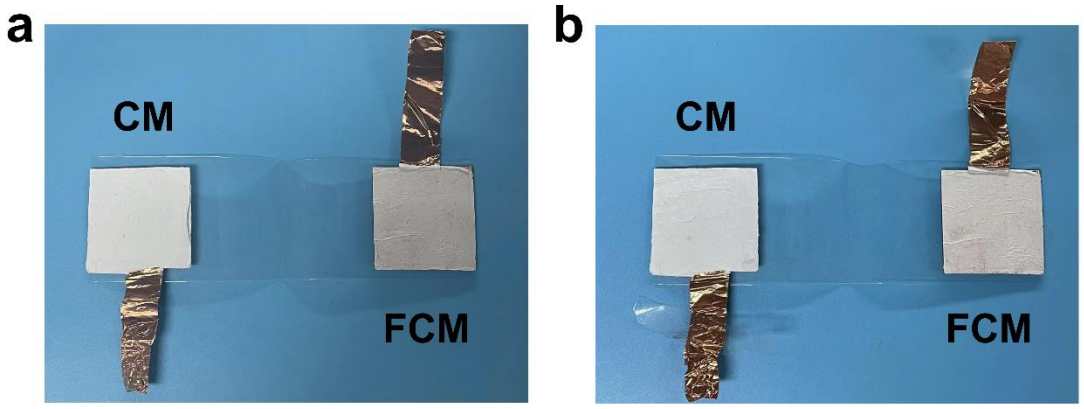


Figure S3. photographs of the FC-TENG before (a) and after (b) 15,000 recycles of operation.

Table S1. Output performance of FC-TENG with other recent reported cellulose-based TENGs.

Tribopositive	Tribonegative	Voltage (V)	Current (μA)	Power density (W/m^2)	Ref.
CNF Phosphorene Hybrid Paper	Gold	5.2	/	0.018	[1]
Cellulose/PVDF/ $BaTiO_3$	PTFE	20.15	6	/	[2]
Methylated superhydrophobic CNF	FEP	120	6.1	/	[3]
PEO/PPG	PCL/EC	6.3	0.07205	2.25×10^{-6}	[4]
PEI/paper	PTFE	68.6	4.47	0.0793	[5]
polypyrrole-coated cellulose paper	Nitrocellulose	60	/	0.83	[6]
BC/$BaTiO_3$	PDMS	57.6	5.78	0.0048	[7]
Polyamide	PFOTES-CNF	28.5	9.3	0.0135	[8]
Alc-S_5-CNF	PVDF	7.9	5.13	0.182	[9]
CNF-PEI-Ag	FEP	100	1.1	0.43	[10]
Cellulose	**Fluorinated cellulose**	**94**	**8.5**	**0.15**	**This work**

CNF = cellulose nanofiber, PVDF = polyvinylidene fluoride, PTFE = Polytetrafluoroethylene, FEP = fluorinated ethylene propylene, PEO = polyethylene oxide, PPG = poly(propylene glycol), PCL = polycaprolactone, EC = ethyl cellulose, PEI = polyethyleneimine , BC = bacterial cellulose, PDMS = polydimethylsiloxane, PFOTES = triethoxy-1H,1H,2H,2H-tridecafluoro-n-octylsilane, Alc-S_5-CNF = allicin grafted CNFs.

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