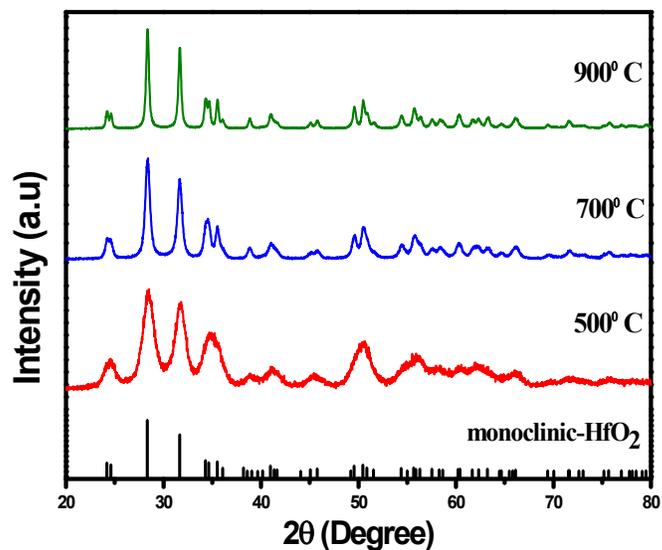
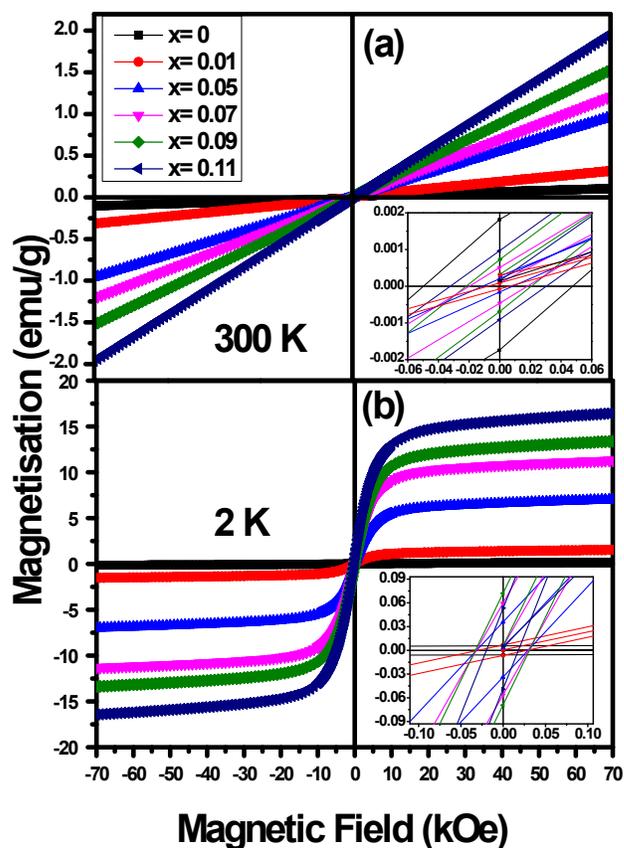


## Supporting Information

**Fig. S1** XRD patterns of  $\text{HfO}_2$  ( $x=0$ ) calcined at 500, 700, and 900 °C, respectively.



**Fig. S2** M vs. H dependence measured at (a) 300 K and (b) 2 K for  $\text{Hf}_{1-x}\text{Dy}_x\text{O}_2$  ( $0 \leq x \leq 0.11$ ).



**Fig. S3** Variation of  $\chi^{-1}$  vs. T for  $\text{Hf}_{1-x}\text{Dy}_x\text{O}_2$  ( $0.01 \leq x \leq 0.11$ ).

