

Supplementary Information

Multi-Tunnel Triboelectric Nanogenerator for Scavenging Mechanical Energy in Marine Floating Bodies

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Table S1. Some wave energy harvesting TENGs comparison

Wave Energy Harvesting TENGs	Output	Materials	Frequency
Matryoshka-inspired hierarchically structured TENG	1.64 μ A 1.108 W/m ³	PTFE ball Copper film	1.25–3 Hz
Duck-shape TENG	65.5 μ A 9.56 W/m ³	Nylon ball Kapton film	0.56–5 Hz
Sandwich-like TENG	11.94 μ A 36.68 W/m ³	PTFE ball Al film	0.4–2 Hz
Tower-like TENG	1.4 μ A 1.03 W/m ³	PTFE ball Nylon and copper film	0.6–2.4 Hz
Multi-tunnel structure TENG	4.1 μ A 8.3 W/m ³	PTFE ball Copper film	0.4–2 Hz



Figure S1. Photograph of the flat type TENG.

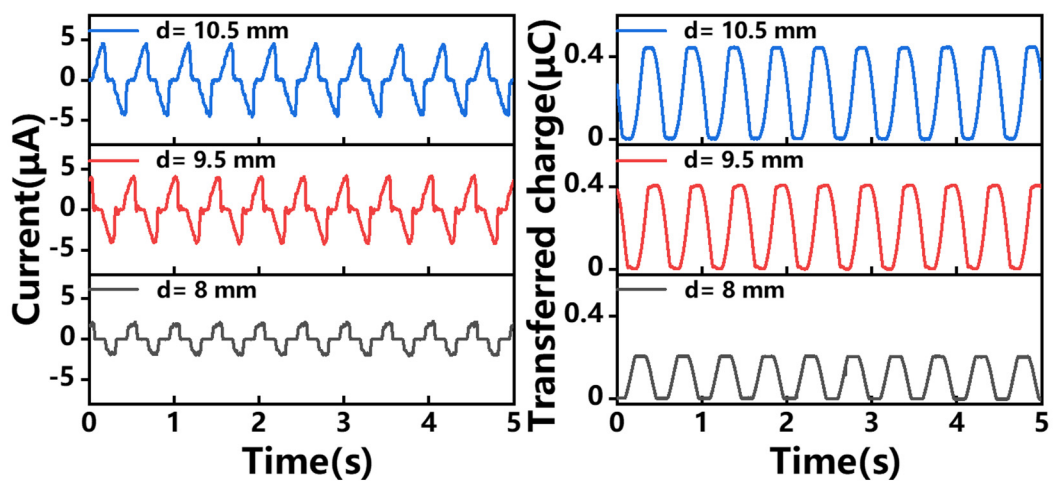


Figure S2. Detailed outputs of the MT-TENG for PTFE balls with various diameter.

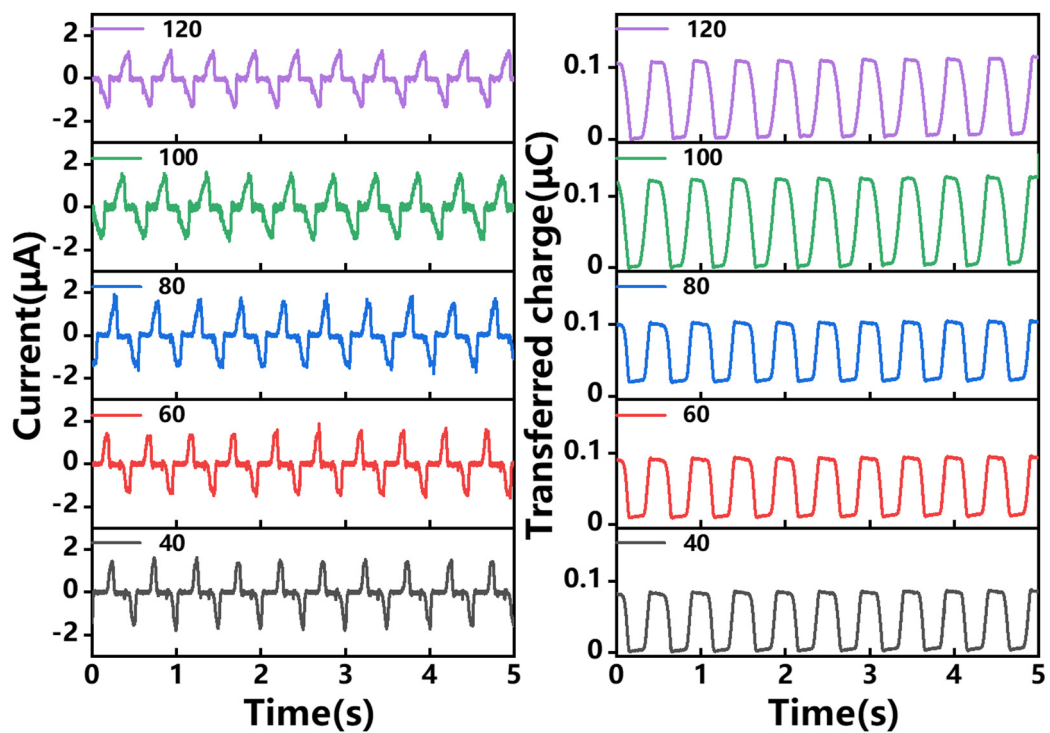


Figure S3. Detailed outputs of the flat type TENG with 40, 60, 80, 100, 120 balls.

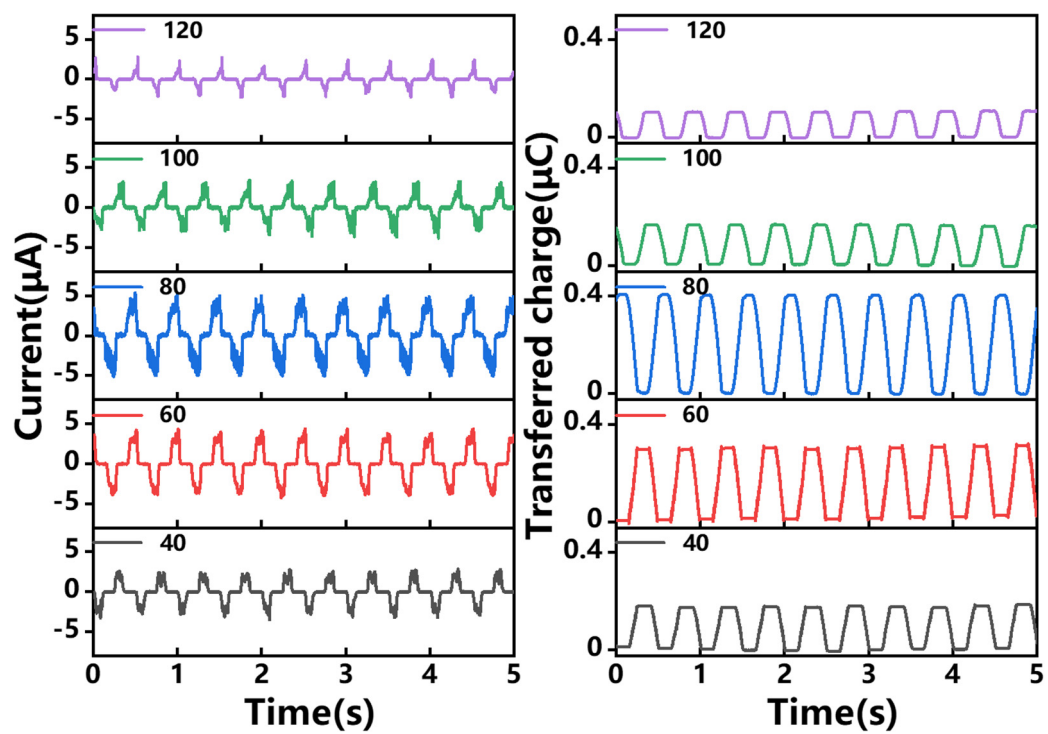


Figure S4. Detailed outputs of the MT-TENG with 40, 60, 80, 100, 120 balls.

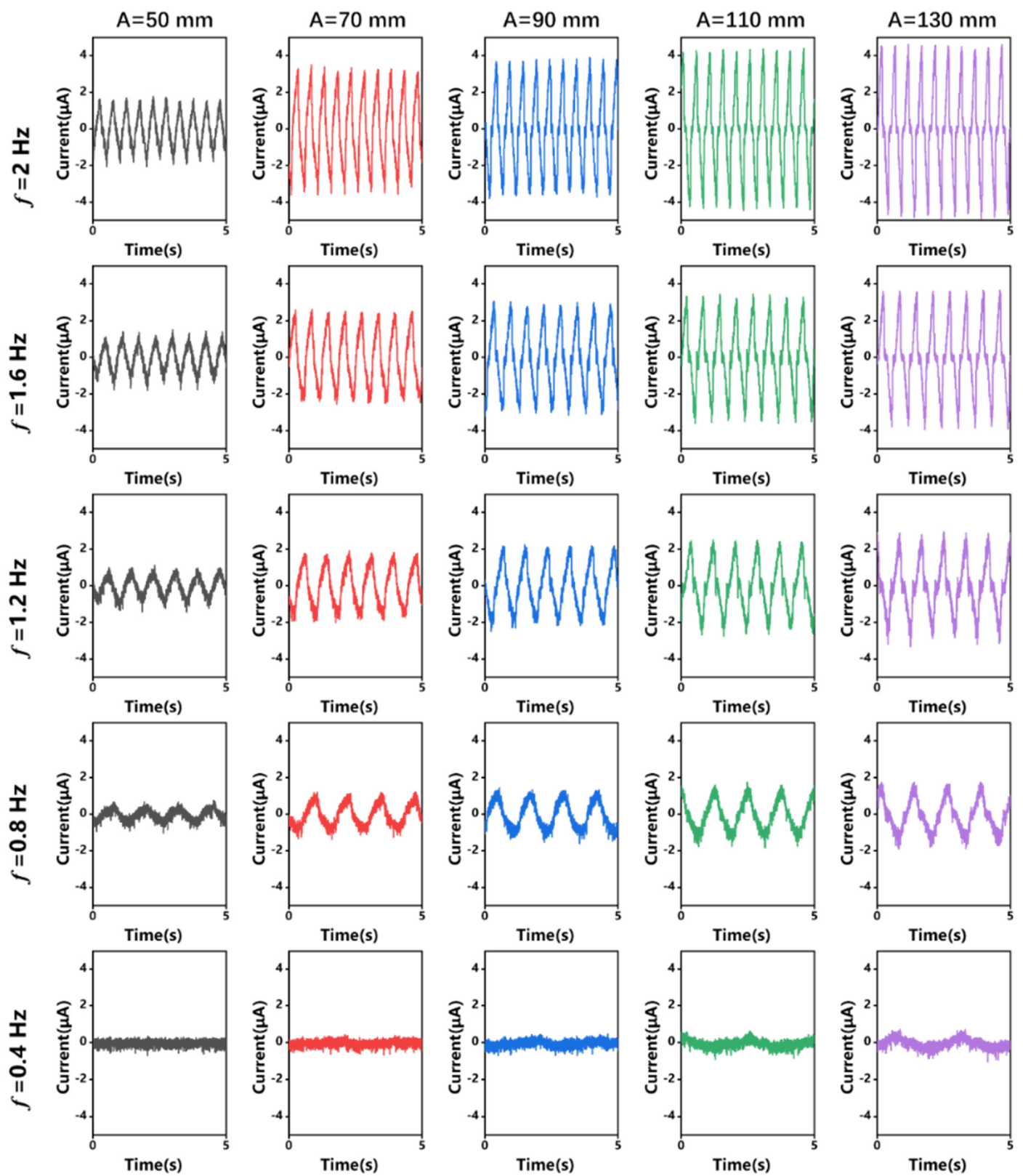


Figure S5. Details of short-circuit current with various frequency and amplitude.

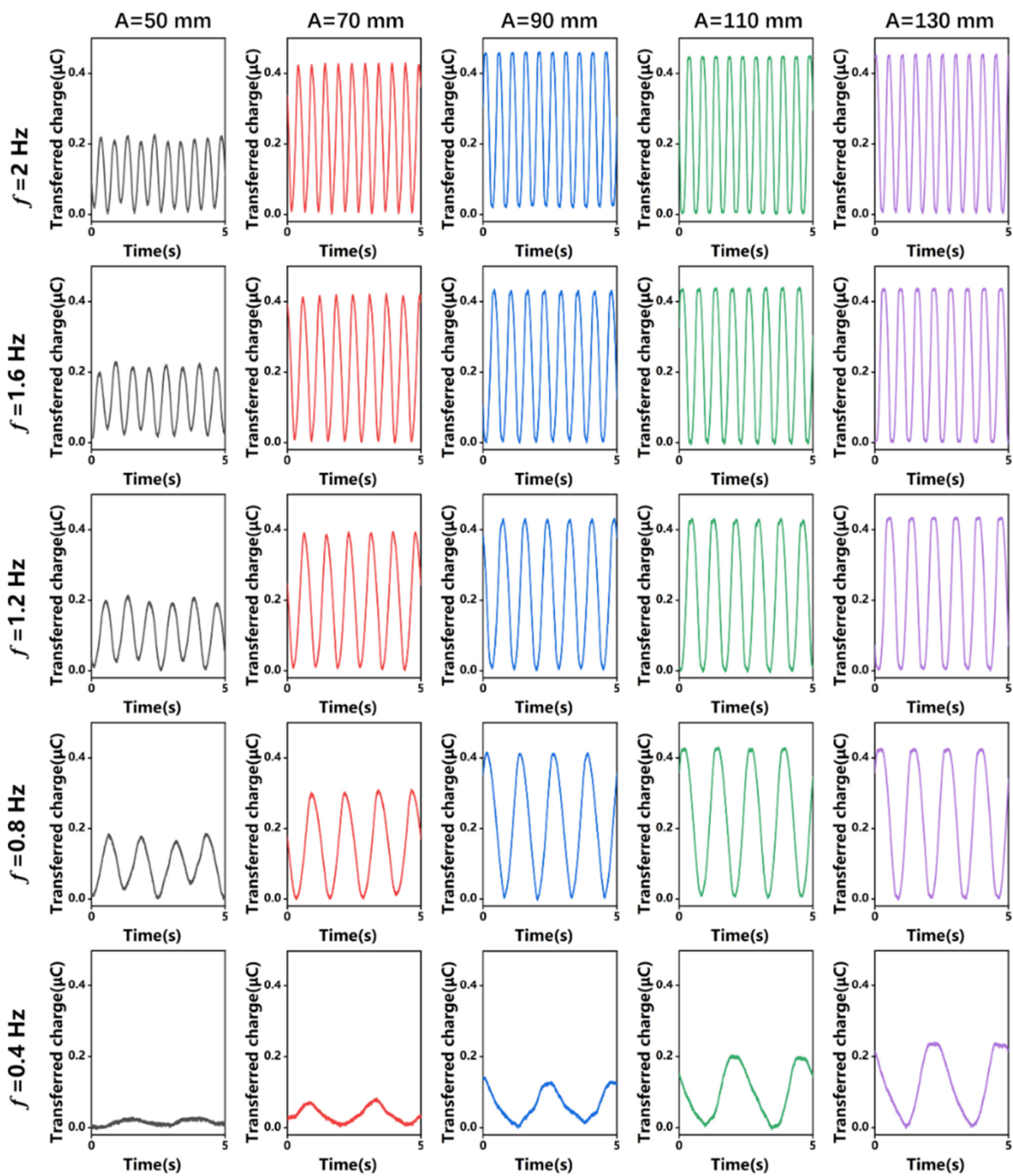


Figure S6. Details of transferred charge with various frequency and amplitude.

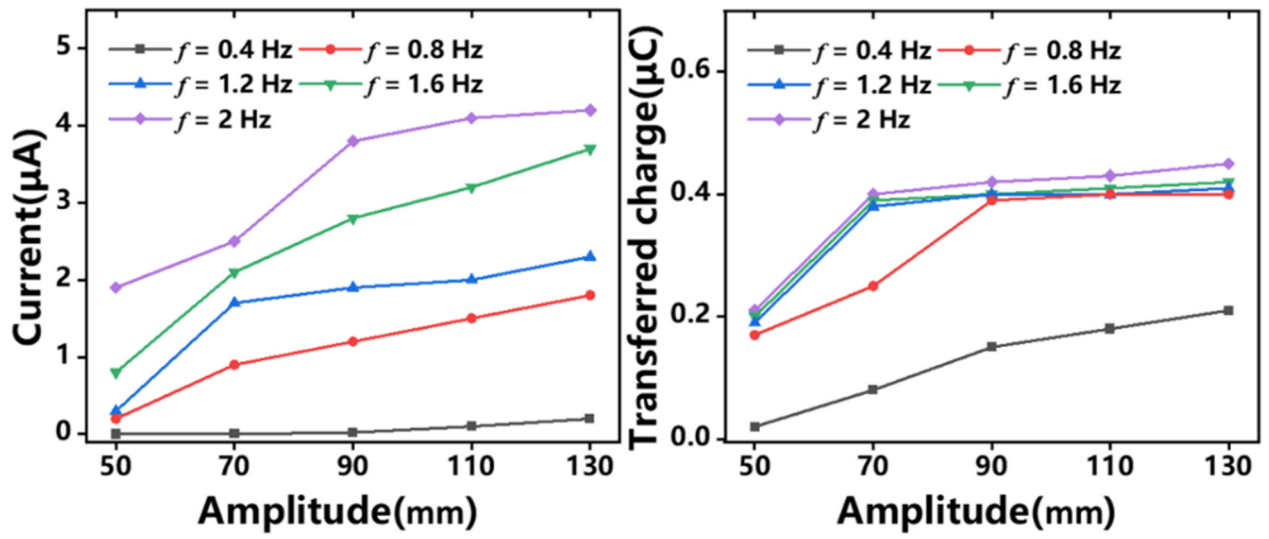


Figure S7. Details of transferred charge with various frequency and amplitude.

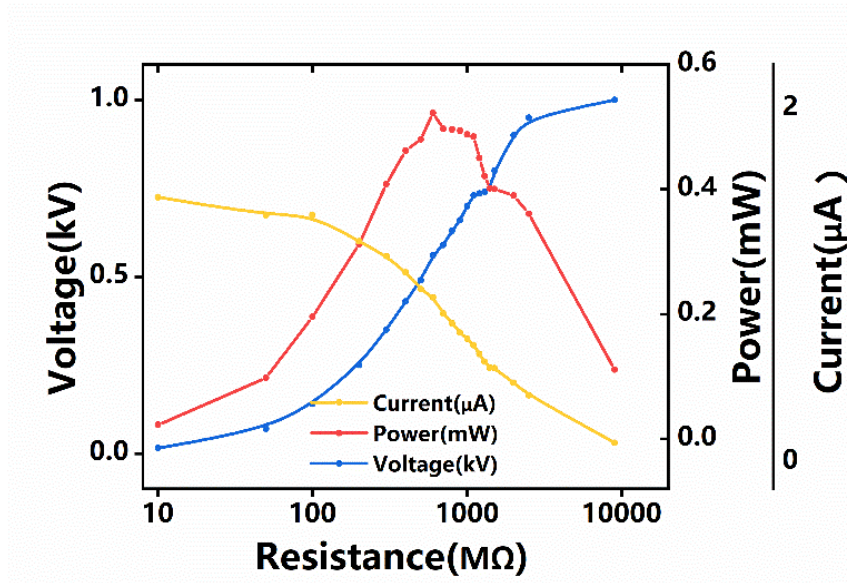


Figure S8. The output voltage, current and output power for the flat type TENG on the resistance of the load



Figure S9. Photographs of the folding structure of the MT-TENG (a) Two cover plates and intermediate frame. (b) Intermediate frame combined with one cover plate. (c) Intermediate frame combined with two cover plates.