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Supporting Information

A Molybdenum disulfide/Nickel ferrite-Modified Voltammetric Sensing Platform for Ultra-Sensitive Determination of Clenbuterol under the presence of external magnetic field

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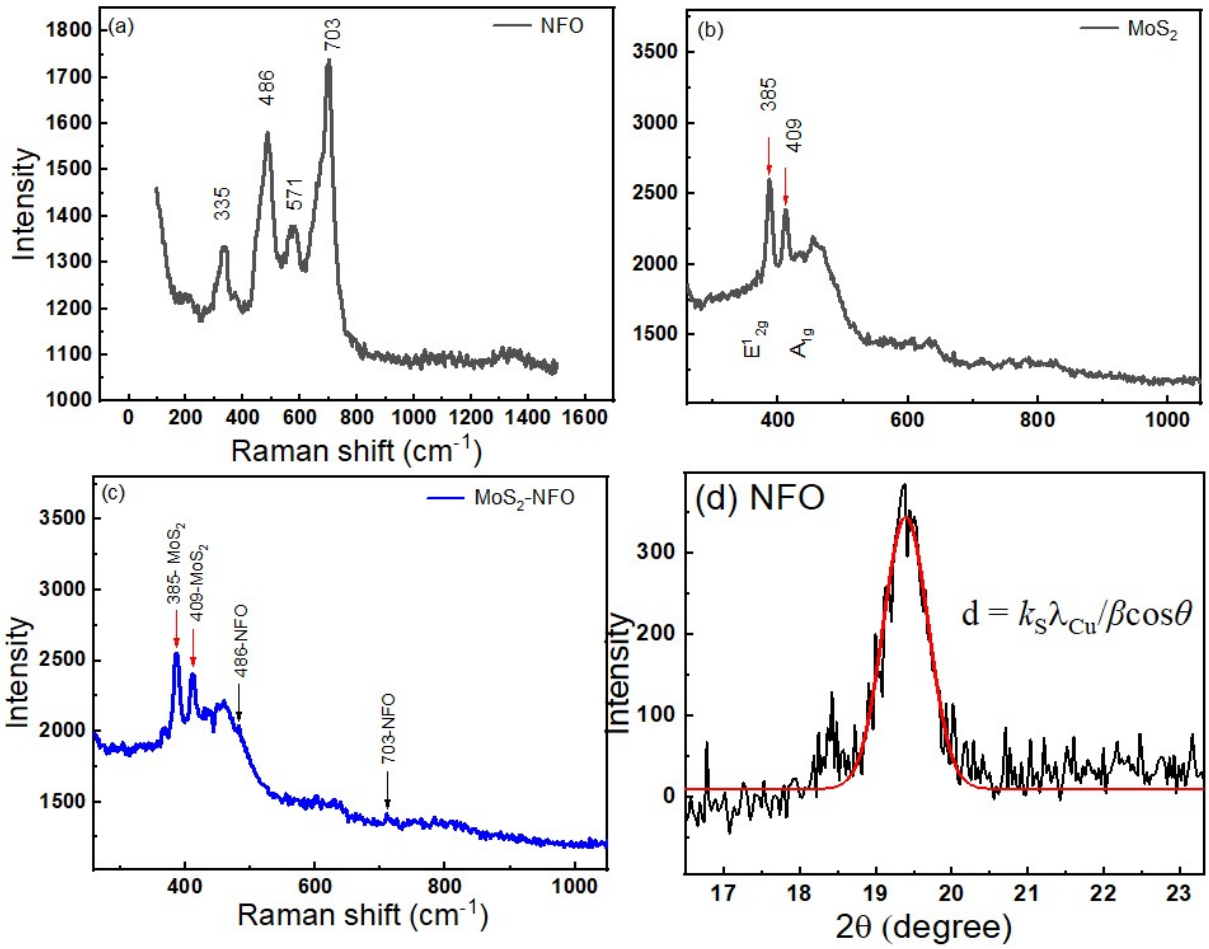
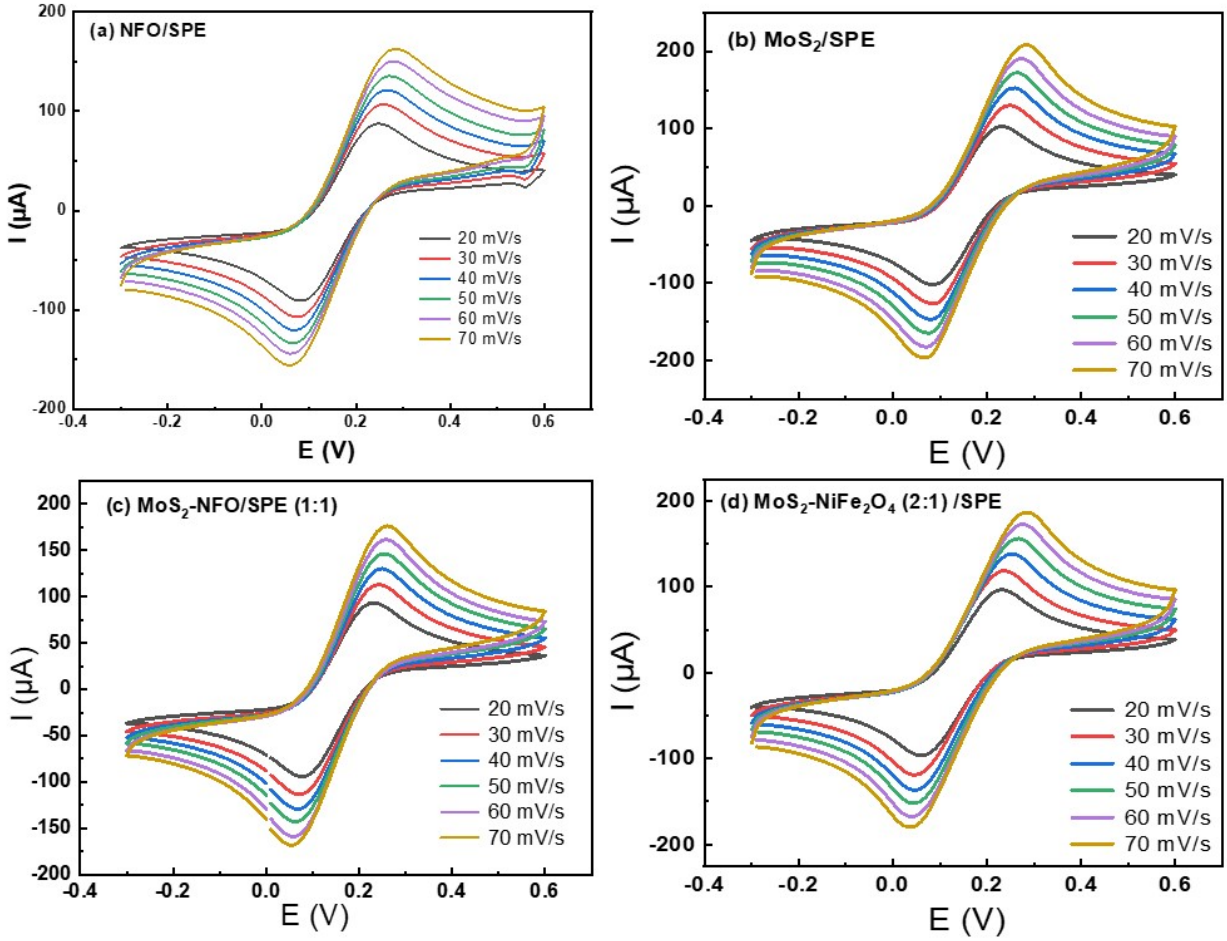


Figure S1. (a, b, and c): Raman spectra of NFO, MoS_2, and MoS_2-NFO, respectively; (d): Graphs and calculations for s Scherrer's formula of NFO sample.


(a) NFO/SPE
(b) MoS2/SPE
(c) MoS2-NFO/SPE (1:1)
(d) MoS2-NiFe2O4 (2:1) /SPE
I (μA)
E (V)
20 mV/s
30 mV/s
40 mV/s
50 mV/s
60 mV/s
70 mV/s

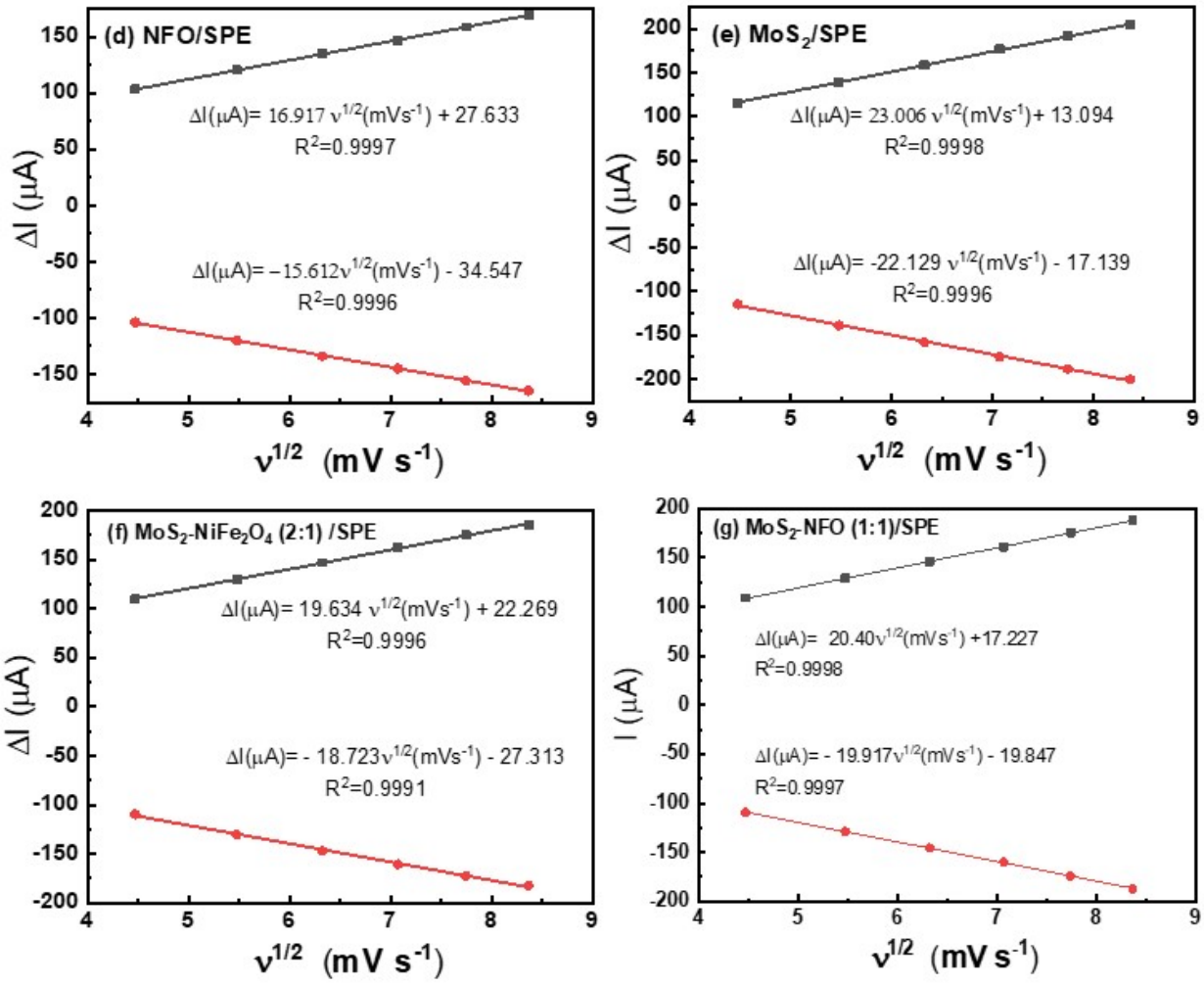


Figure S2. (a, b, c, and d): CV profiles of modified electrodes at various scan rates (20- 70 mV s^{-1}); and (e, f, g, and h): The corresponding linear plot of peak current response and sqrt of scan rate. All experiments were performed in 0.1 M KCl containing 5 mM $[Fe(CN)_6]^{3-/4-}$.

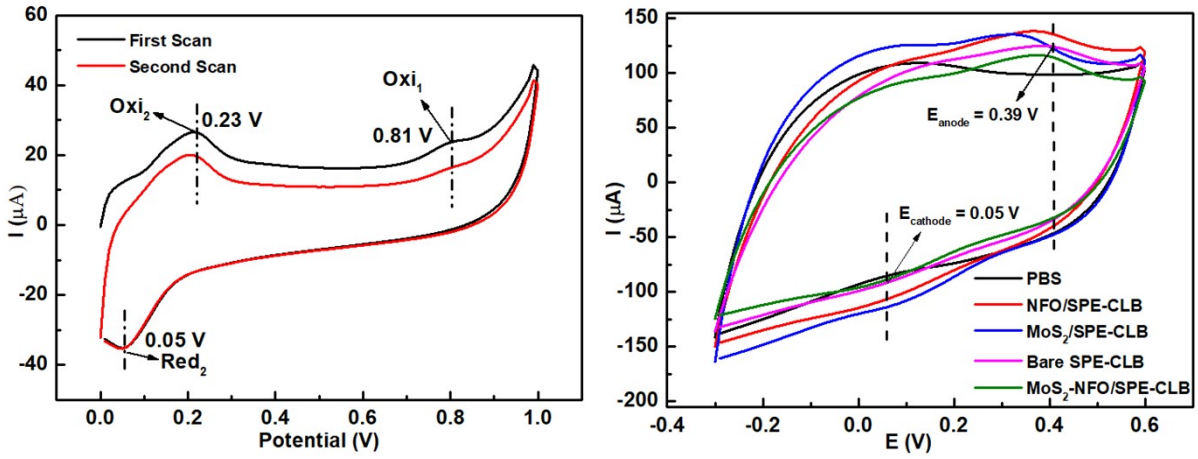


Figure S3. CV curves of bare SPE, MoS_2/SPE, NFO/SPE, and MoS_2-NFO(2:1)/SPE in pH 7.4 PBS buffer and PBS containing CLB, respectively.

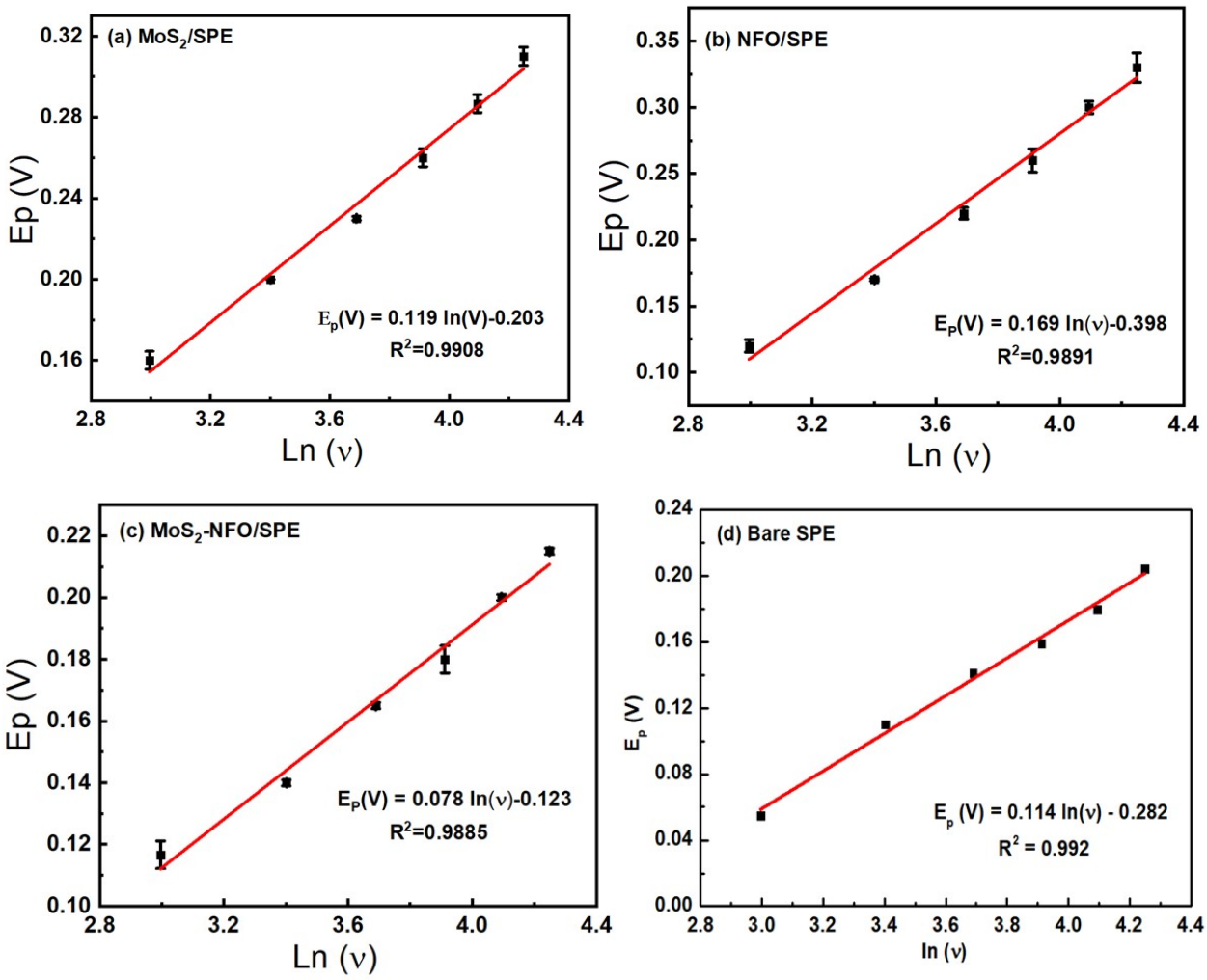


Figure S4. The linear relationship between E_p and the natural logarithm of scan rate ln (ν) at different scan rates from 20 to 70 mV s^{-1} on the (a): MoS_2, (b): NFO, (c): MoS_2-NFO (2:1), and (d): bare SPE, respectively.

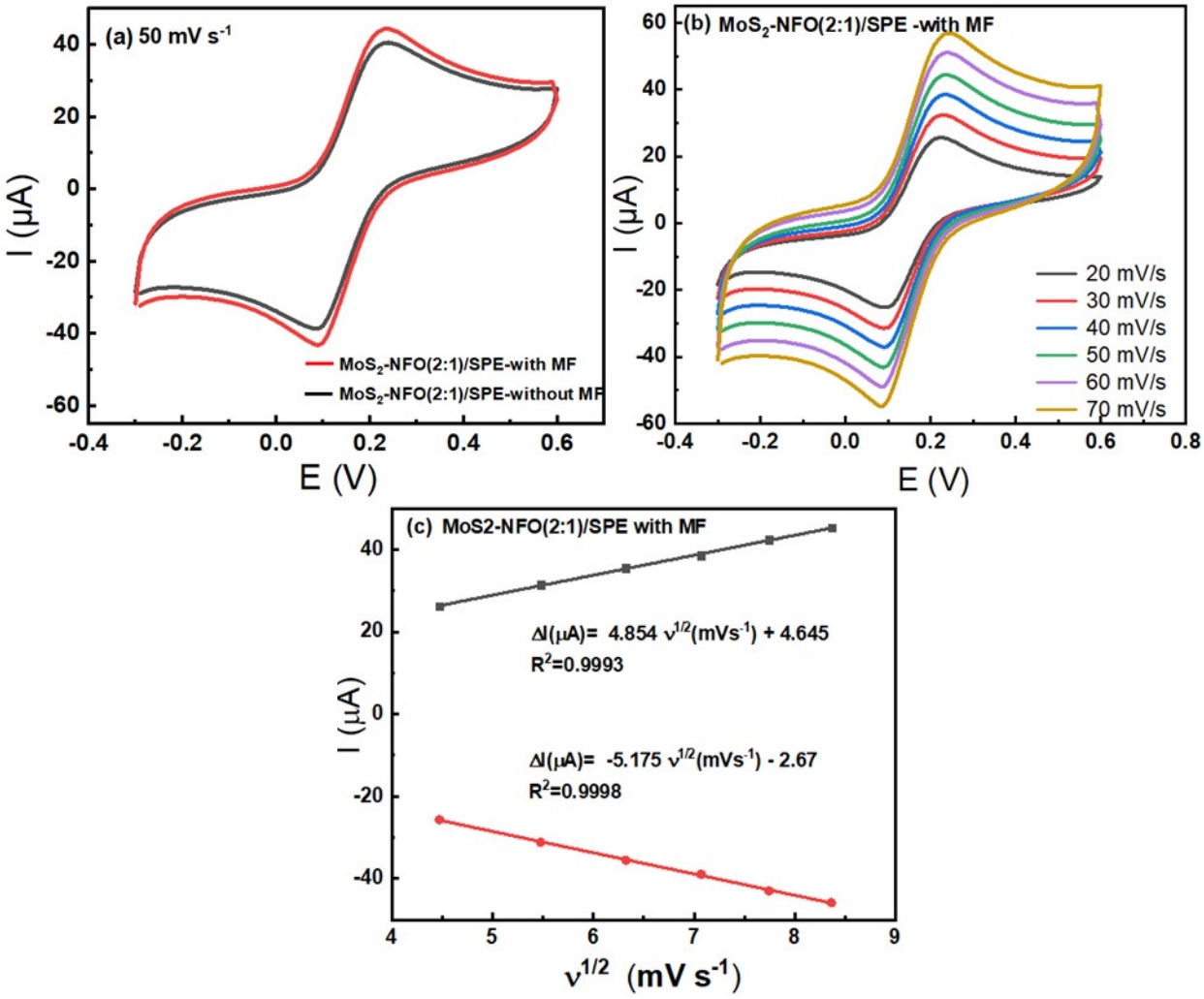


Figure S5. (a and b**):** CV curves of MoS_2-NFO(2:1)/SPE in 0.1 M KCl solution containing 2.5 mM $[Fe(CN)_6]^{3-/4-}$ under the support of external MF, (c): The corresponding to the plot of peak current (I) versus the square root of the scan rate ($\nu^{1/2}$).

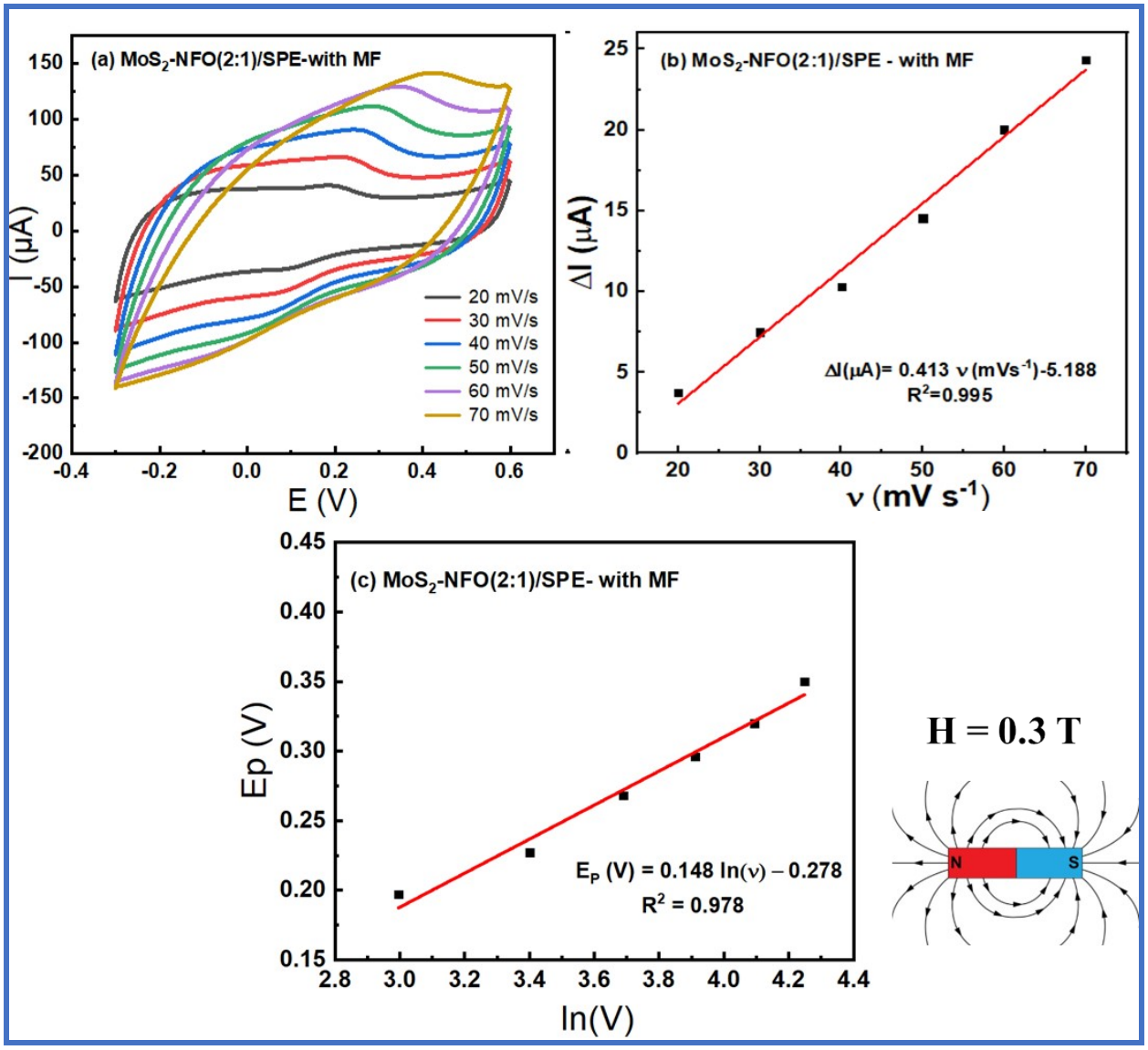


Figure S6. (a): CVs responses of 50 µM CLB at MoS_2-NFO(2:1)/SPE in 0.1M PBS buffer at different scan rates under the support of external MF; (b, c): The corresponding to the plot of peak current (I) versus scan rate (ν) and E_p *vs*. ln(ν), respectively.