B-Site Engineered Medium-Entropy Perovskite as a Dual-Purpose Material Enabling Piezoelectric Energy Harvester and Supercapacitor electrode Applications.

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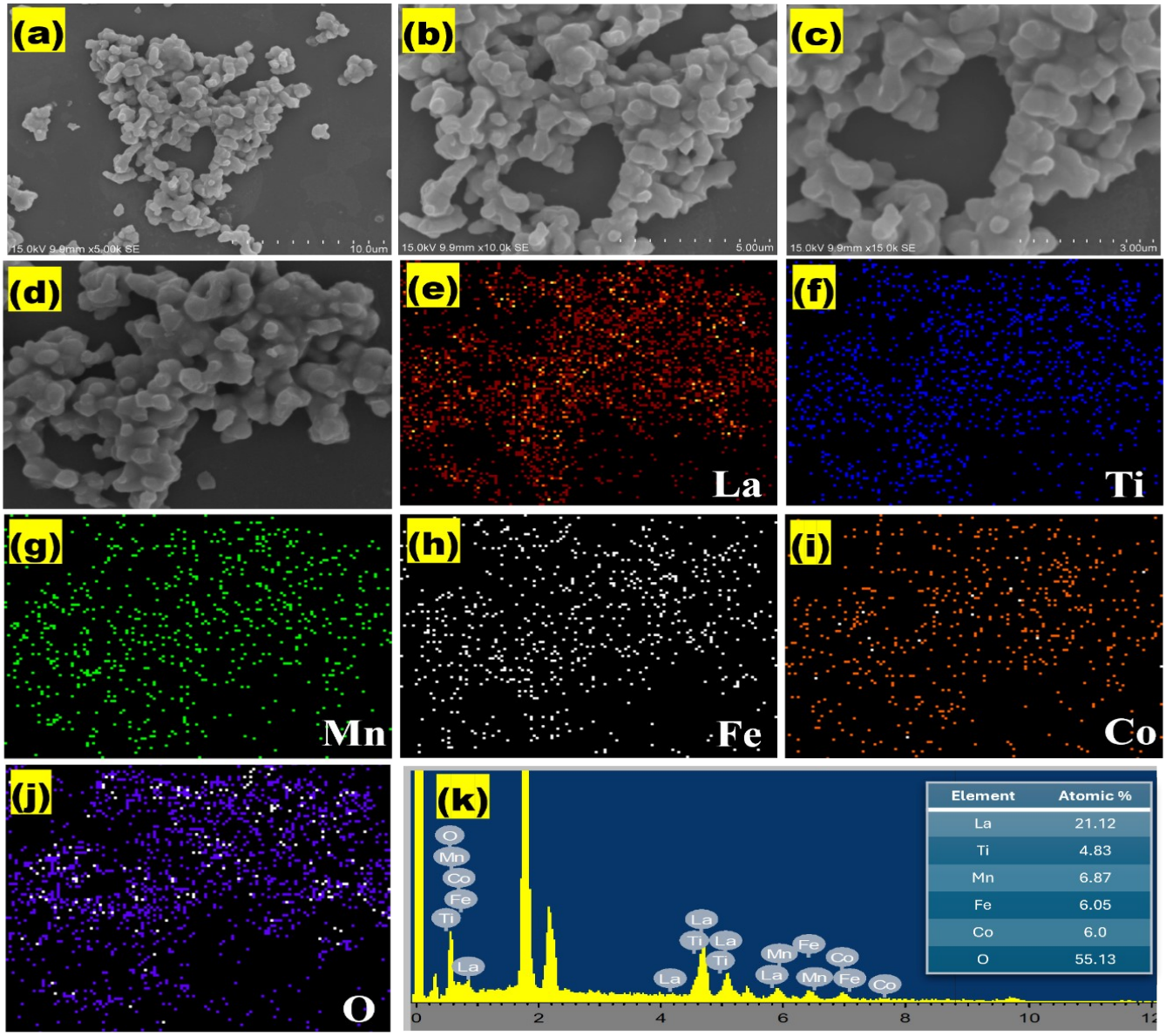

Figure S1. (a-c) SEM images of LTMFC at different magnifications, (d-j) mapping image of elements La, Ti, Mn, Fe, Co, and O, (k) EDS spectrum of LTMFC, inset showing the atomic percentage of elements.

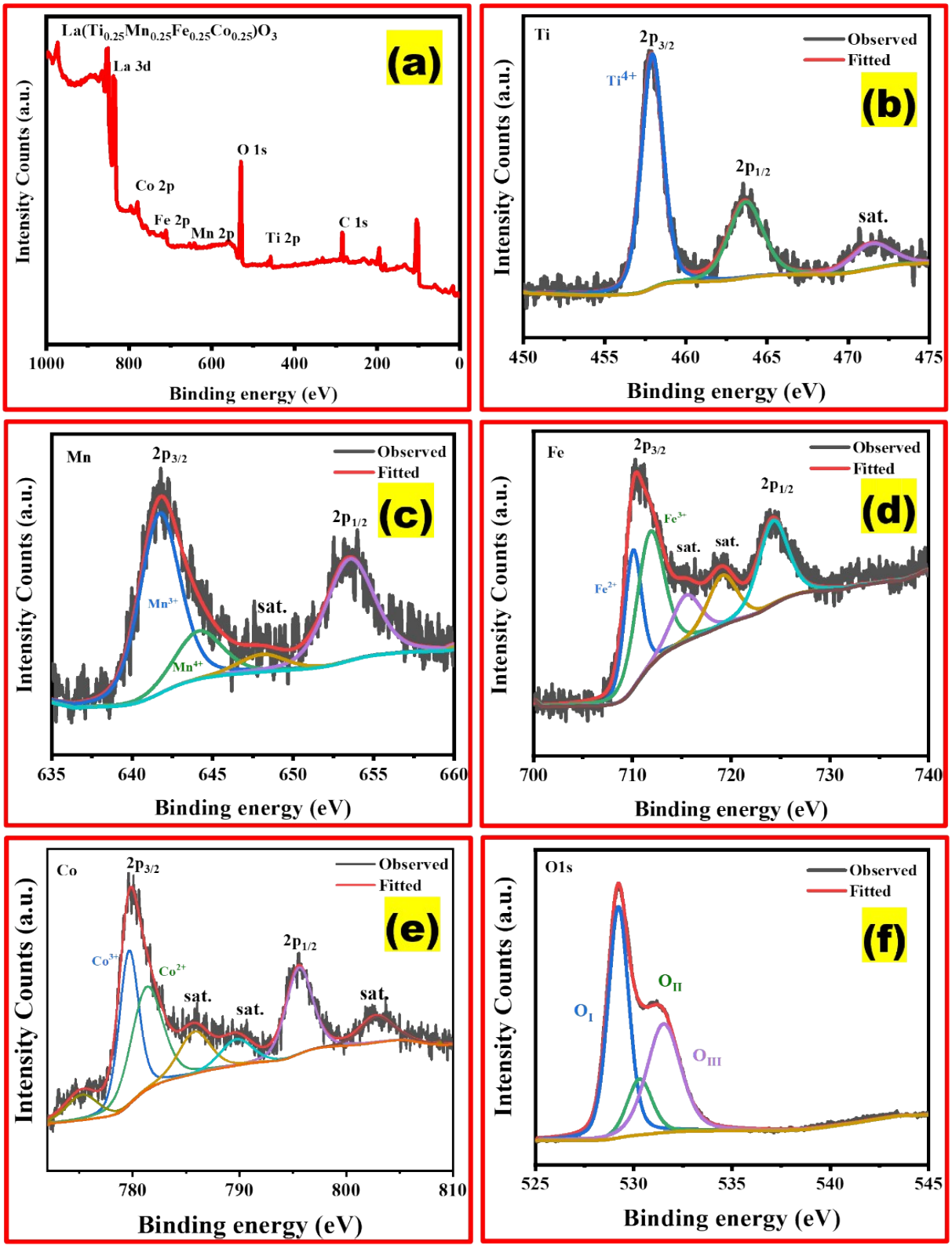

Figure S2. XPS analysis of LTMFC (a) survey spectrum, (b) Ti, (c) Mn, (d) Fe, (e) Co, (f) O1s.

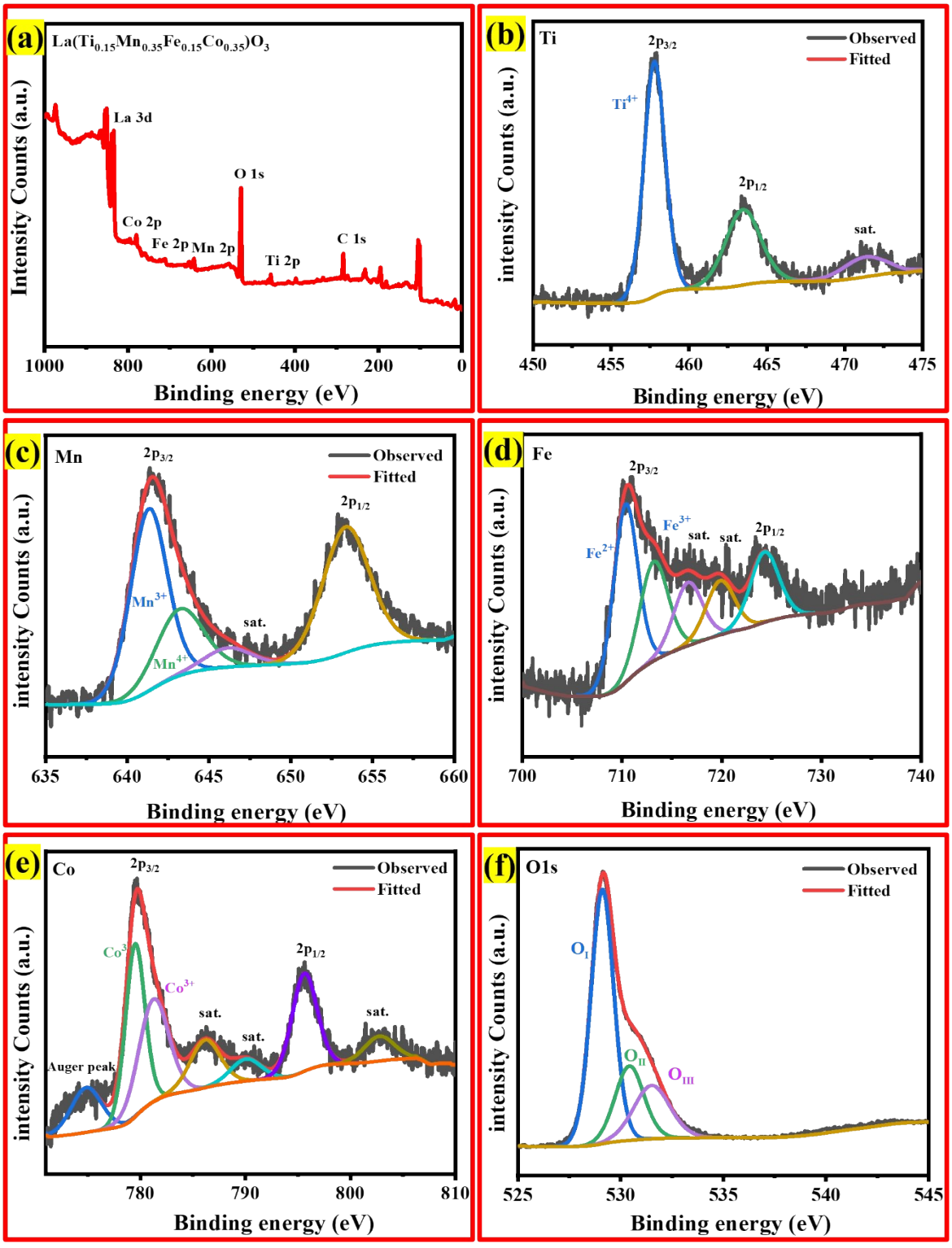

Figure S3. XPS analysis of TF-0.15 (a) survey spectrum, (b) Ti, (c) Mn, (d) Fe, (e) Co, (f) O1s.

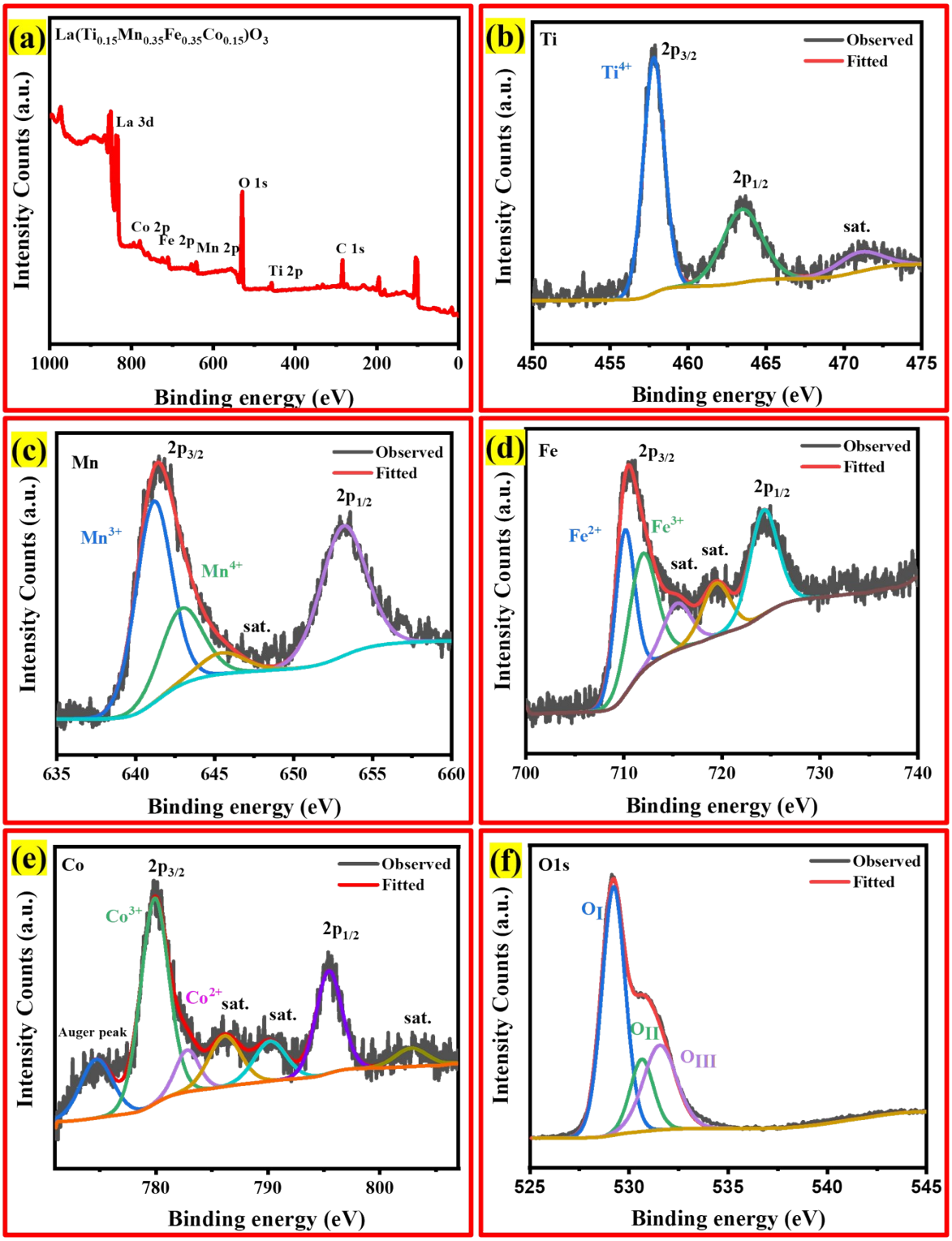

Figure S4. XPS analysis of TC-0.15 (a) survey spectrum, (b) Ti, (c) Mn, (d) Fe, (e) Co, (f) O1s.

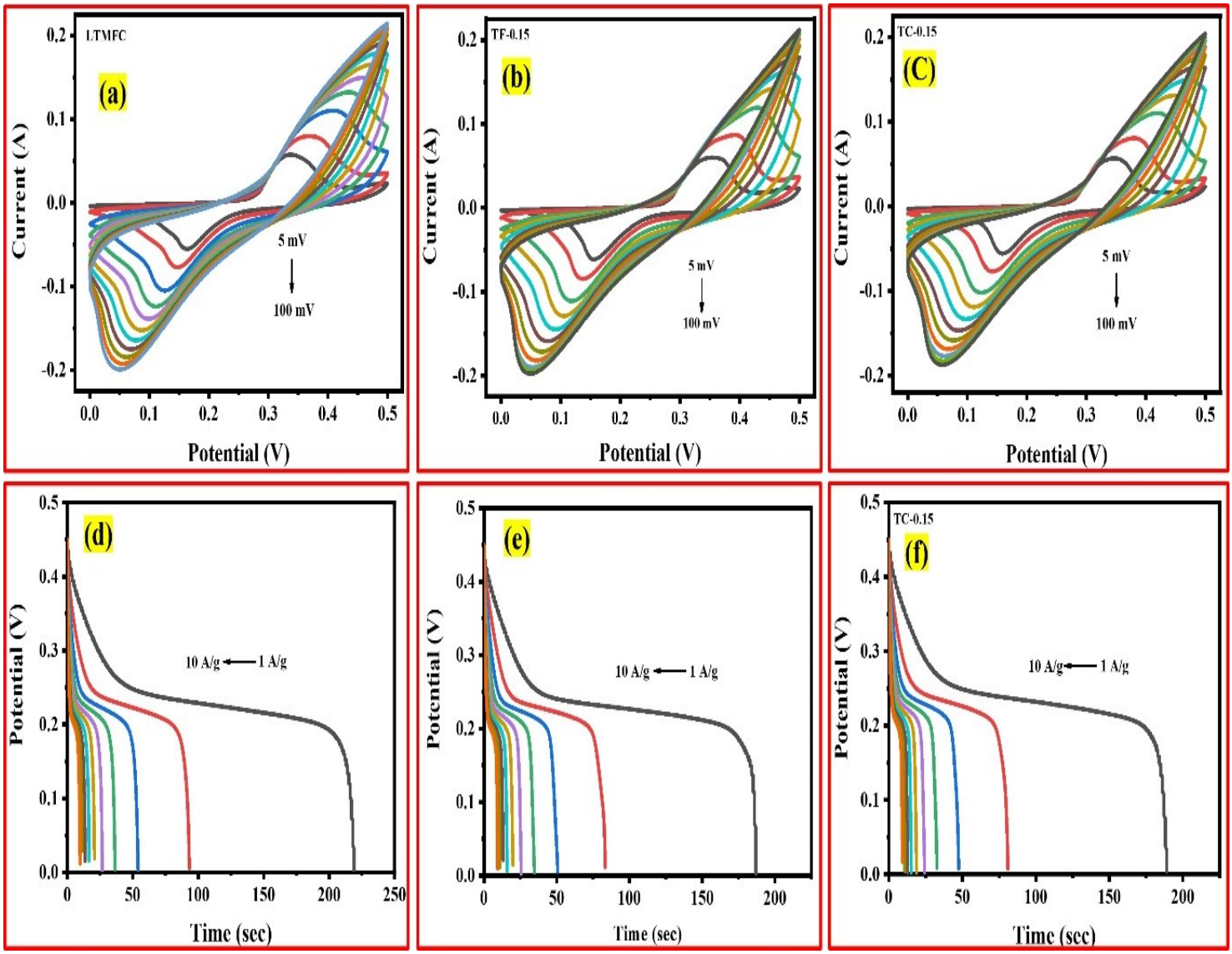

Figure S5. CV of (a) LTMFC, (b) TF-0.15, (c) TC-0.15 at different scan rates from 5 mV/s to 100 mV/s and GCD of (d) LTMFC, (e) TF-0.15, (f) TC-0.15 at different current densities from 1A/g to 10A/g, respectively.

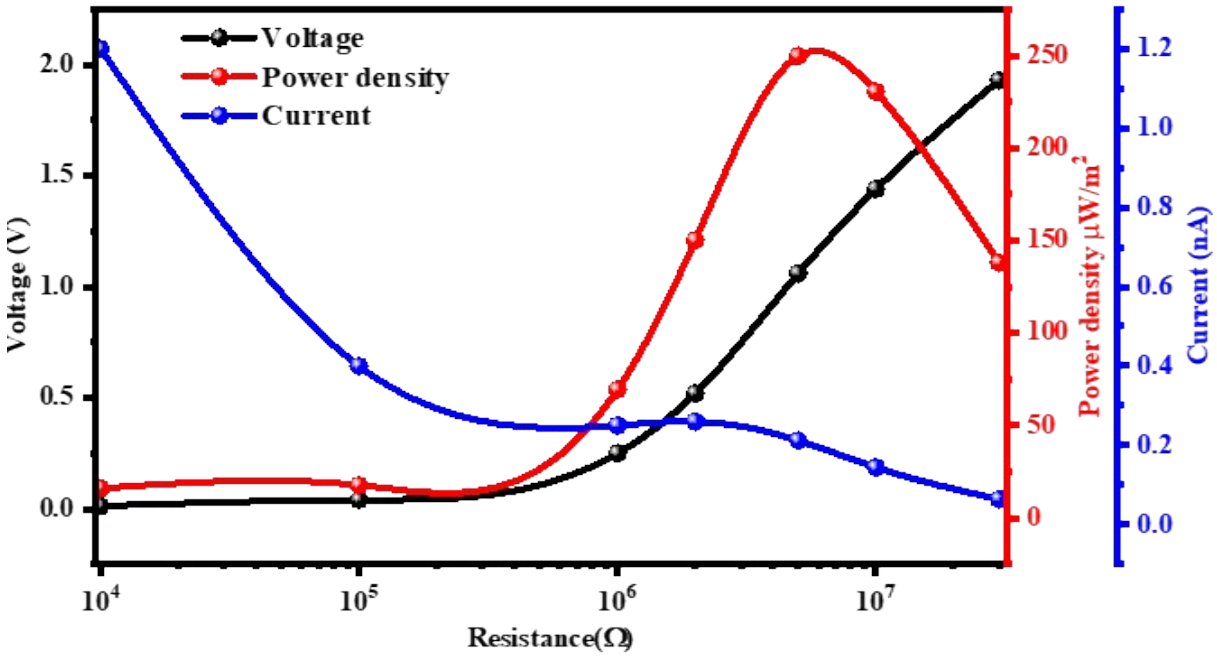

Figure S6. Output voltage and corresponding power density, and current with varying resistance

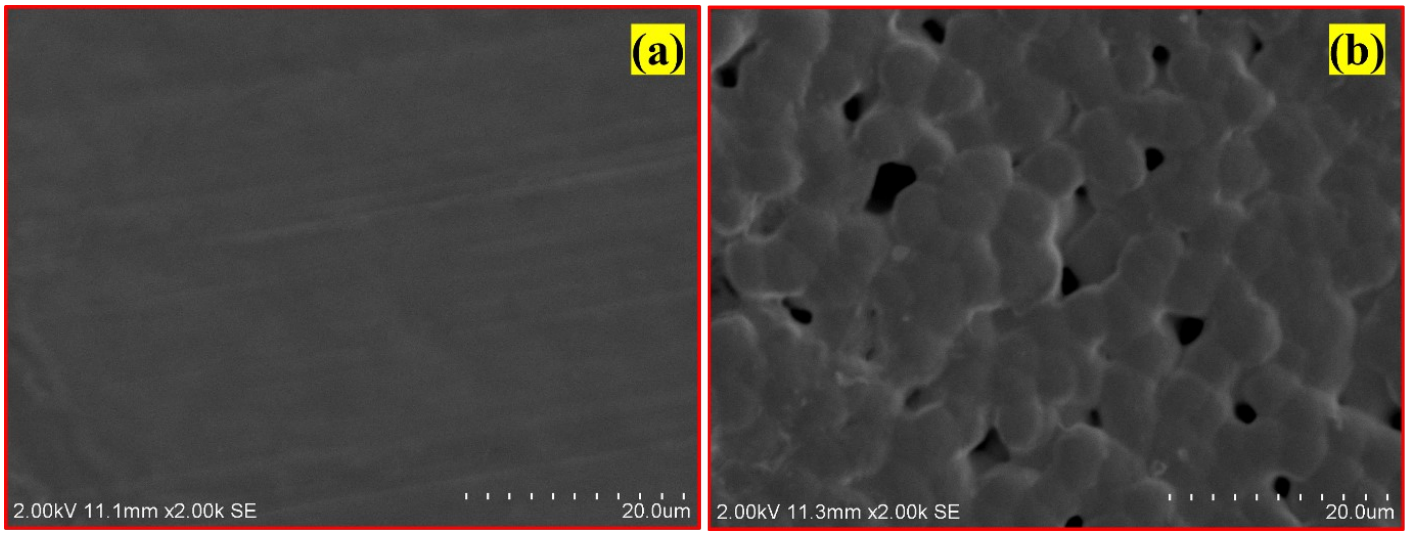

Figure S7. SEM image of (a) PVDF and (b) 5 wt% TM added PVDF.

Table S1. Comparison of power density.

Material	Method	Power density	Reference
PVDF/TM-0.15	**Solution casting**	**250 μW/m^2**	**Present work**
PVDF-ZnSnO3-MoS2	electrospinning	28.9 mW/m^2	[1]
NN@PDA/PVDF	Solution casting	81.7 μW/cm^2	[2]
$CoFe_2O_4$	Drop-cast	1.11 μW/cm^2	[3]
PVDF/MoS_2	electrospinning	16 nW/cm^2	[4]

Reference:

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