

Supporting Information

Of

**Robust molecularly imprinted electrochemiluminescence
sensor based on Ni-Co nanoarray for sensitive detection of
spiramycin**

Yunxiao Li^a, Jiwei Xu^a, Rongqi Cheng^{b,c}, Jinghui Yang^a, ChenChen Li^{a,b},
Yingchun Liu^a, Rui Xu^a, Qin Wei^b and Yong Zhang^{*a,b}

^a *Provincial Key Laboratory of Rural Energy Engineering in Yunnan, Yunnan Normal University,
Kunming 650500, China. Email: yongzhang7805@126.com*

^b *Key Laboratory of Interfacial Reaction & Sensing Analysis in Universities of Shandong, School
of Chemistry and Chemical Engineering, University of Jinan, Jinan 250022, China.*

^c *Inspection and Testing Center of Liangshan County, Jining 272600, China.*

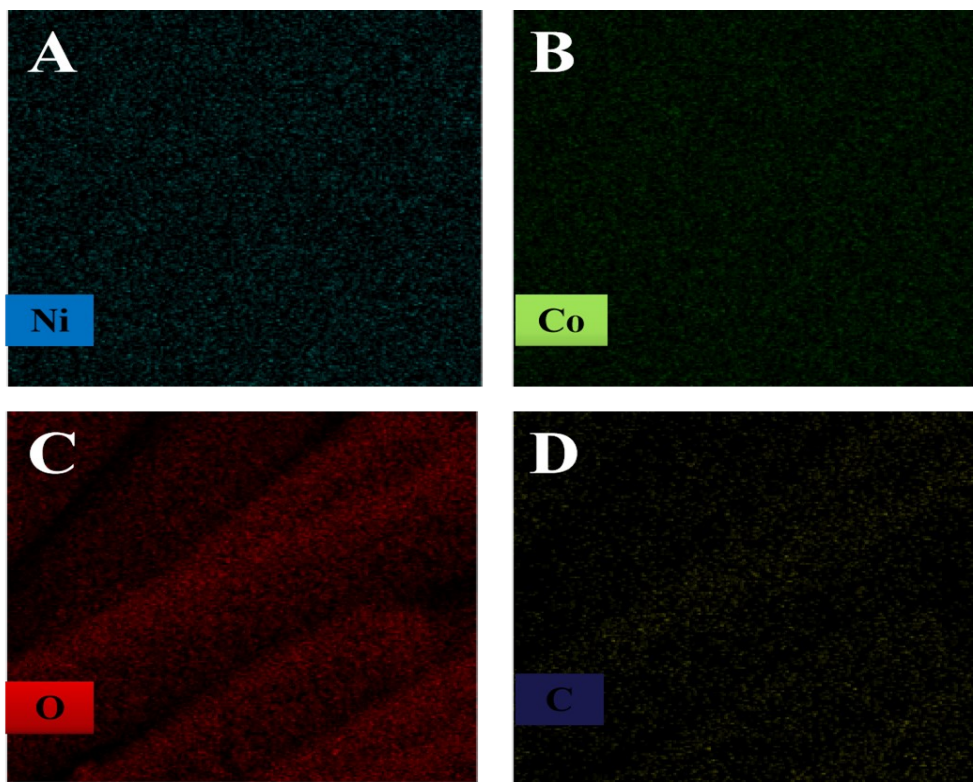


Fig. S1 (A, B, C, D) EDS Elemental analysis of Ni-Co LDH samples

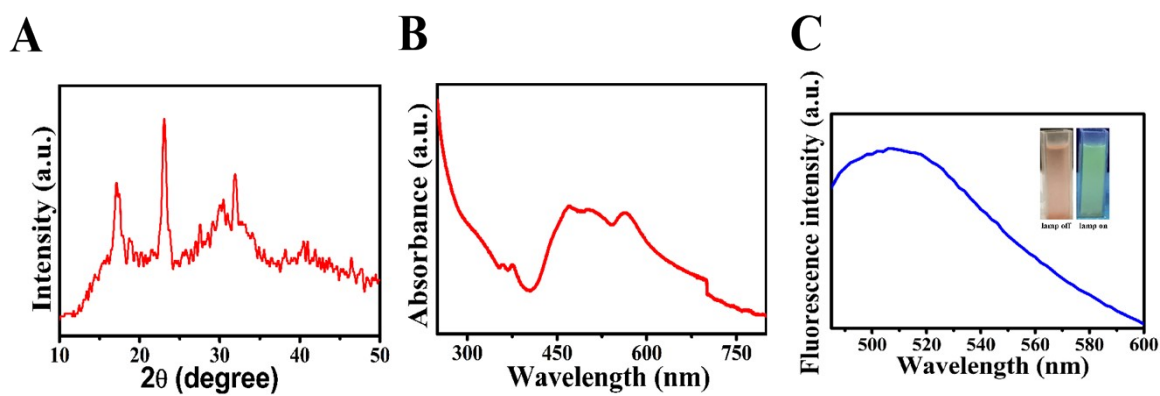


Fig. S2 (A) XRD patterns of PTCA. (B) UV-vis absorption spectrum of PTCA. (C) Fluorescence emission spectrum of PTCA.

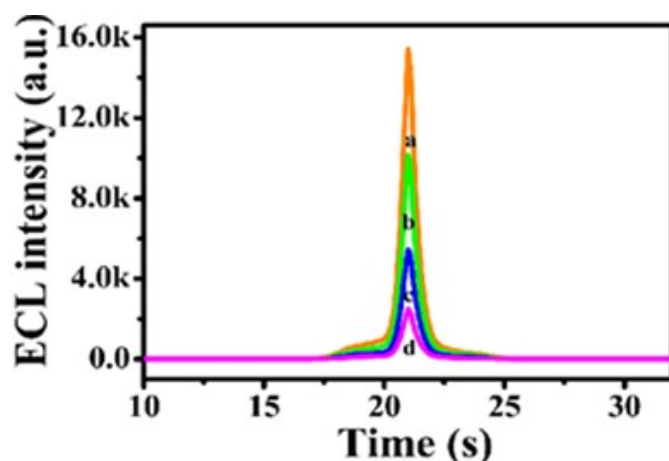


Fig. S3 ECL intensity-time curves of different modified electrodes: (a) PTCA/N-Ti₃C₂/Ni-Co LDH/CC. (b) Eluted PTCA/N-Ti₃C₂/Ni-Co LDH/CC. (c) MIP/PTCA/N-Ti₃C₂/Ni-Co LDH/CC. (d) Rebinding MIP/PTCA/N-Ti₃C₂/Ni-Co LDH/CC.

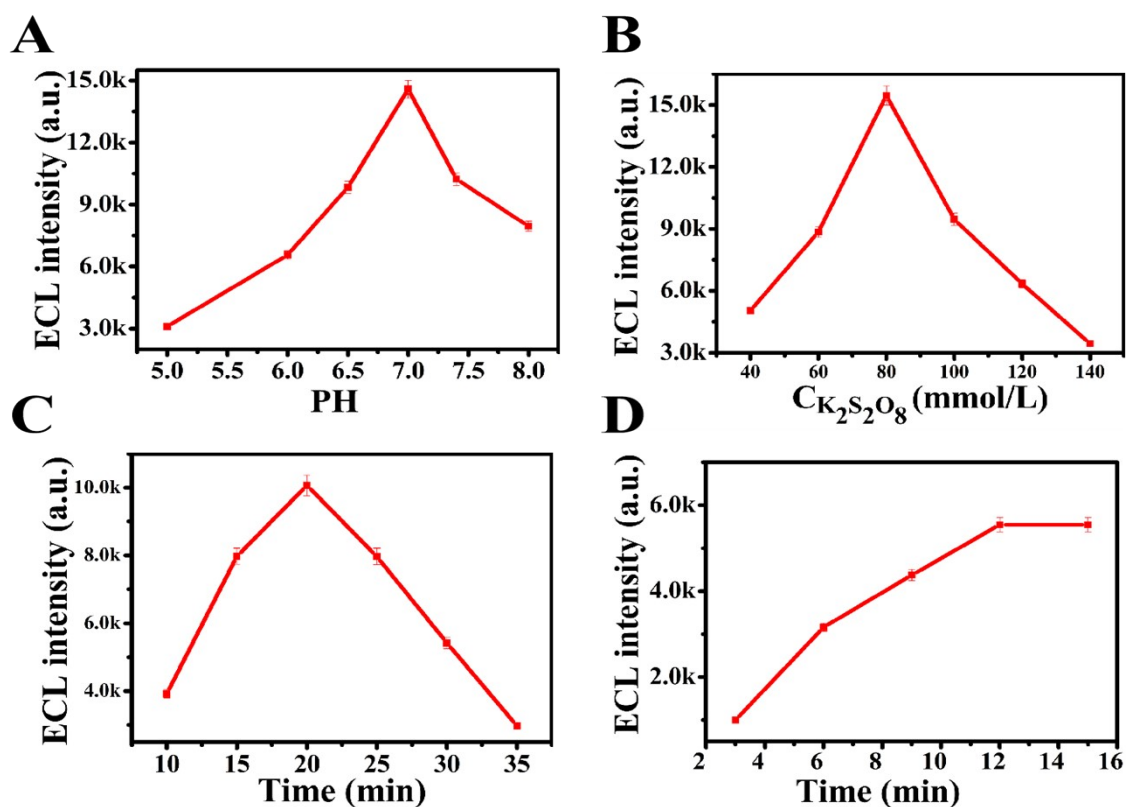


Fig. S4 (A) The effect of pH on ECL intensity. (B) The effect of K₂S₂O₈ concentration on ECL intensity. (C) Effect of incubation time of MIP on ECL intensity. (D) The effect of elution time of template molecules on ECL intensity. Error bars = SD (n = 3)

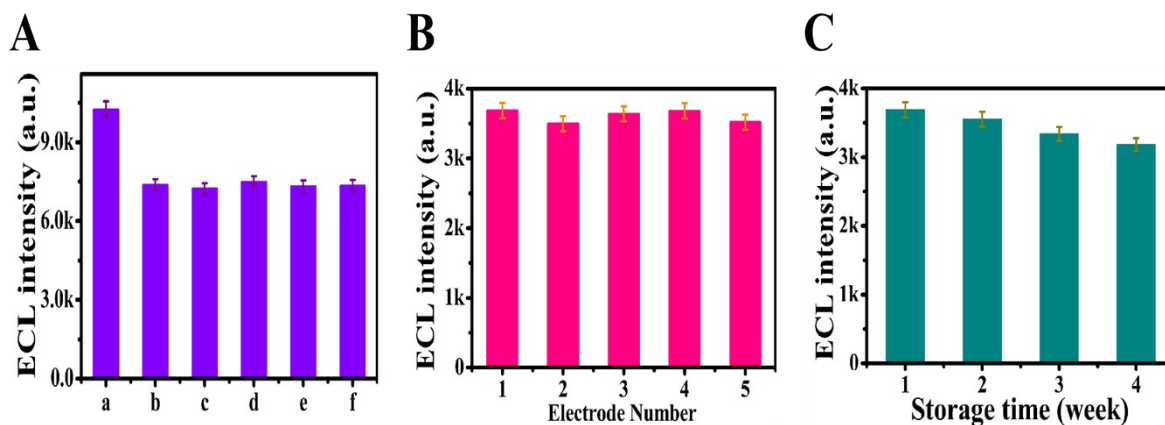


Fig. S5 (A) Selectivity of MIECL sensors for different detectors: (a) Blank sample. (b) SPI. (c) SPI & Tylosin. (d) SPI & Azithromycin. (e) SPI & erythromycin. (f) SPI & josamycin. (B) Reproducibility of six MIECL sensors. (C) Storage Stability of MIECL Sensors. Error bars = SD (n = 3)

Table S1. Result and recovery of SPI measured by MIECL sensor

Chicken sample	Detected (10^{-6} M)	Spiked (10^{-6} M)	Found (10^{-6} M)	RSD (%)	Recovery (%)
Sample 1	0.24	0.10	0.3413	3.75	101.3
Sample 2	0.24	0.30	0.5381	4.06	99.37
Sample 3	0.24	0.60	0.8295	2.61	98.25