Electronic Supplementary Material (ESI) for Physical Chemistry Chemical Physics.

High-Performance Thermoelectric Materials Based on the Ternary TiO_2/CNT/PANI Composites

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Supporting Information

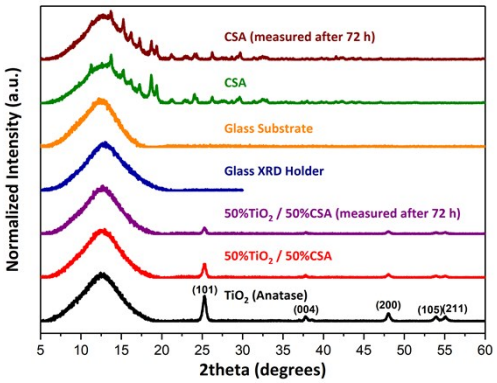

Figure S1. X-Ray Diffraction Patterns of the other necessary samples.

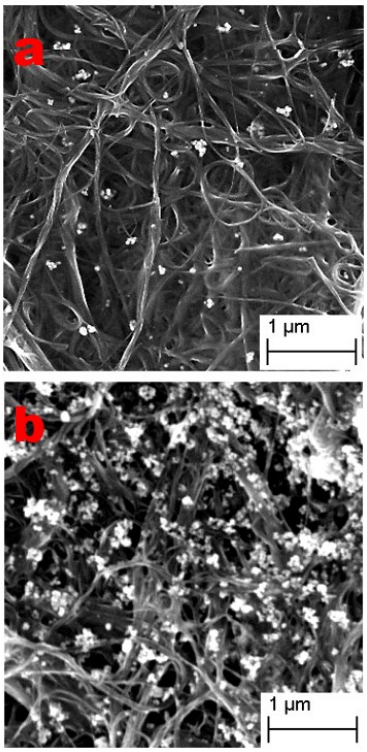

Figure S2. SEM micrographs of the 70%a-CNT-50%PANI composites with different TiO_2 content: 10% (a), and 70% (b) – illustrating the disruption of 3D conducting CNT network at high TiO_2 content composites.

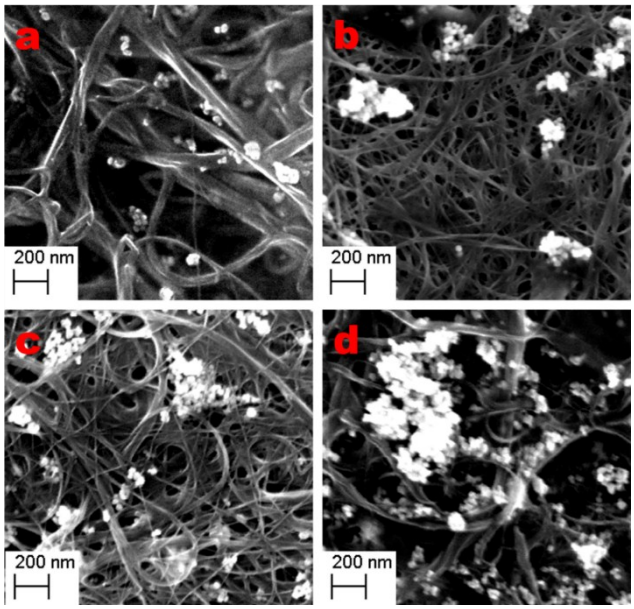

Figure S3. SEM micrographs of the 50%a-CNT/50%PANI composites (a, and c) and 70%a-CNT/30%PANI composites (b, and d) with different TiO_2 content: 30% (a, and b), and 70% (c, and d) – illustrating the disruption of 3D conducting CNT network at high TiO_2 content composites.

Table S1. Comparison of the room temperature TE properties of the organic based ternary composites

Materials	Conductivity (S/cm)	Thermopower (μV/K)	PF (μW/mK²)	Ref.
PANI/SWNT/Te	345	54	101	[1]
PPy/GP/PANI	500	29	42	[2]
rGO/CdS/PANI	$2.9x10^3$	18	92	[3]
PEDOT/rGO/SWNT	208.4	20.9	9.1	[4]
rGO/PEDOT/Te	35	202	143	[5]
$Te/Cu_{1.75}Te$/PEDOT	1.73	220	84	[6]
PVAc/Graphene/TiO_2	26	-42	47	[7]
TiO_2/a-CNT/PANI	2183	22.9	114.5	This work

References

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