



**Figure S1.** EBSD inverse pole figures show the grain texture of the (a) as-solutionized (AS), (b) hot-rolled (HR), (c) cold-rolled and heat-treated at 973 K for 30 min (HT1), (d) cold-rolled and heat-treated at 1023 K for 30 min (HT2) of the  $\text{Co}_{35}\text{Cr}_{25}\text{Mn}_{15}\text{Ni}_{15}\text{Fe}_{10}$  HEA, which is corresponding to the images shown in Figure 1.

**Table S1.** Vickers hardness of the as-solutionized (AS), warm-rolled (WR), cold-rolled and heat-treated at 973 K for 30 min (HT1), cold-rolled and heat-treated at 1023 K for 30 min (HT2) of the  $\text{Co}_{35}\text{Cr}_{25}\text{Mn}_{15}\text{Ni}_{15}\text{Fe}_{10}$  HEA.

Sample	AS	WR	HT1	HT2
Hardness	233.56±11.5	363.6±1.5	277.3±5.3	251.2±3.7