

Electronic Supplementary Information

Crystal Plane Effect of CoFe Nanocrystals on Fischer-Tropsch Synthesis

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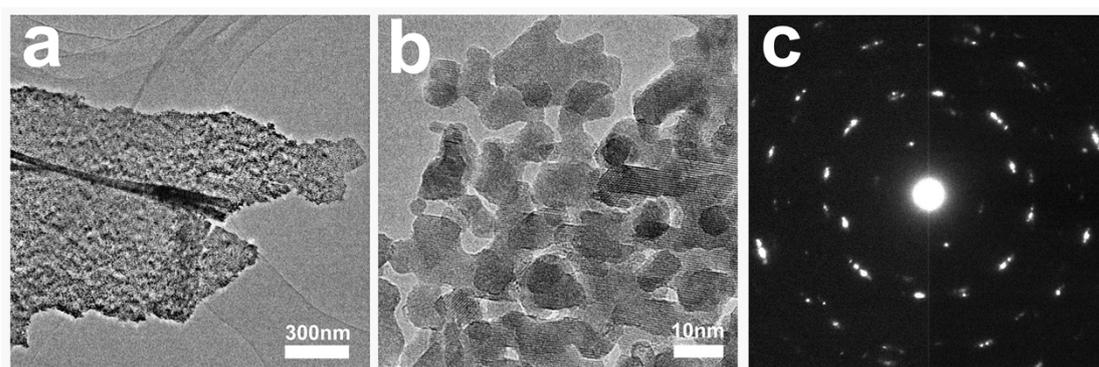


Figure S1 HRTEM (a, b) and SAED (c) patterns of the CoFe nanosheet after fast reductions.

Table S1 Catalytic activity and product selectivity of a variety of catalysts

Catalyst	CO conversion (Cmol%)	FTY ($\mu\text{mol}_{\text{CO}} \cdot \text{g}_{\text{cat}}^{-1} \cdot \text{s}^{-1}$)	Selectivity (Cmol%)			Reference
			CH ₄	C ₂₋₄	C ₅₊	
CoFe nanowires ^a	43.7	10.18	31.3	50.2	18.5	this study
CoFe nanosheets ^a	13.0	2.98	40.7	44.2	15.1	this study
Co ^b	12.5	-	59.1	34.4(C ₂₊)	-	1
AFe ^c	-	1.4	54	42	2	2
BFe ^c	-	0.2	78	15	7	2

^a Reaction conditions: T=300 °C, P=2.0 MPa, H₂/CO=2;

^b Reaction conditions: T=300 °C, P=1.0 MPa, H₂/CO=2;

^c Reaction conditions: T=350 °C, P=0.1 MPa, H₂/CO=1.

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