

Supplementary Information

In-situ grown crystalline $(\text{Ni}_{1-x}\text{Co}_x)_5\text{TiO}_7$ nanostructures on flexible metal substrate toward efficient CO oxidation

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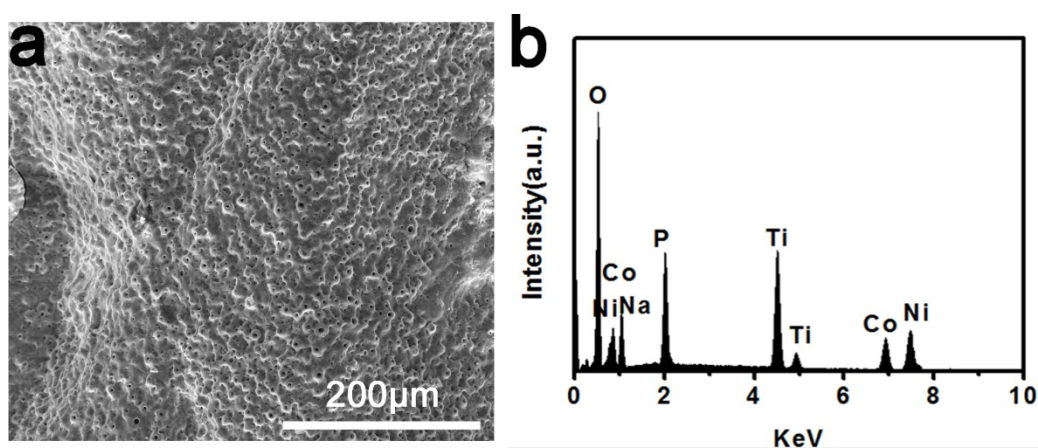


Figure S1 (a) SEM image of PEO sample; (b) EDS spectra of PEO sample

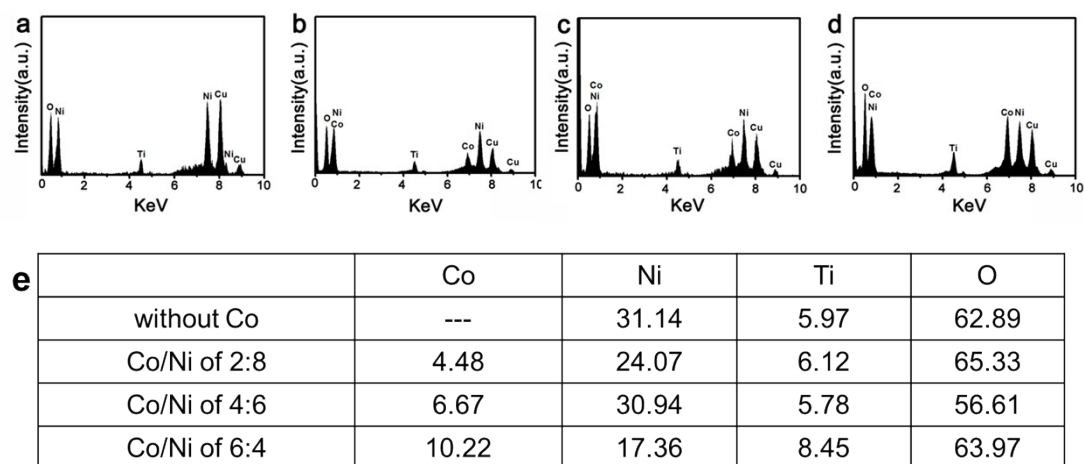


Figure S2 EDS spectra of $(\text{Ni}_{1-x}\text{Co}_x)_5\text{TiO}_7$ nanowires: (a) $x=0$, (b) $x=0.16$, (c) $x=0.24$, (d) $x=0.4$; (e) quantitative analysis of element composition from EDS survey spectra

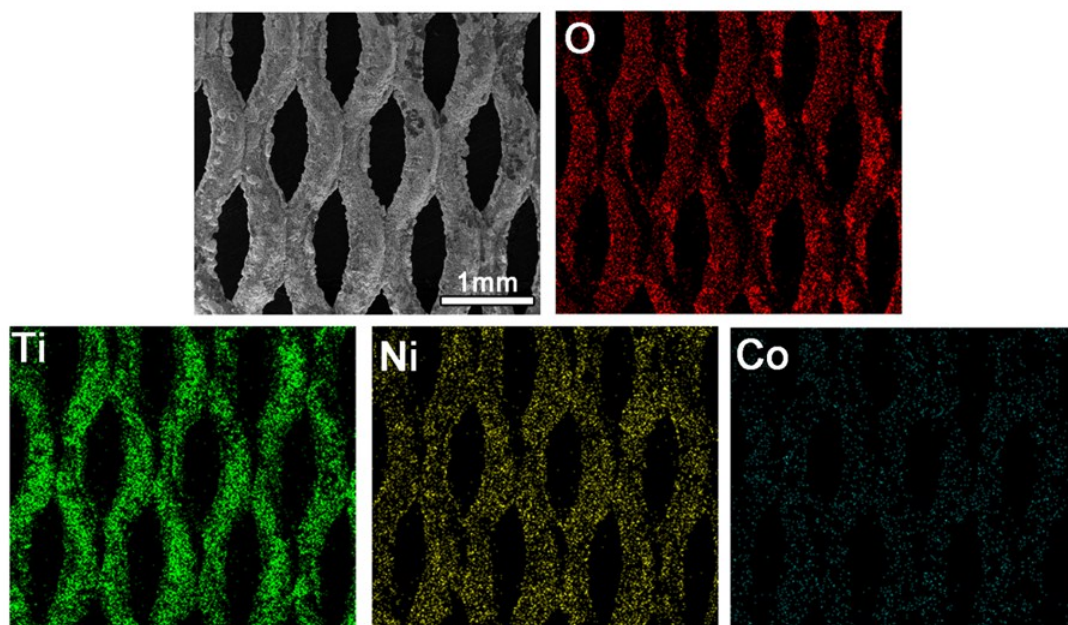


Figure S3 Large area elemental mapping of O, Ti, Ni and Co distribution on the titanium network by EDS under SEM

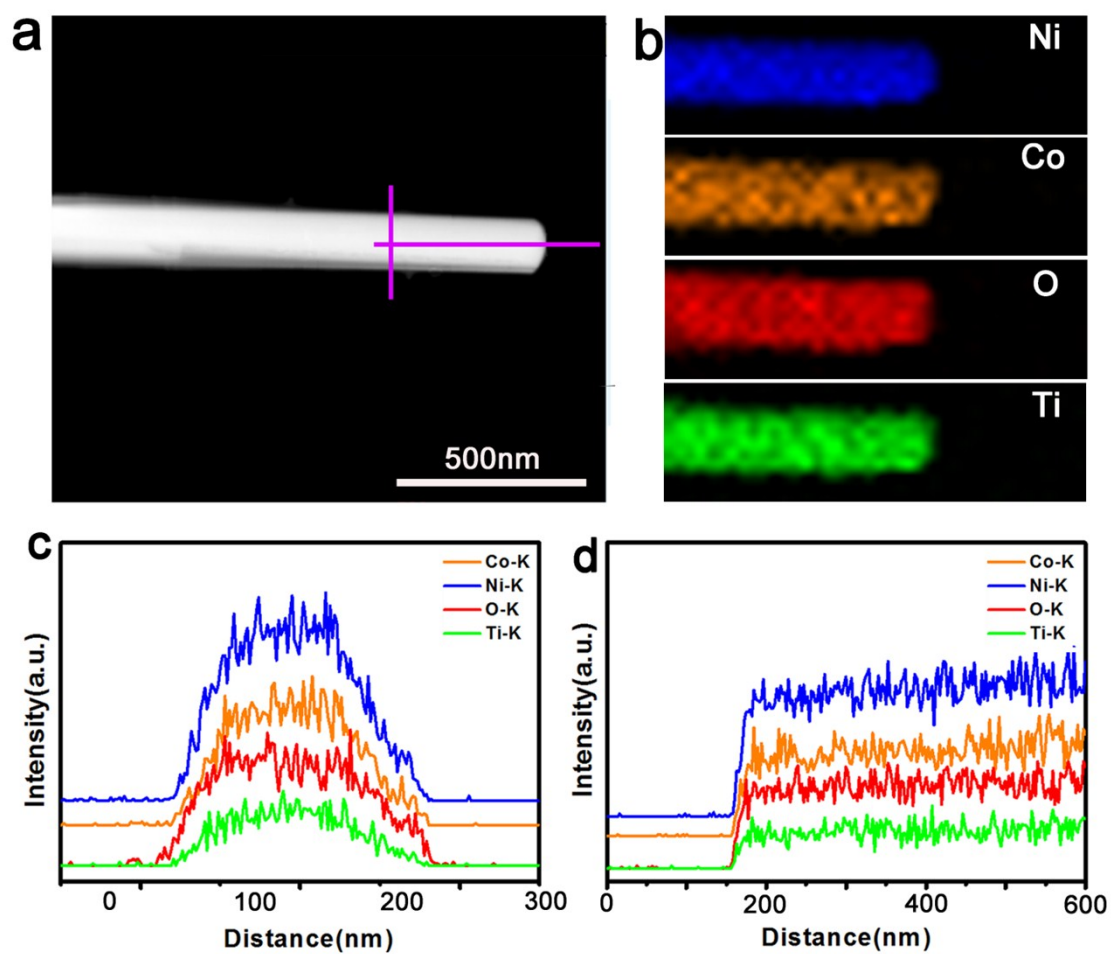


Figure S4 (a) STEM image of $(\text{Ni}_{0.84}\text{Co}_{0.16})_5\text{TiO}_7$ nanowire; (b) the elemental mapping of Ni, Co, O and Ti; (c) elemental line scan profile along the radial direction (c) and axis (d) of the $(\text{Ni}_{0.84}\text{Co}_{0.16})_5\text{TiO}_7$ nanowire

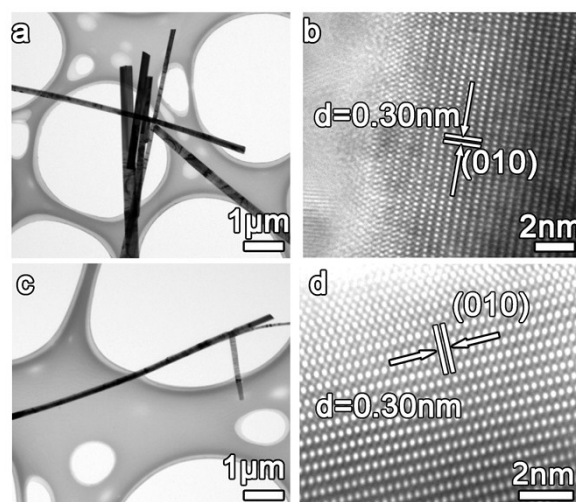


Figure S5 (a) TEM images of $(\text{Ni}_{0.84}\text{Co}_{0.16})_5\text{TiO}_7$ nanowires and (b) its corresponding HRTEM patterns, (c) TEM image of $(\text{Ni}_{0.84}\text{Co}_{0.16})_5\text{TiO}_7$ nanowires and (d) its corresponding HRTEM patterns after CO oxidation within consecutive 20 hours at 326 °C (T_{90}).

	O1s			
	lattice	defect	-OH	H ₂ O
Ni ₅ TiO ₇	59.74	8.91	24.63	6.72
(Ni _{0.84} Co _{0.16}) ₅ TiO ₇	51.26	11.09	27.08	10.57
(Ni _{0.76} Co _{0.24}) ₅ TiO ₇	58.65	15.11	16.41	9.83
(Ni _{0.6} Co _{0.4}) ₅ TiO ₇	55.21	14.98	19.65	10.16

Table S1 Summary of the quantitative analysis for surface