Electronic Supplementary Material (ESI) for RSC Advances.

Supplementary Materials:

Facile rapid synthesis of nanocrystalline Cu_2Te multi-phase transition material and its thermoelectric performance

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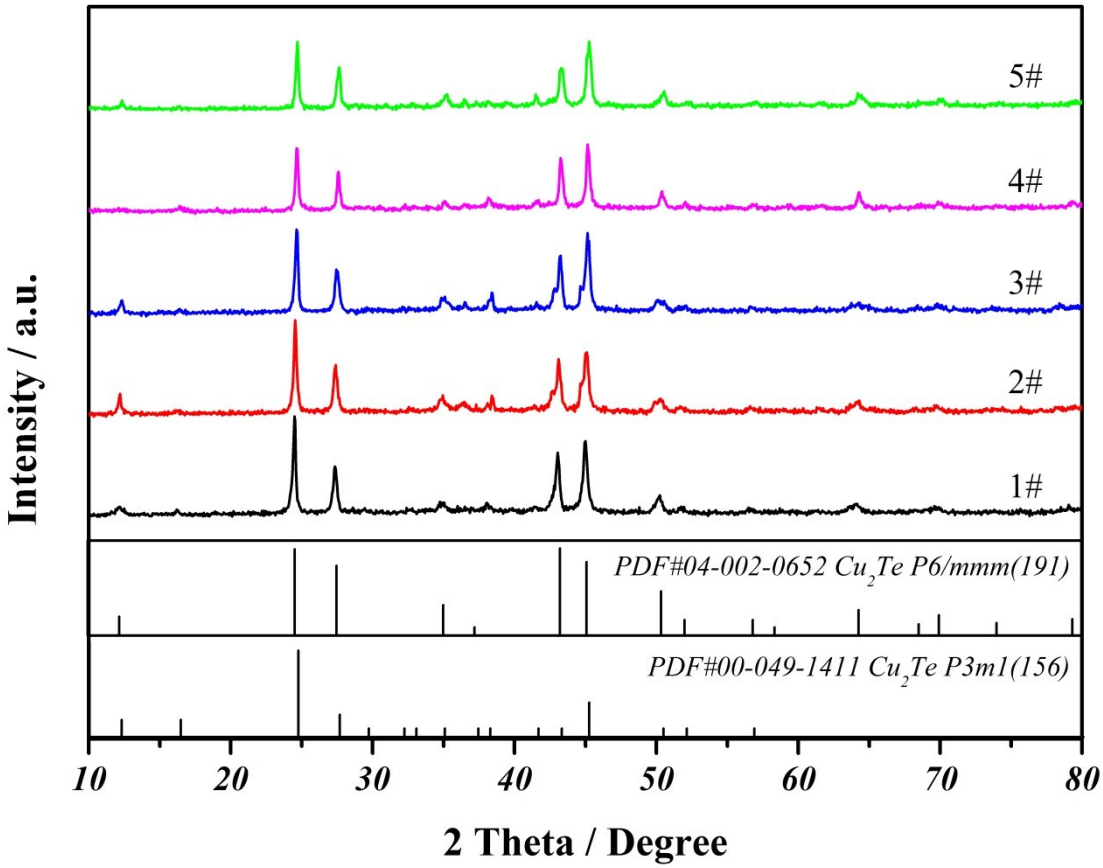

Figure S 1. XRD patterns of: (1#) SPS sintered sample; (2#) SPS followed by annealing for 10 h; (3#) SPS followed by annealing for 20 h; (4#) SPS followed by annealing for 30 h; (5#) SPS followed by annealing for 40 h.

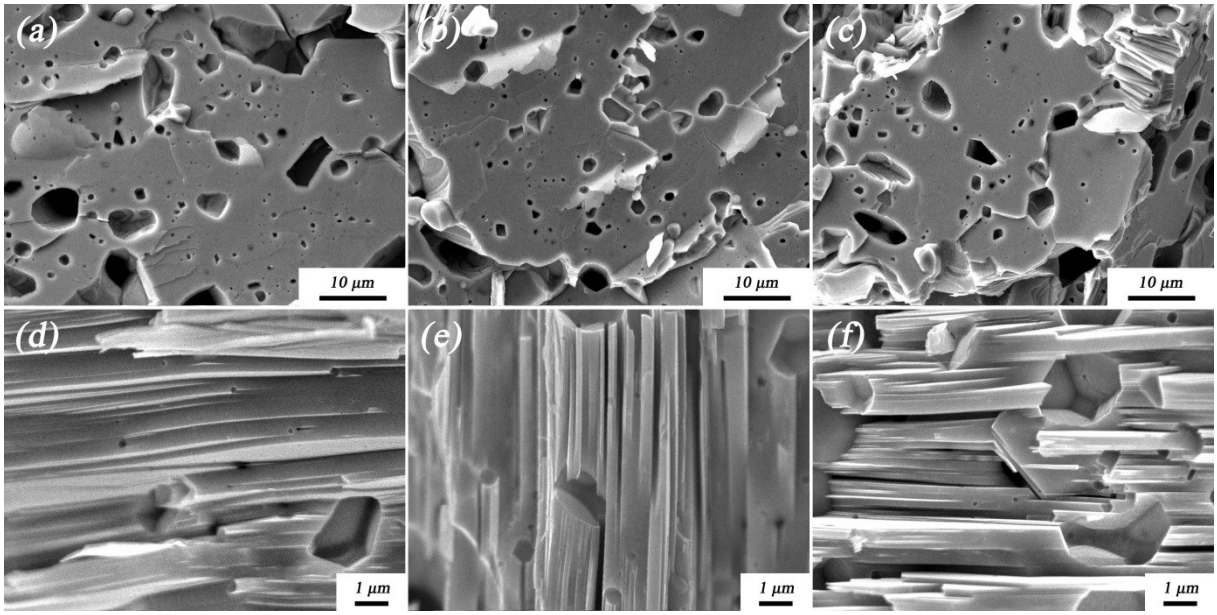

Figure S 2. SEM images of: (a) low magnification of 3# sample; (b) low magnification of 4# sample; (c) low magnification of 5# sample; (d) high magnification of 3# sample; (e) high magnification of 4# sample; (f) high magnification of 5# sample.

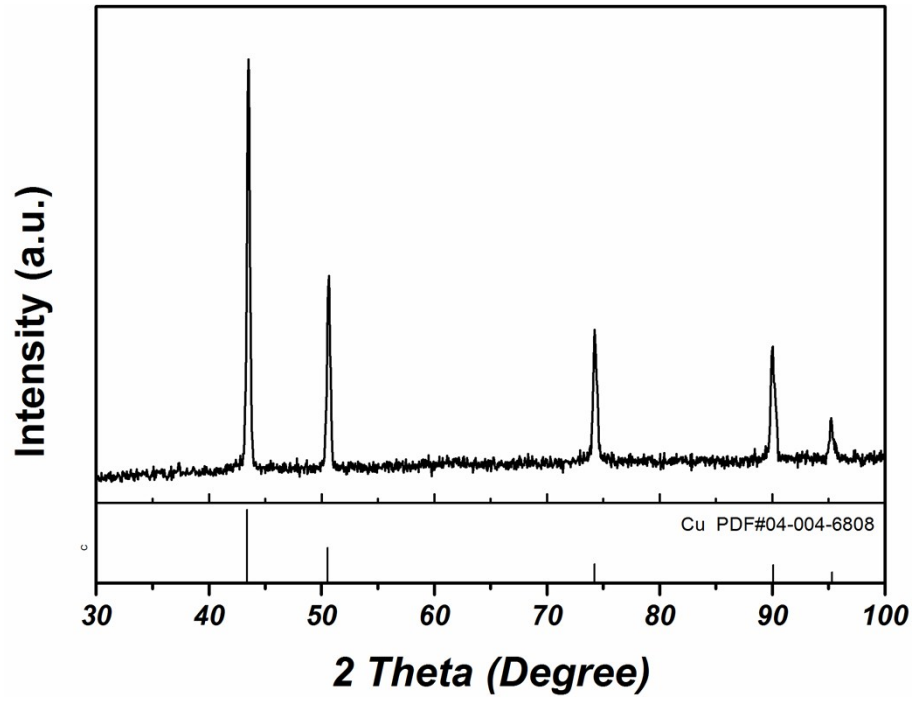

Figure S 3. XRD pattern of the powders attached to the surface of annealed samples.

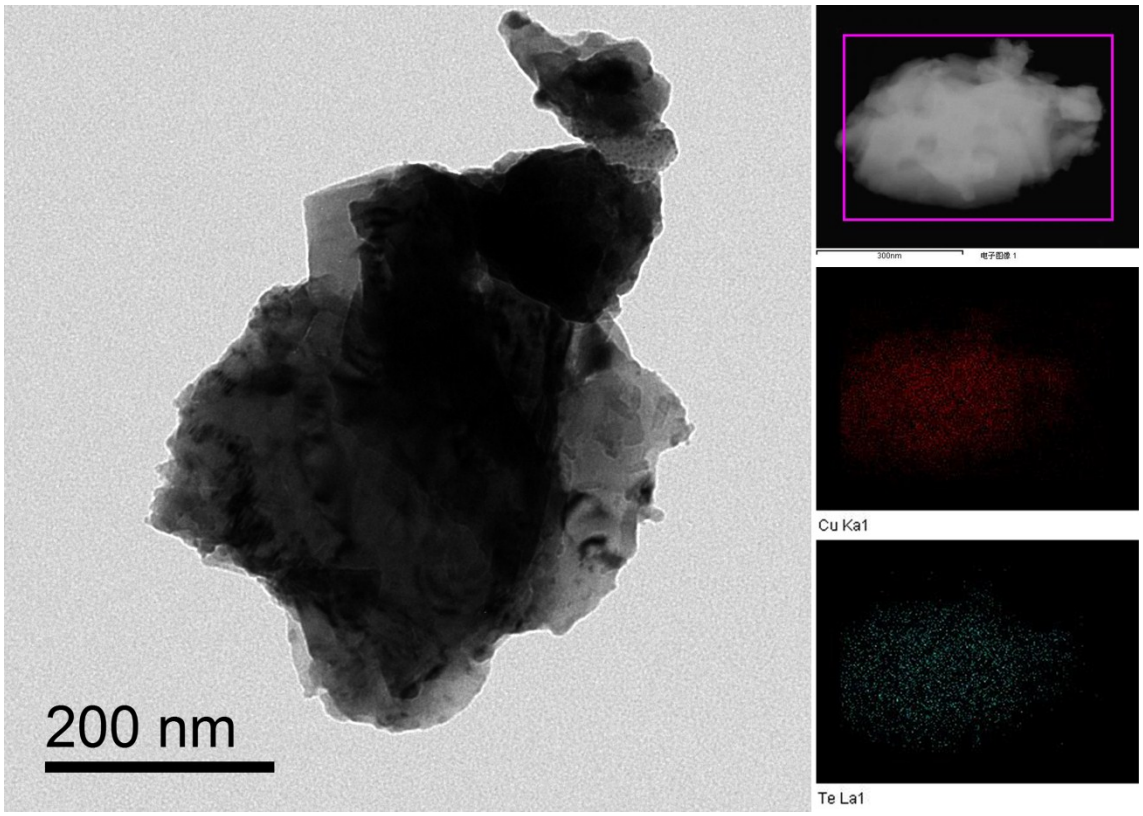

Figure S 4. TEM image of nanocrystalline Cu_2Te along with dark filed STEM image and EDS elemental mapping.

Table S 1. EDS results of each prepared Cu_2Te bulk

	1#	2#	3#	4#	5#
Cu (wt.%)	49.37	49.11	48.71	47.69	46.63
Cu (at.%)	66.20	65.96	65.60	64.67	63.70
Te (wt.%)	50.63	50.89	51.29	52.31	53.37
Te (at.%)	33.80	34.04	34.40	35.33	36.30
Cu:Te (at.)	1.96	1.94	1.91	1.83	1.75