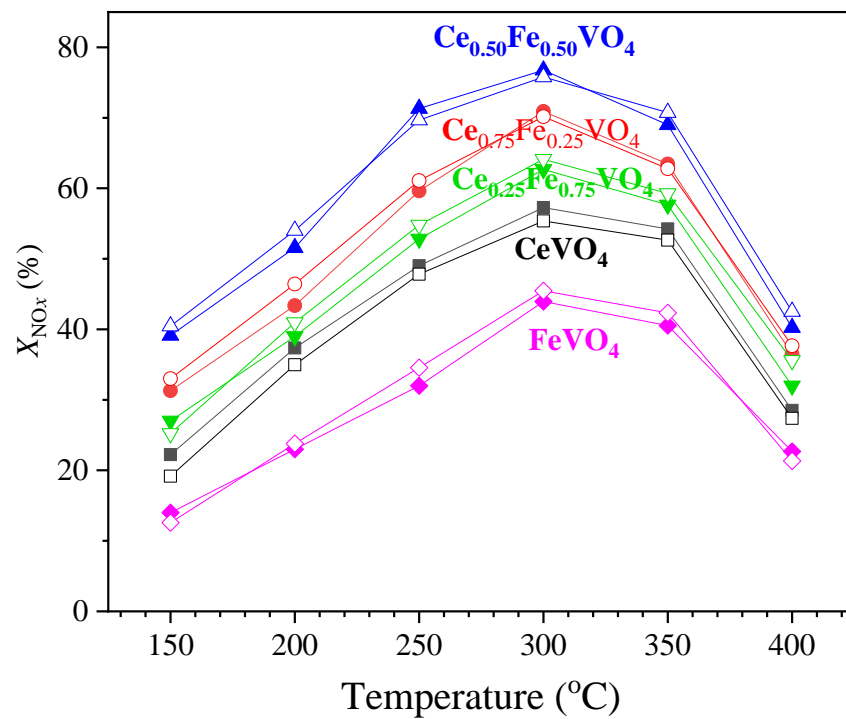


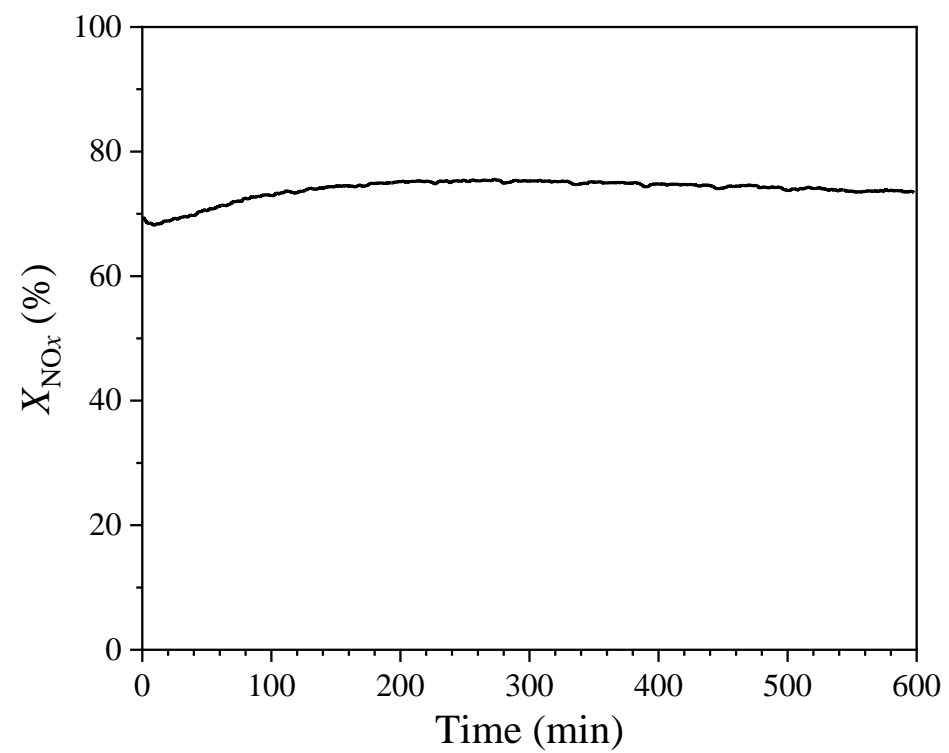
## **Supporting Information**

**Table S1.** The crystallographic data of  $\text{Ce}_{1-x}\text{Fe}_x\text{VO}_4$  samples, some of which were obtained using the Rietveld refinements.

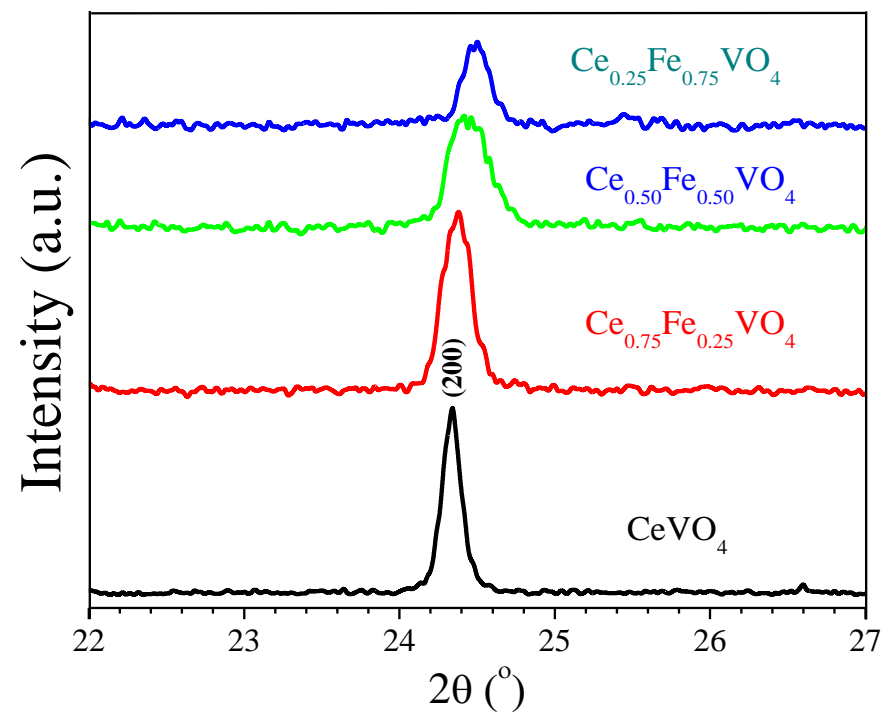
Samples	$\text{CeVO}_4$	$\text{Ce}_{0.75}\text{Fe}_{0.25}\text{VO}_4$	$\text{Ce}_{0.50}\text{Fe}_{0.50}\text{VO}_4$	$\text{Ce}_{0.25}\text{Fe}_{0.75}\text{VO}_4$	$\text{FeVO}_4$
crystal system	tetragonal	tetragonal	tetragonal	tetragonal	triclinic
space group	I41/amd	I41/amd	I41/amd	I41/amd	P-1
cell formula units Z	4	4	4	4	6
$a/[\text{\AA}]$	7.39921	7.378008	7.354506	7.349089	6.71924
$a/[\text{\AA}]$	7.39921	7.378008	7.354506	7.349089	8.06432
$c/[\text{\AA}]$	6.496023	6.481832	6.478912	6.469042	9.25428
$R_p$	19.9	27.5	20.3	31.0	30.6
$R_{wp}$	19.8	22.7	17.4	26.7	27.8
$R_{exp}$	23.79	33.30	30.82	31.41	32.83
$\chi^2$	0.693	0.467	0.320	0.722	0.7188



**Figure S1.**  $X_{\text{NO}_x}$  over  $\text{Ce}_{1-x}\text{Fe}_x\text{VO}_4$  catalysts prepared by a hydrothermal method. Reaction conditions:  $[\text{NO}] = 500 \text{ ppm}$ ,  $[\text{NH}_3] = 500 \text{ ppm}$ ,  $[\text{O}_2] = 3 \text{ vol. \%}$ , balance  $\text{N}_2$ ; catalyst weight: 200 mg; total flow rate:  $1000 \text{ mL} \cdot \text{min}^{-1}$ .



**Figure S2.**  $X_{\text{NOx}}$  over  $\text{Ce}_{0.5}\text{Fe}_{0.5}\text{VO}_4$  at 300 °C as a function of time on stream. Reaction conditions:  $[\text{NO}] = 500$  ppm,  $[\text{NH}_3] = 500$  ppm,  $[\text{O}_2] = 3$  vol. %, balance  $\text{N}_2$ ; catalyst weight: 200 mg; total flow rate:  $1000 \text{ mL} \cdot \text{min}^{-1}$ .



**Figure S3.** XRD patterns ( $2\theta = 22\text{--}27^\circ$ ) of  $\text{Ce}_{1-x}\text{Fe}_x\text{VO}_4$  catalysts.