Electronic Supplementary Material (ESI) for CrystEngComm

Supporting Information

Controllable wettability by tailoring one-dimensional tellurium micro-nanostructures

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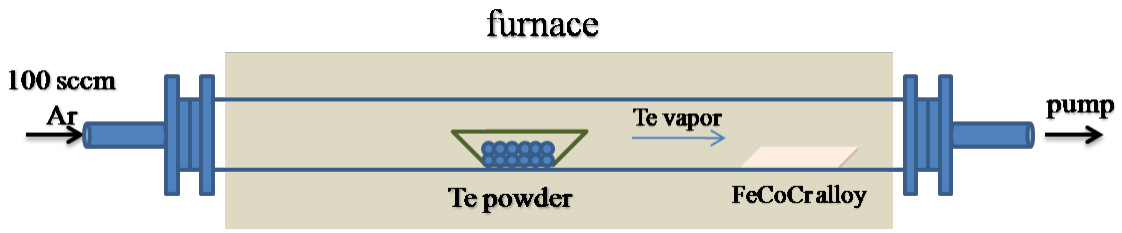

Figure S1.Schematic diagram of PVD growth process of Te micro-nanostructures on FeCoCr alloy

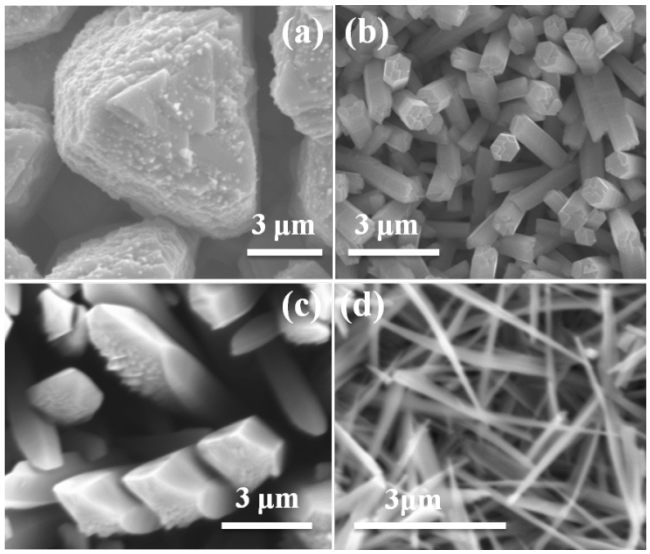

Figure S2. (a) Triangle microrods array, (b) hexagon microrods array, (c) needle microrods array and (d) random-oriented needle nanowires networks are magnified SEM images of Figure 1 (a), (c), (e) and (g), respectively.

Table S1. Spacing of triangle microrods array, hexagon microrods array, needle microrods array and needle nanowires networks. Each measurement was carried out 10 times.

Patterns	*d* (μm)										
	1	2	3	4	5	6	7	8	9	10	average
	9.4	7.4	11.2	9.8	11.4	11.6	8.8	9.7	7.4	9.7	9.7
	1.2	1.3	1.0	1.3	1.1	1.1	1.2	1.0	1.3	1.0	1.2
	1.8	2.0	2.1	2.0	1.8	1.8	1.9	1.9	1.9	2.3	2.0
	0.9	1.0	1.0	1.2	1.0	1.1	1.1	0.8	0.9	1.0	1.0

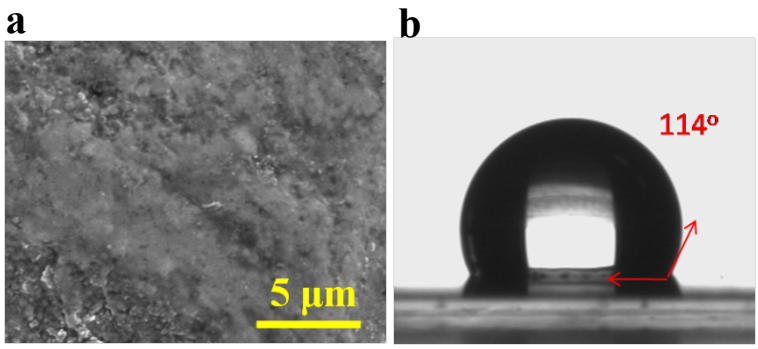

Figure S3. SEM images of near flat surface of Te thin film (a) and static contact angle photographs of water droplet (6 μL) on its surface (b).

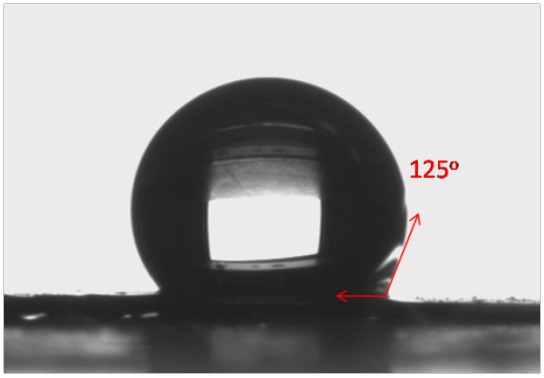

Figure S4. Static contact angle photograph of a large water droplet (10μL) on surface of triangle microrods array.

Table S2. Fraction of liquid-solid contact area calculated from high-contrast black and white SEM images. The selective area is 50×50 cm for triangle microrods array and 10×10 cm for hexagon microrods array, needle microrods array and needle nanowires networks. Measurement of f is carried out three times for each sample.

Patterns	f			Average
	1	2	3	
	0.57	0.59	0.58	0.58
	0.54	0.59	0.56	0.56
	0.50	0.48	0.50	0.49
	0.46	0.47	0.46	0.46