Figure Captions:

**Fig. S1.** $^3$P FT-NMR of [HF] complex in C$_6$D$_6$.

**Fig. S2** P-XRD patterns of [HF] complex, [HT(3.5)] and [HF/HT(X)].

**Fig. S3.** SEM images of [HT(3.5)] and [HF/HT(3.5)].

**Fig. S4.** TGA of [HT(3.5)], [HF] Complex and [HF/HT(3.5)].
Fig. S3  SEM images of [HT(3.5)] and [HT/HF(3.5)].
Fig. S4 TGA of [HT(3.5)], [HF] Complex and [HT/HF(3.5)].