

Supplementary information

**Poly(diallyl dimethylammonium)-based solid electrolytes to significantly  
enhance the power factor of a thermoelectric oxide film**

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Table S1. Elemental composition of an Sb:SnO<sub>2</sub> film.

| Element | Weight% | Atomic% |
|---------|---------|---------|
| Sn      | 71.38   | 30.50   |
| Sb      | 7.83    | 3.30    |
| O       | 20.79   | 66.20   |

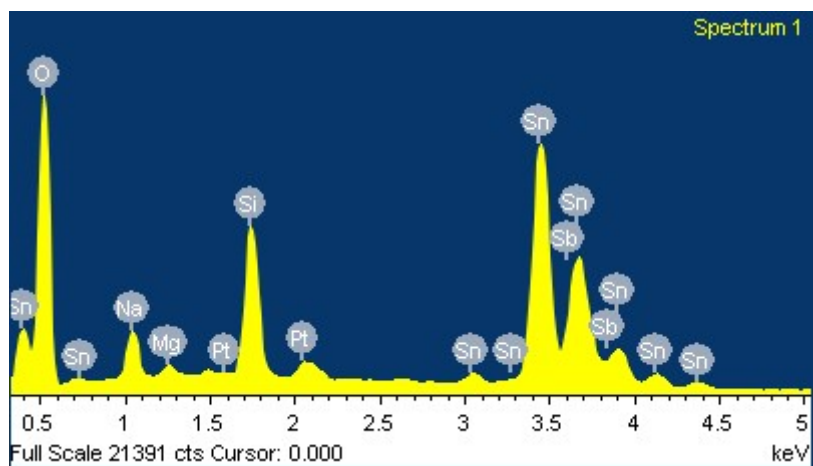


Fig. S1. EDX spectrum of an Sb:SnO<sub>2</sub> film.

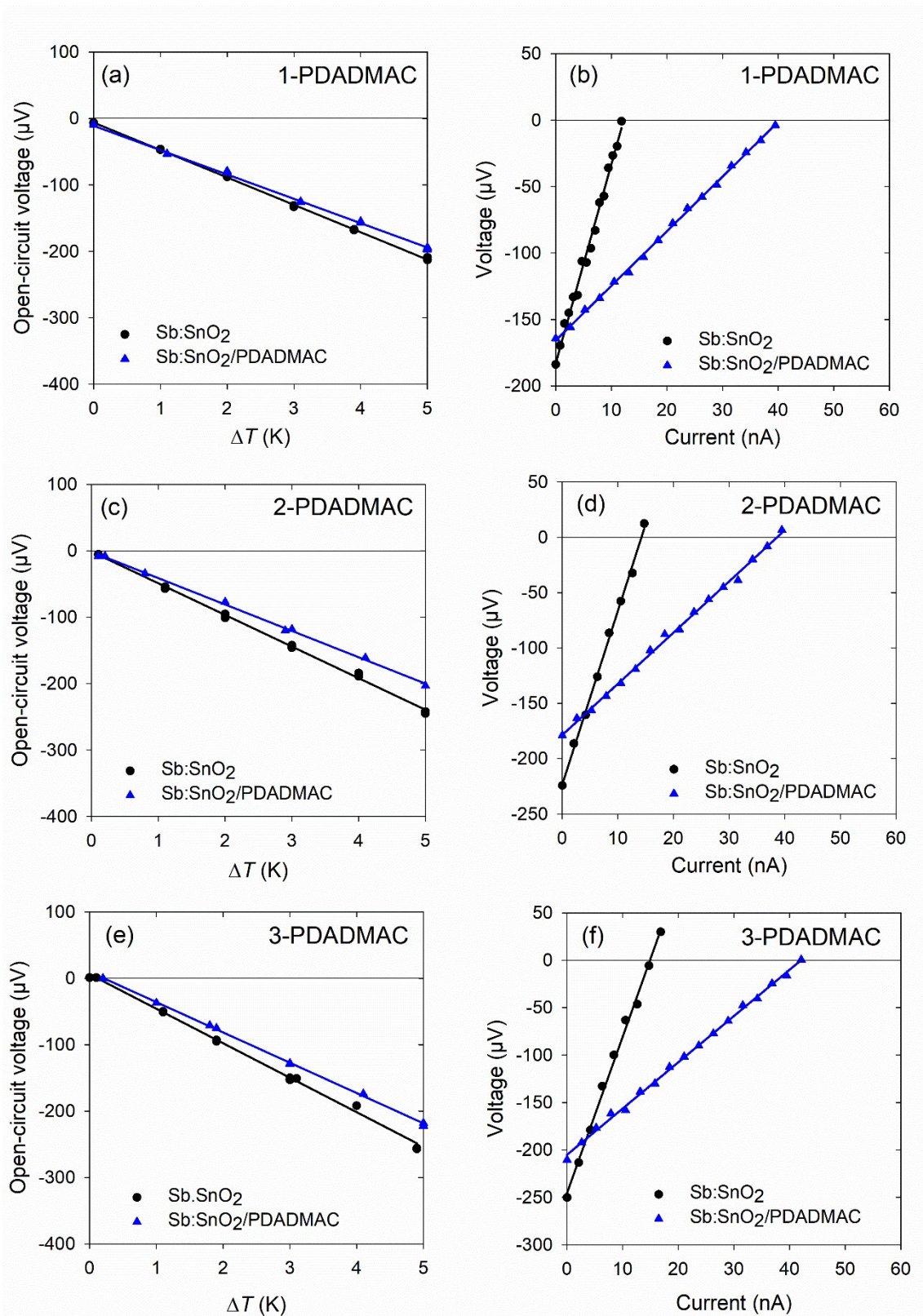


Fig. S2. (a, c, e) Open-circuit voltage vs temperature difference plots and (b, d, f) current-voltage curves for three Sb:SnO<sub>2</sub> films before and after PDADMAC addition.

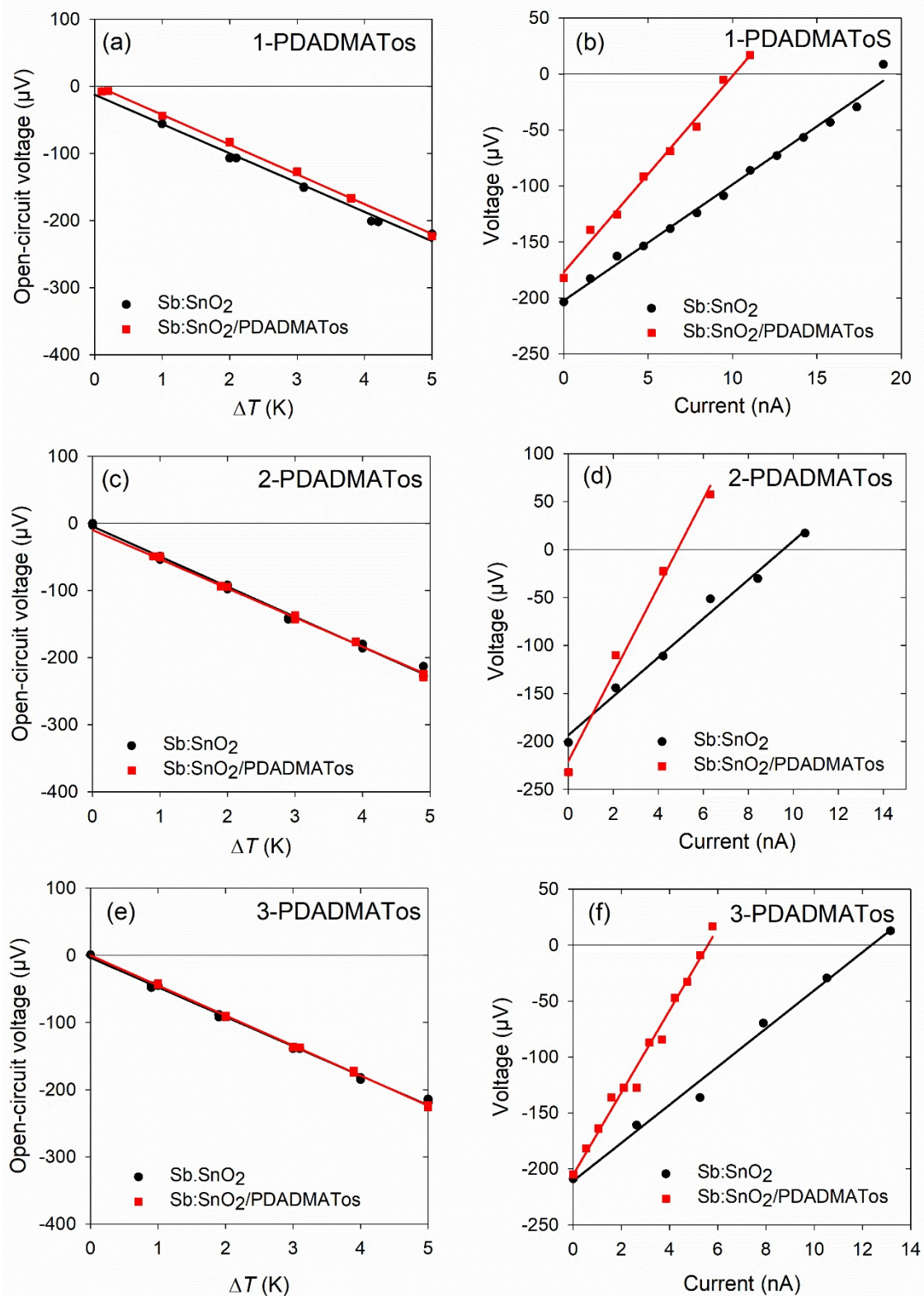


Fig. S3. (a, c, e) Open-circuit voltage vs temperature difference plots and (b, d, f) current-voltage curves for three Sb:SnO<sub>2</sub> films before and after PDADMATos addition.

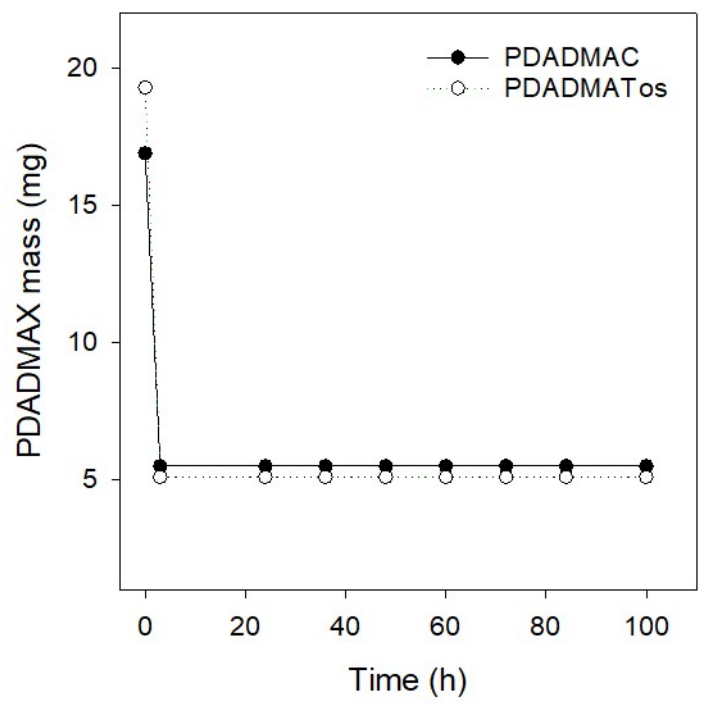


Fig. S4. Mass monitoring of the PDADMAX polyelectrolytes.



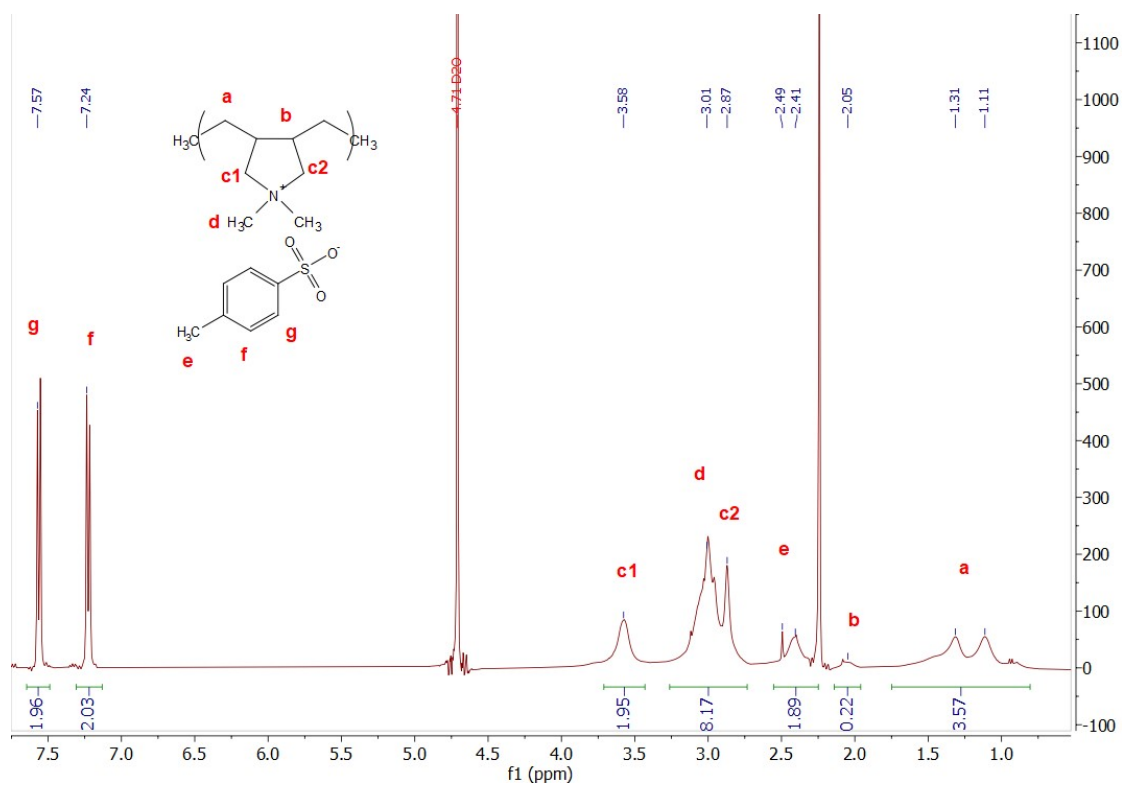


Fig. S5. <sup>1</sup>H-NMR spectrum of PDADMATos.

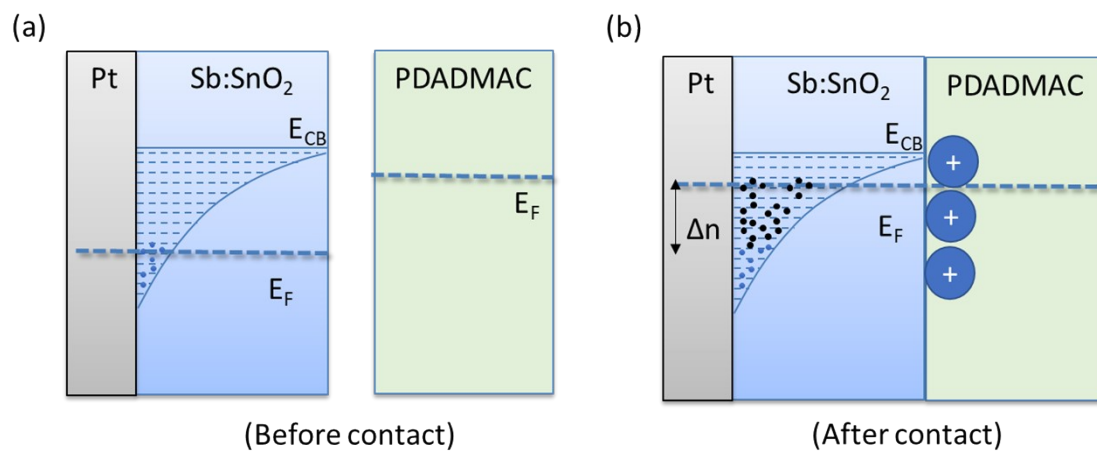


Fig. S6. Energy diagram (a) before and (b) after the equilibration of Sb:SnO<sub>2</sub> with PDADMAC.