

## Supporting Information

### **Structural evolution of carbon in Fe@C catalyst during Fischer-Tropsch synthesis reaction**

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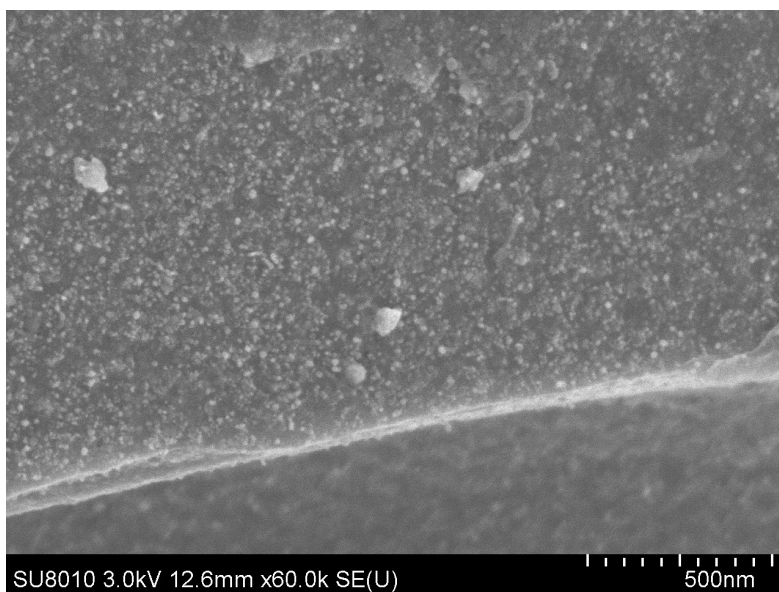


Figure S1. SEM images of Fe@C-F sample.

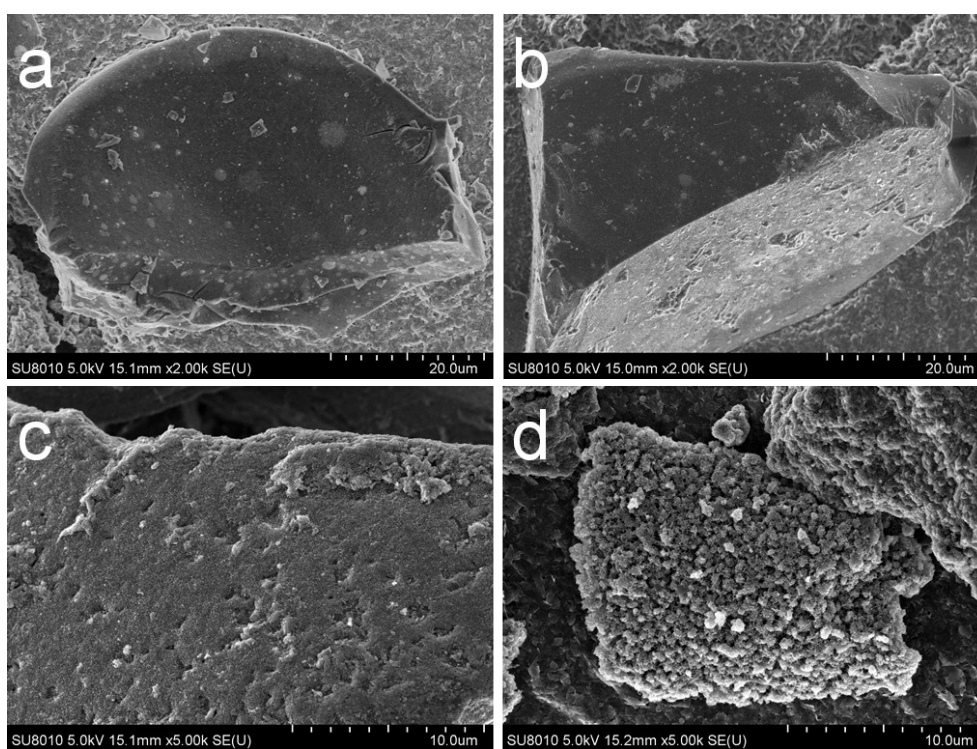


Figure S2. SEM images of the as-synthesized catalysts. a: Fe@C-F; b: Fe@C-U-300; c: Fe@C-U-320; d: Fe@C-U-340.

Table S1. Detailed parameters of the DTG profiles over the as-synthesized catalysts. <sup>a</sup>

Catalysts	Weight loss (%)	Peak position (°C)			
		atomic carbon	functional groups &	non-graphitic	graphitic
Fe@C-F	42.1	--	337	390	505
Fe@C-U-300	41.9	--	353	398	535
Fe@C-U-320	38.9	--	356	398	522
Fe@C-U-340	17.4	--	353	394	486, 557

a: The content of Fe calculate from weight loss, Fe<sub>2</sub>O<sub>3</sub> was regarded as final phase after a TGA test in air.