

Supporting Information

Sintering behaviour of TiO₂-supported model cobalt Fischer-Tropsch catalysts under H₂ reducing conditions and elevated temperature.

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Table S1: Cobalt crystallite sizes of sintered TiO₂ -supported catalysts obtained from XRD.

Time (Hours)	Anatase (3 σ error) nm	P25 (3 σ error) nm	Rutile (3 σ error) nm
4	31 (4)	26 (1)	25 (2)
8	31 (2)	28 (2)	26 (2)
16	37 (5)	30 (3)	27 (2)
32	43 (7)	30 (3)	28 (2)
48	55 (10)	35 (3)	28 (2)

Table S2: Cobalt particle sizes of sintered TiO₂ -supported catalysts obtained from TEM particle size distributions.

Time (Hours)	Anatase		P25		Rutile	
	Mean (nm)	FWHM (nm)	Mean (nm)	FWHM (nm)	Mean (nm)	FWHM (nm)
4	30	26	51	39	17	15
8	52	44	52	40	20	11
16	58	52	55	46	23	20
32	65	58	62	47	25	22
48	88	76	65	51	36	32

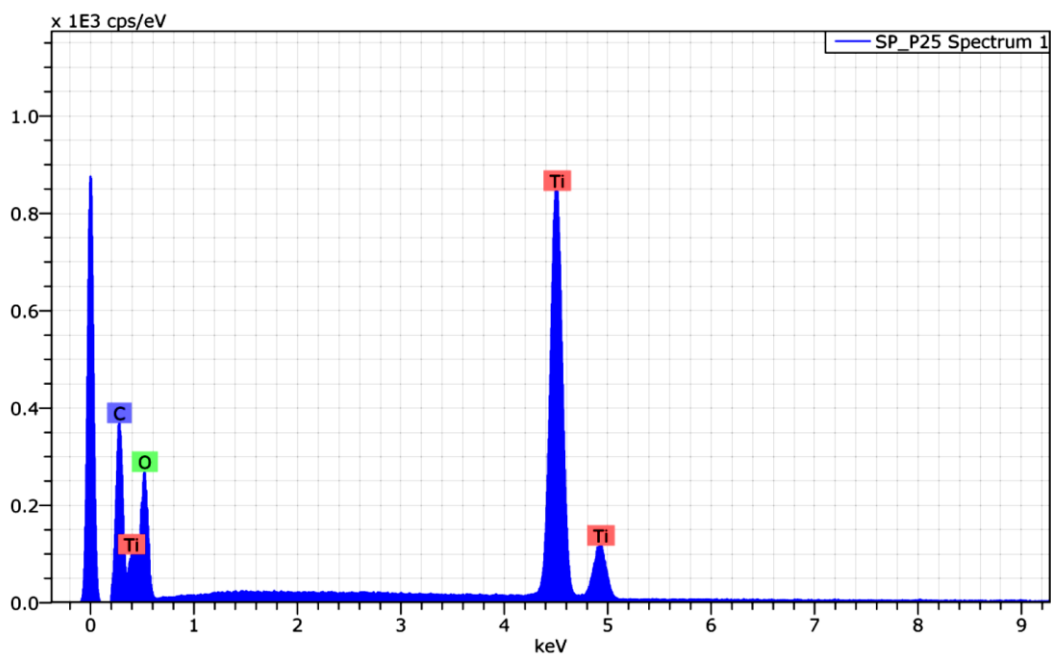


Figure S1: Representative EDX spectrum of a bare TiO₂ support showing the elemental composition.

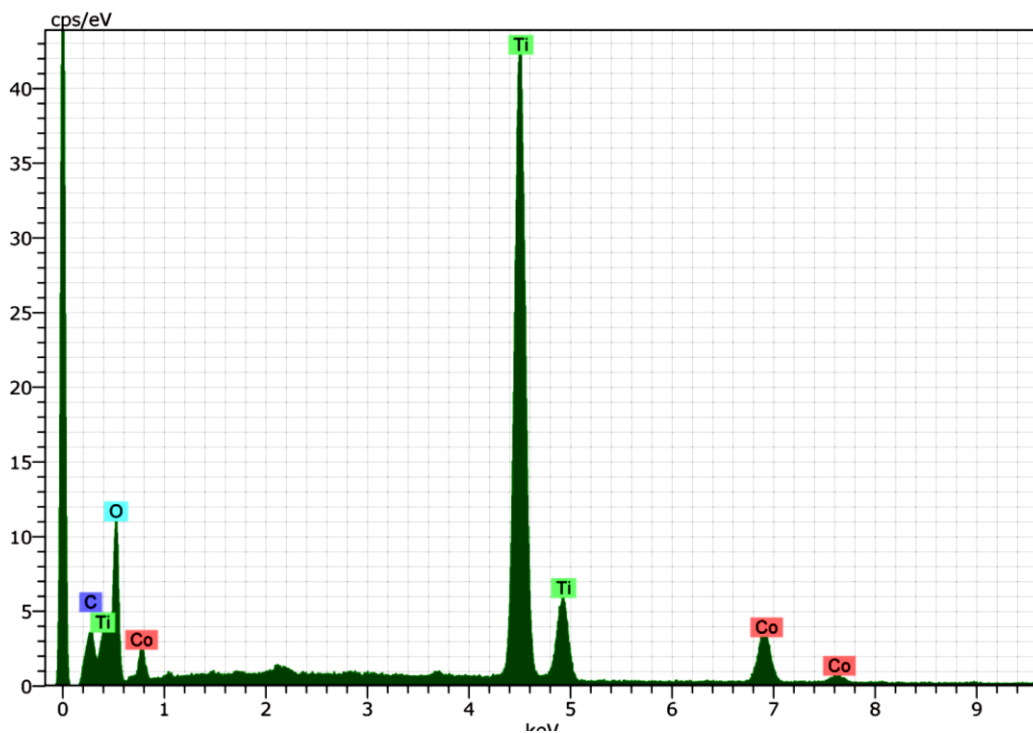


Figure S2: Representative EDX spectrum of a Co/TiO₂ catalyst showing the elemental composition.

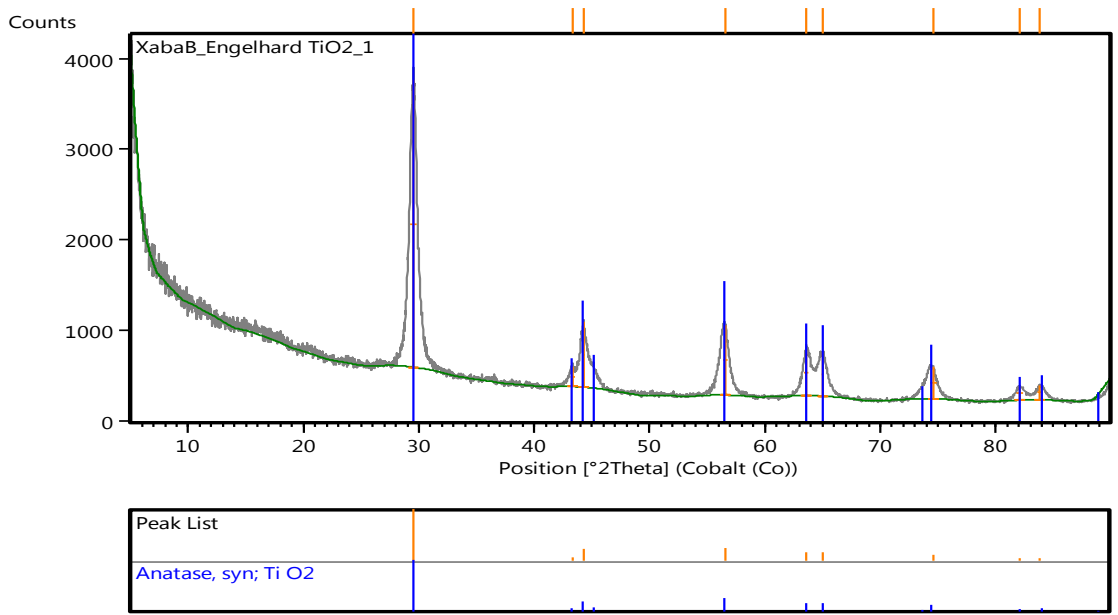


Figure S3: Powder X-ray diffractogram of anatase support.

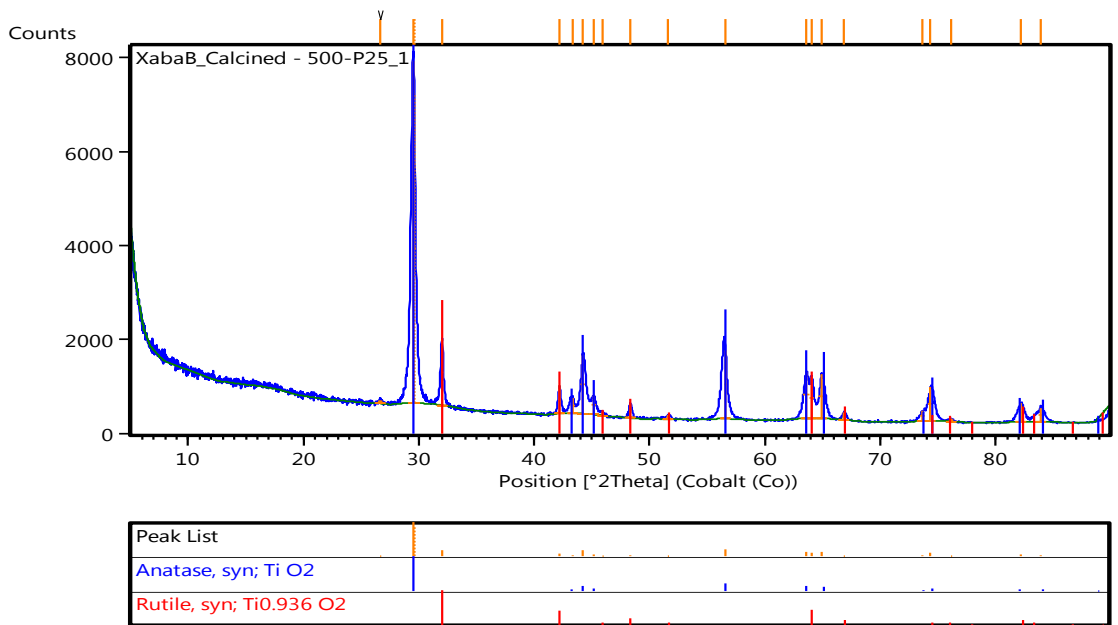


Figure S4: Powder X-ray diffractogram of P25 support.

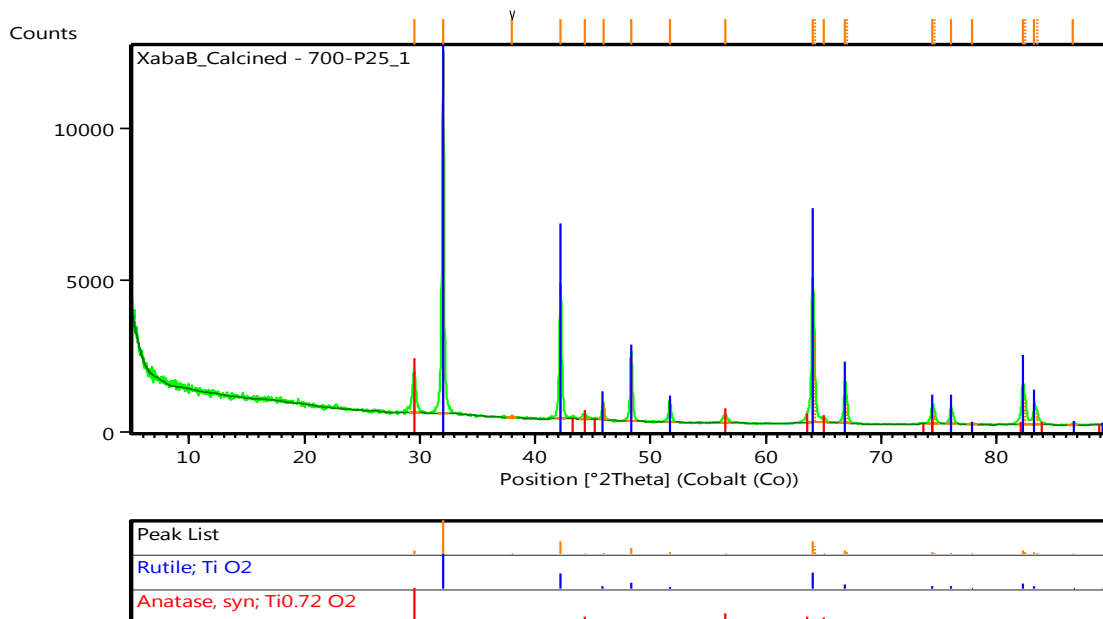


Figure S5: Powder X-ray diffractogram of rutile support.

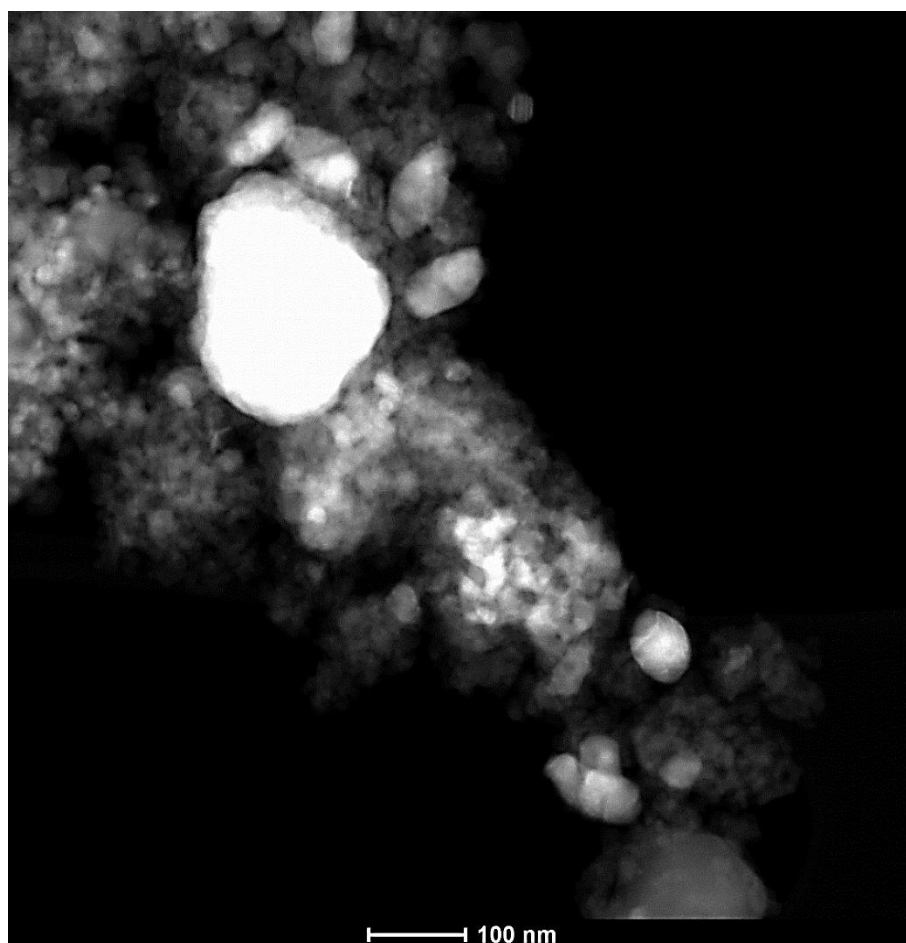


Figure S6: HAADF-STEM image of anatase-supported showing the sintered Co particles on the backdrop of the TiO_2 support seen as fine particles.

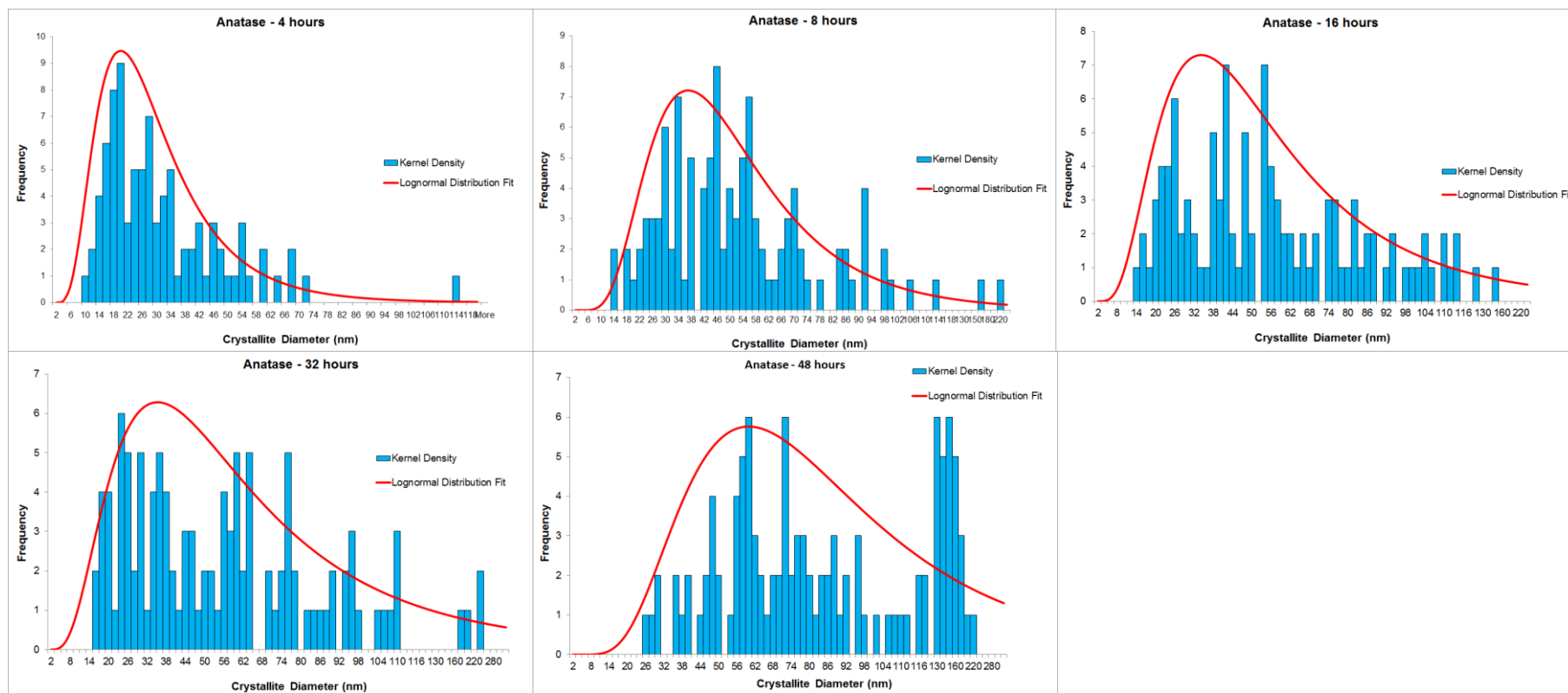


Figure S7: Histograms of particle size distributions of anatase-supported catalysts.

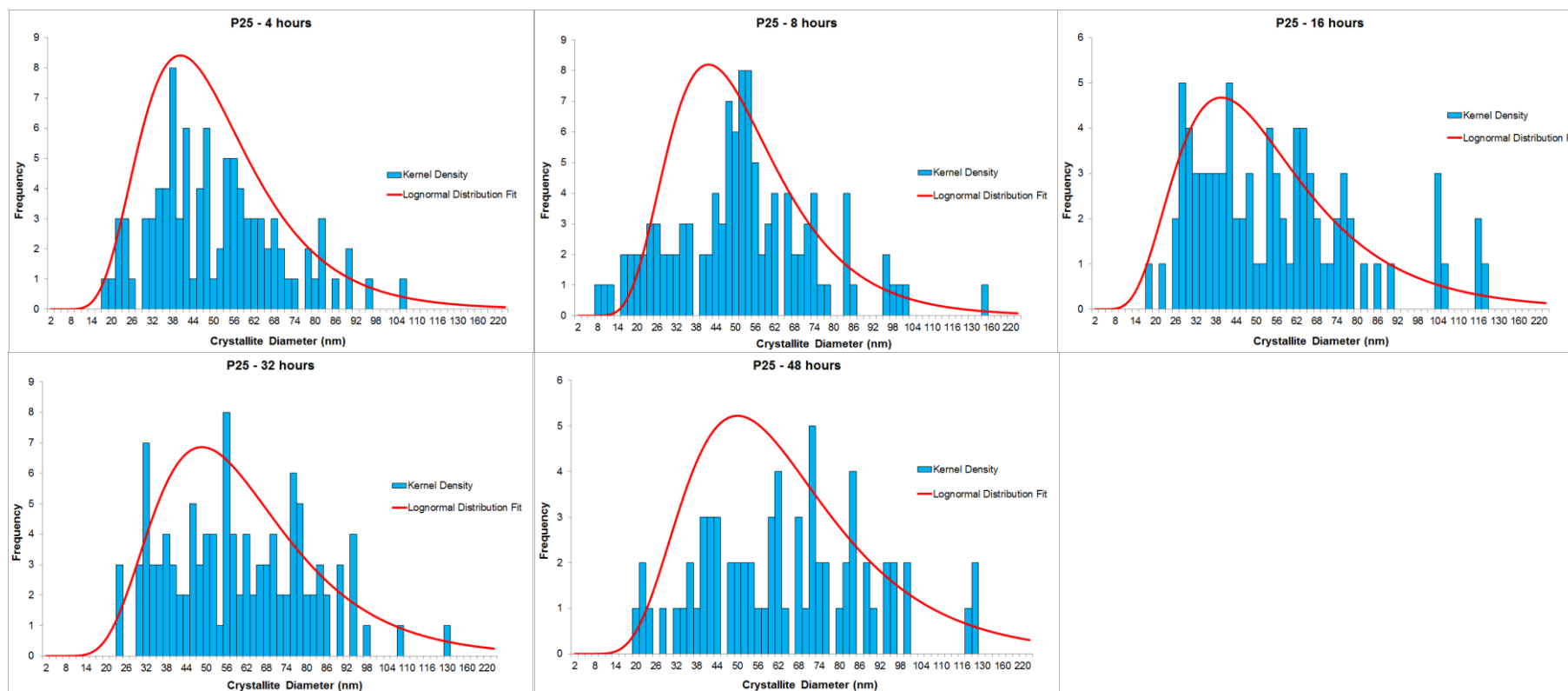


Figure S8: Histograms of particle size distributions of P25-supported catalysts.

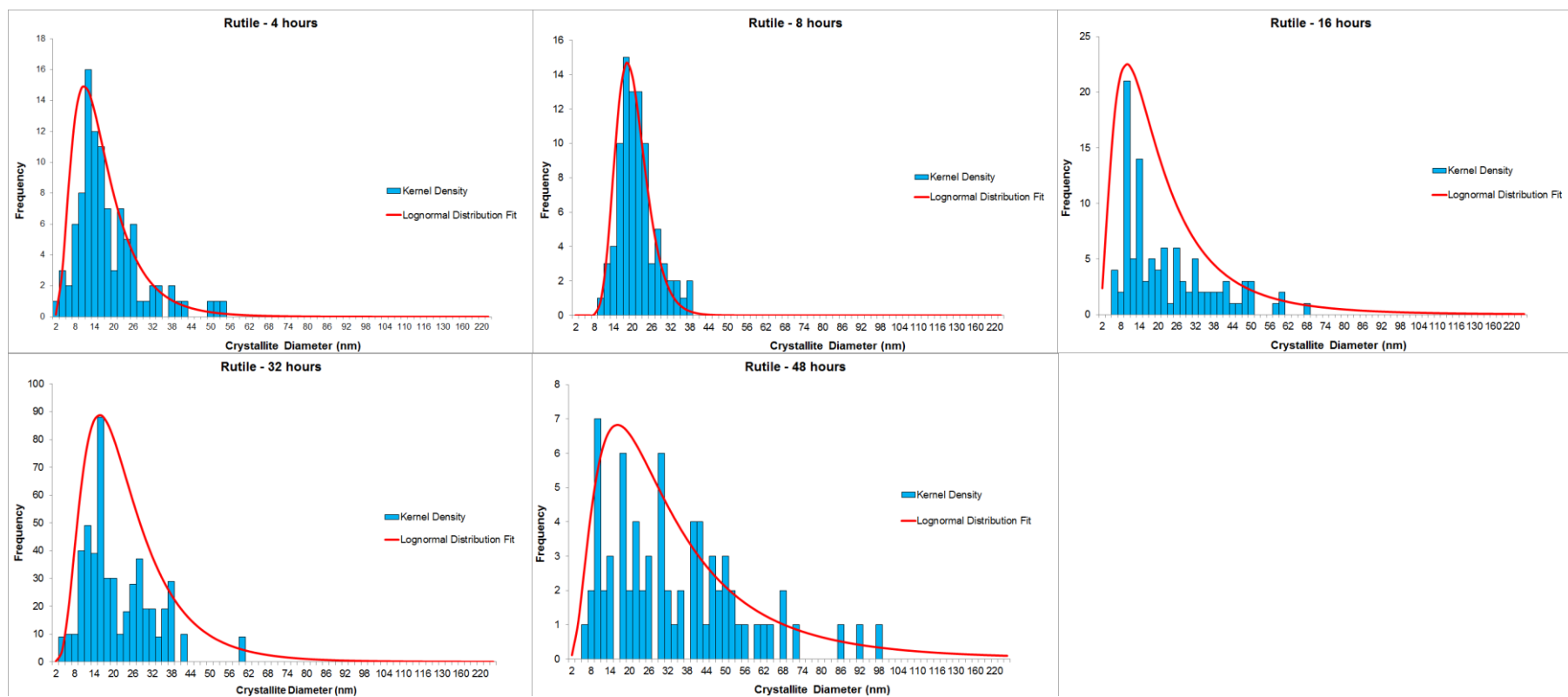


Figure S9: Histograms of particle size distributions of rutile-supported catalysts.