Electronic Supplementary Material (ESI) for New Journal of Chemistry.

Effect of laminate structure on morphology and ethanol sensing properties of hierarchical zinc-cobalt layered double hydroxides

School of Materials Science and Engineering, Shaanxi Key Laboratory of Green Preparation and Functionalization for Inorganic Materials, Shaanxi University of Science and Technology, Xi'an,710021, PR China

*** Corresponding Author: Jing Lu,** E-mail addresses: lujing@sust.edu.cn

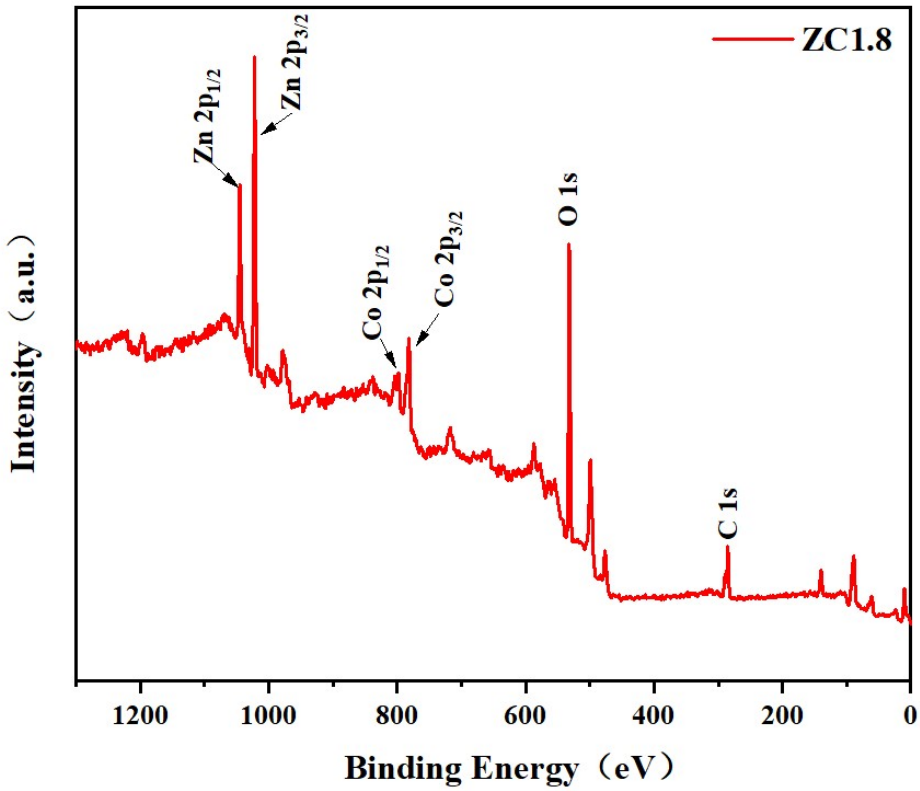

Figure S1. The XPS survey spectrum of the ZnCo-LDHs

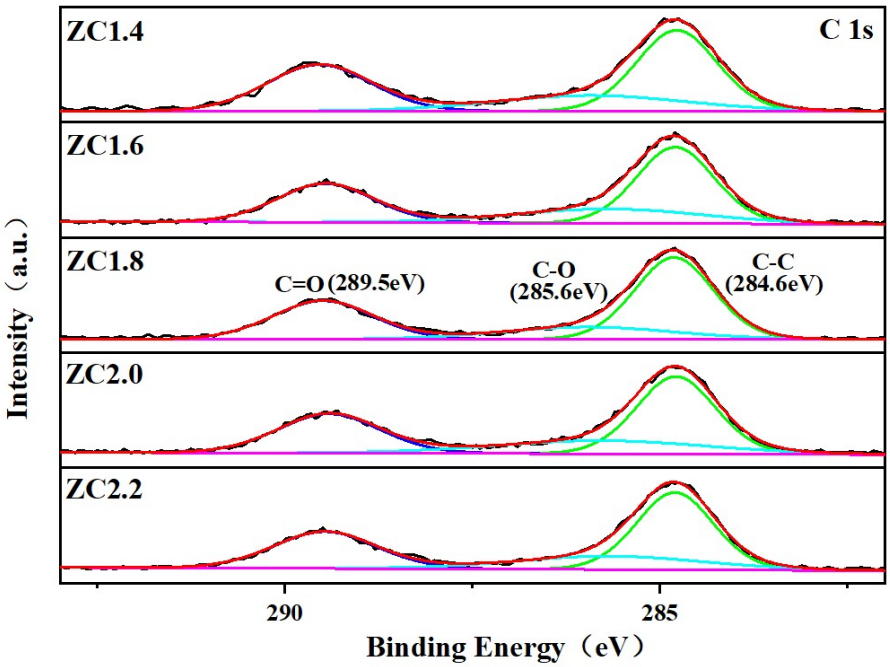

Figure S2. The C1s XPS spectra of the ZnCo-LDHs

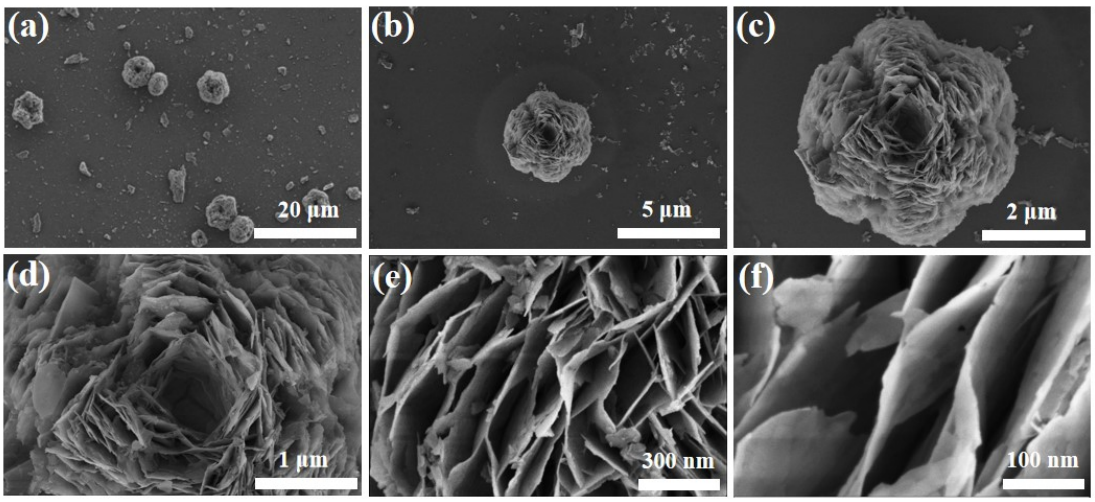

Figure S3. SEM images of ZC1.8 at different magnifications

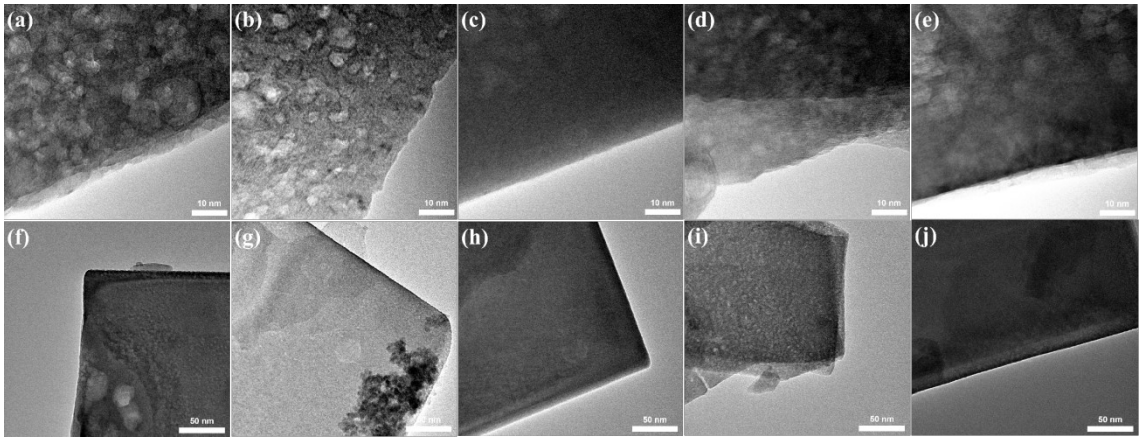

Figure S4. TEM images of ZnCo-LDHs at different magnifications：

(a,f)ZC1.4,(b,g)ZC1.6,(c,h)ZC1.8,(d,i)ZC2.0 and (e,j)ZC2.2

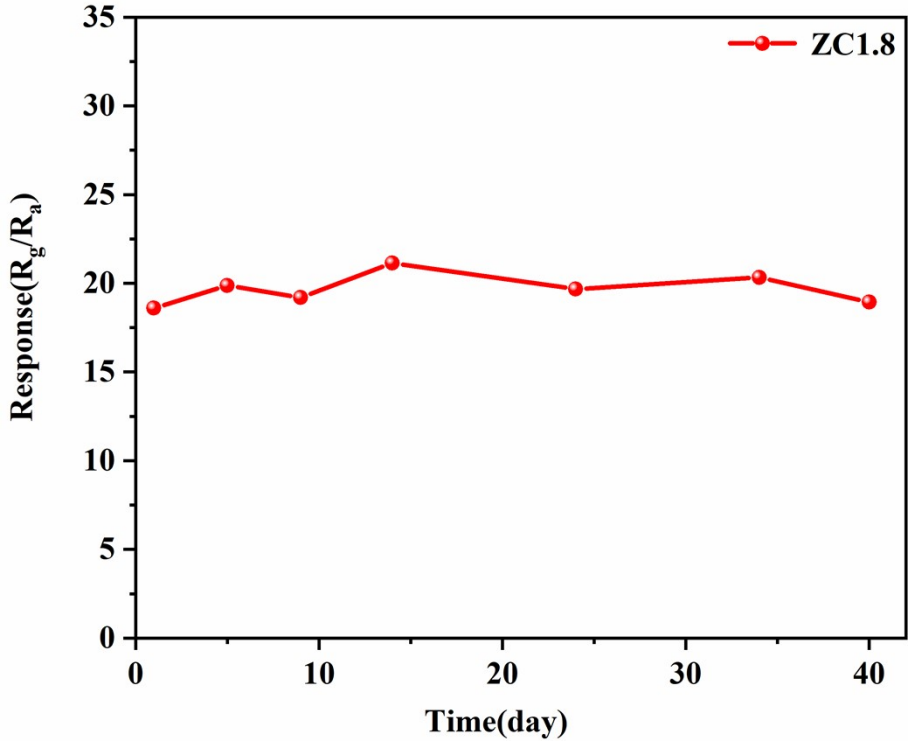

Figure S5. The stability of the ZC1.8 sensor for 200 ppm ethanol over 40 days

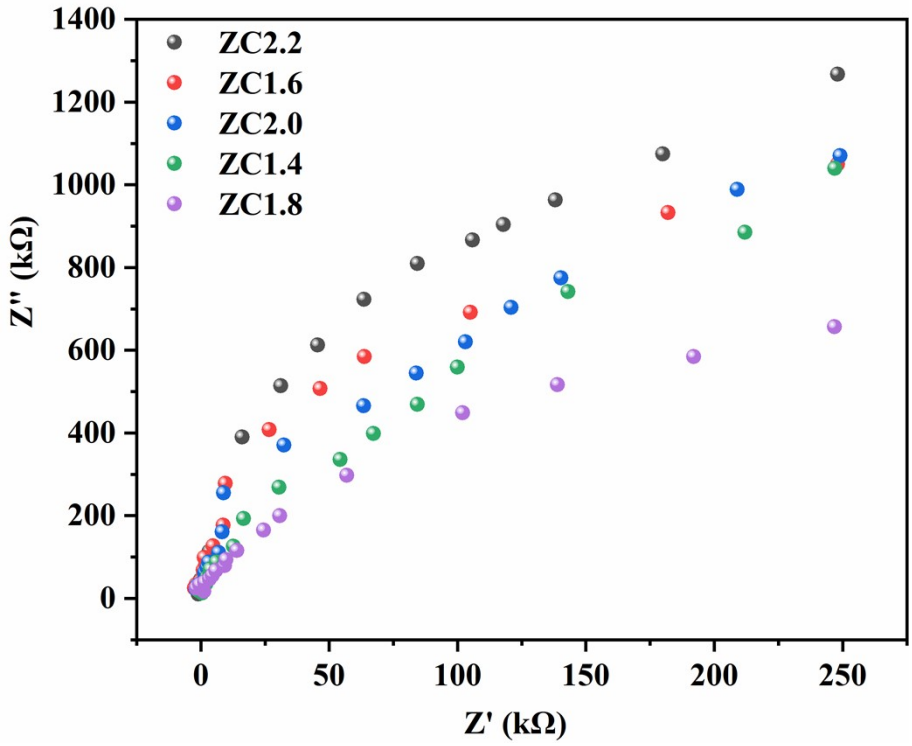

Figure S6. The electrochemical impedance spectra (EIS) Nyquist plots of ZnCo-LDHs

Table S1 Comparison of the content of different oxygen-containing functional groups in ZnCo-LDHs

Sample	oxygen vacancy	M-O (%)	O-H (%)
ZC1.4	20.21	1.96	77.83
ZC1.6	22.18	2.27	75.55
ZC1.8	28.67	5.64	65.69
ZC2.0	14.82	2.33	82.85
ZC2.2	15.58	1.15	83.27