

## Electronic Supplementary Informations

### **Zn-Fe-layered double hydroxide intercalated with Vanadate and Molybdate anions for electrocatalytic water oxidation**

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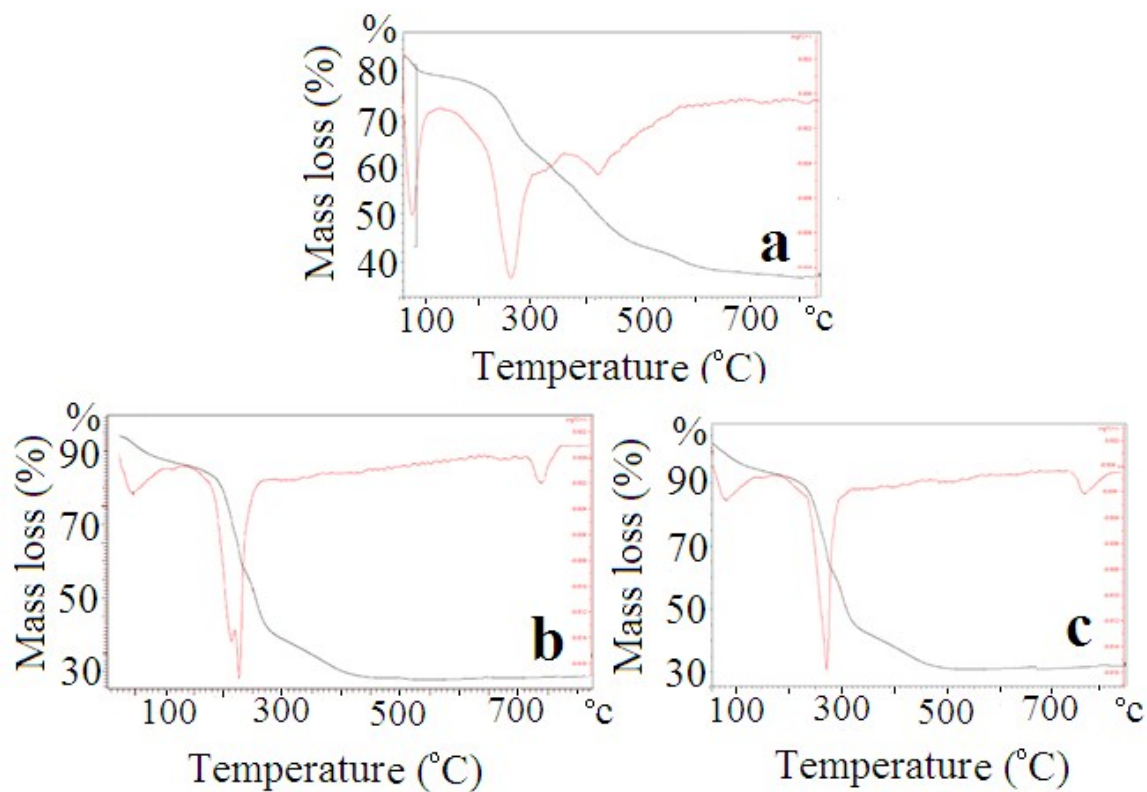


Fig. S1. TG and DTG curves of for Zn-Fe-NO<sub>3</sub>-LDH precursor (a), Zn-Fe-MoO<sub>4</sub>-LDH (b) and Zn-Fe-VO<sub>4</sub>-LDH (c)

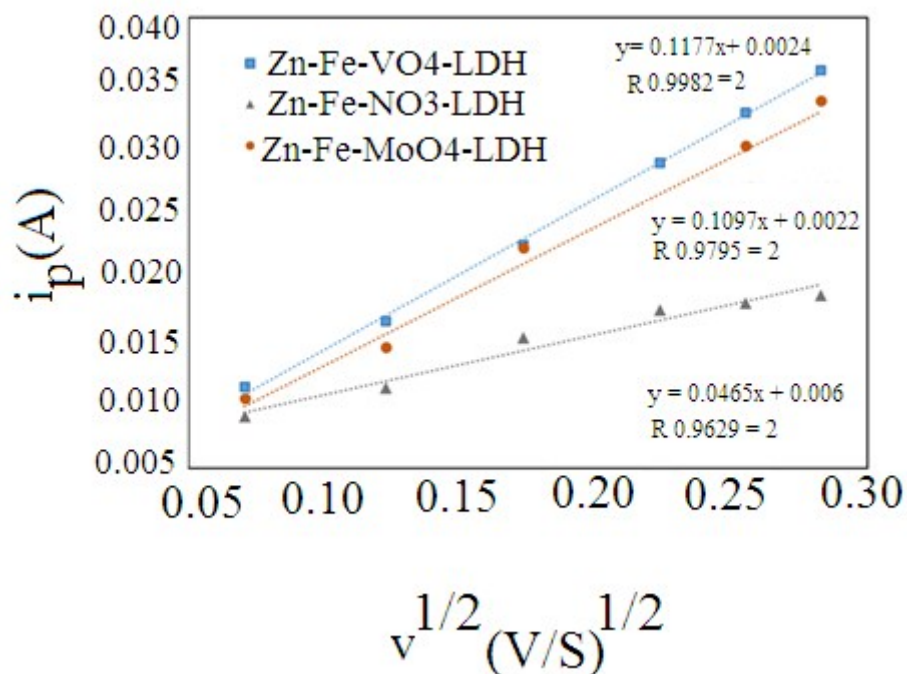


Fig. S2. curve of  $i_p$  versus  $v^{1/2}$  in 0.1 molL<sup>-1</sup> KCl solution containing 1 mmolL<sup>-1</sup> Fe(CN)<sub>6</sub><sup>3-/4-</sup>

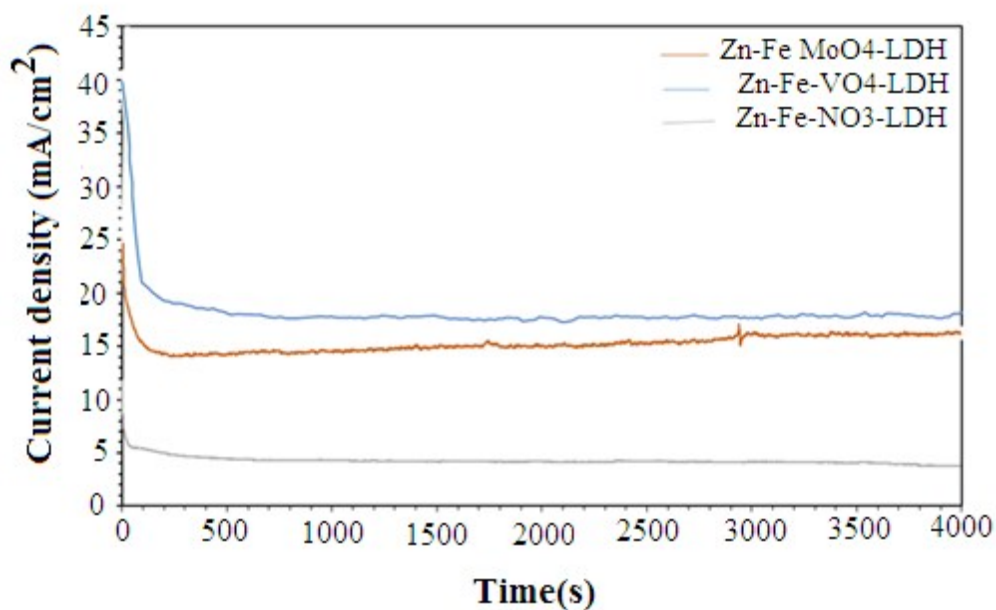


Fig. S3. Chronoamperometry curves of Zn-Fe-VO<sub>4</sub>-LDH, Zn-Fe-MoO<sub>4</sub>-LDH and Zn-Fe-NO<sub>3</sub>-LDH in 1 M KOH at the potential of 2.4 V vs RHE.

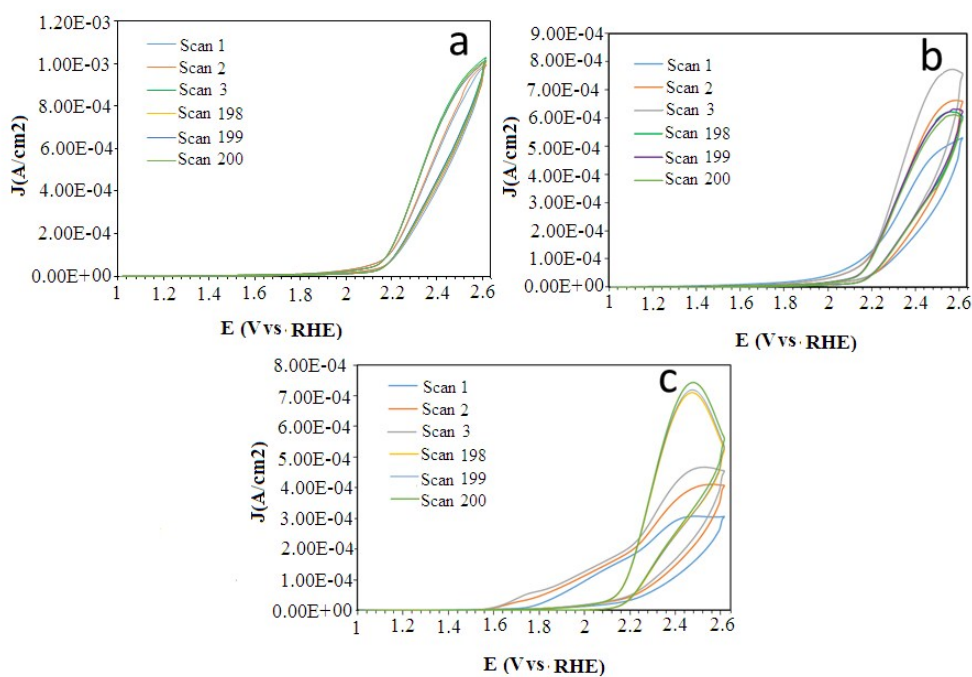


Fig S4. The cyclic voltammograms of Zn-Fe-VO<sub>4</sub>-LDH (a), Zn-Fe-MoO<sub>4</sub>-LDH(b) and Zn-Fe-NO<sub>3</sub>-LDH (c) in 1 M KOH at the Scan rate 0.1V.s<sup>-1</sup>

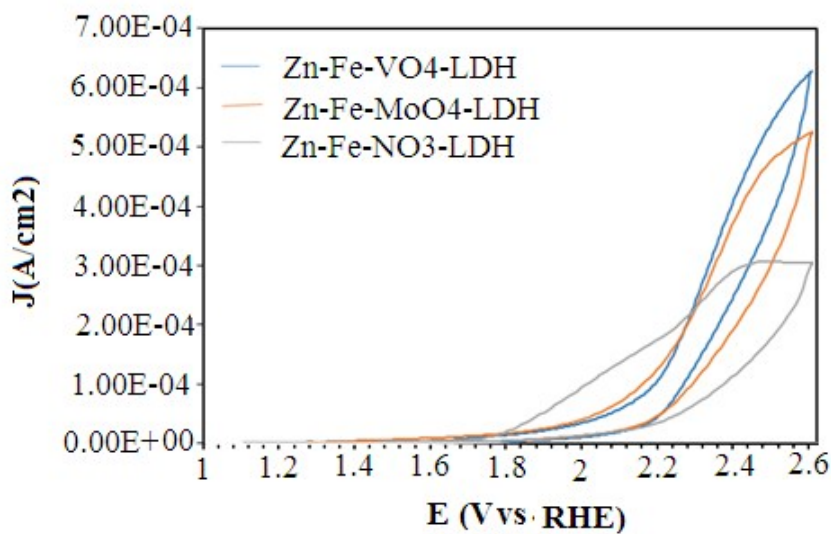


Fig. S5. The cyclic voltammograms of the Zn-Fe-VO<sub>4</sub>-LDH, Zn-Fe-MoO<sub>4</sub>-LDH and Zn-Fe-NO<sub>3</sub>-LDH in the potential range of 1 to 2.8 V (vs. RHE)