

## Comprehensive Detection of Lysergic Acid Diethylamide (LSD) in Forensic Samples Using Carbon Nanotube Screen-Printed Electrodes

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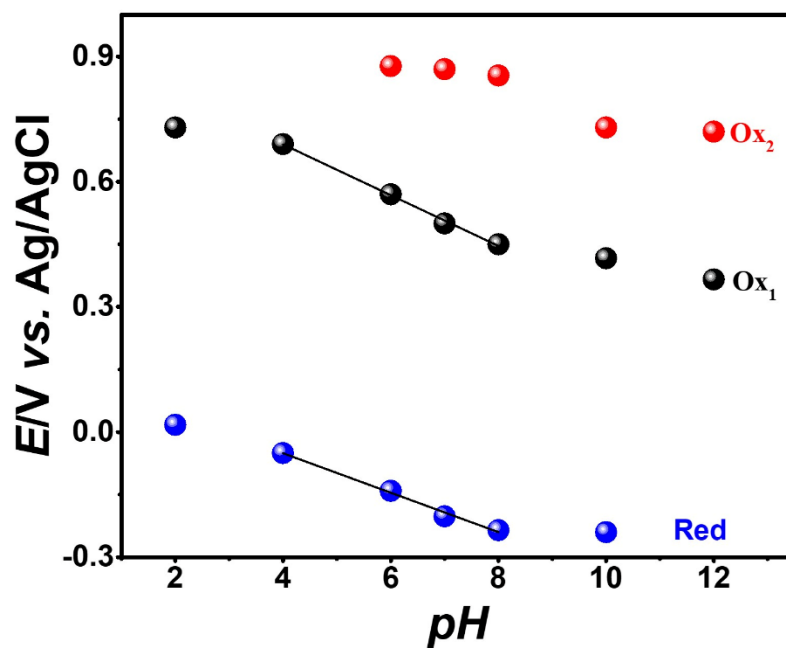
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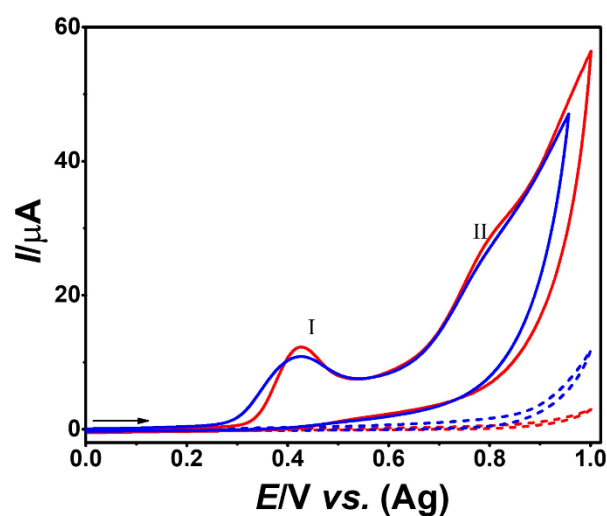
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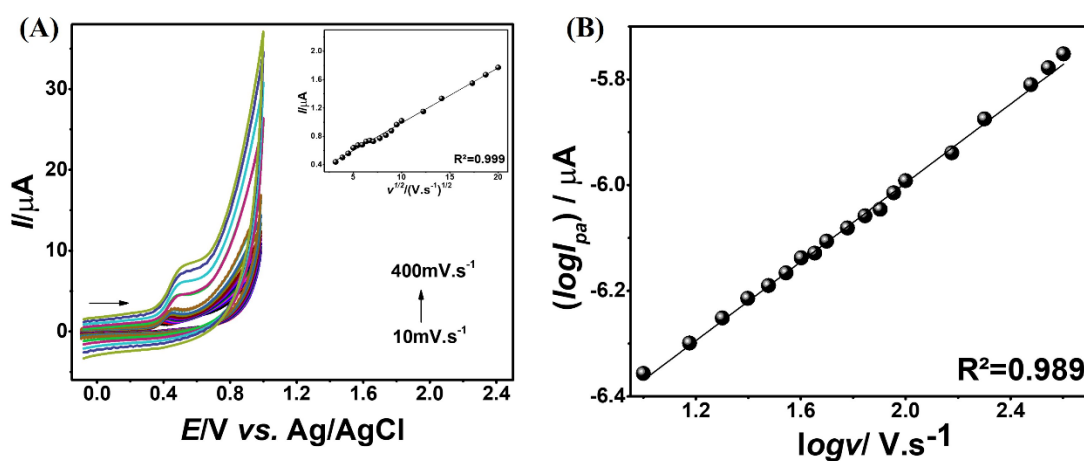
## Supplementary Information



**Figure S1.** Plot of  $E_p$  vs. pH obtained from the data in Fig. 3A, showing the first oxidation (black dots), second oxidation (red dots), and reduction (blue dots) of LSD.

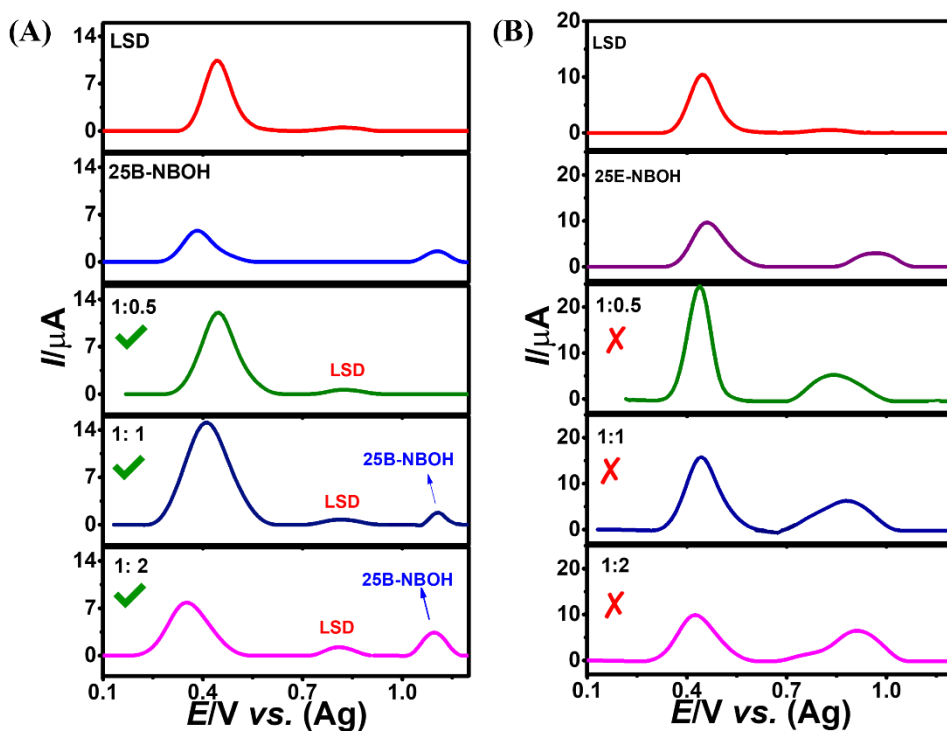


**Figure S2.** CVs in 0.1 mol L<sup>-1</sup> BR buffer solution (blue lines) and phosphate buffer solution (red lines), both at pH 12.0, before (dashed lines) and after (solid lines) the addition of 1.6 mmol L<sup>-1</sup> LSD on SPE-MWCNT. All potential scans started at 0.0 V in the anodic direction (as indicated by the arrow). Scan rate of 50 mV s<sup>-1</sup>.

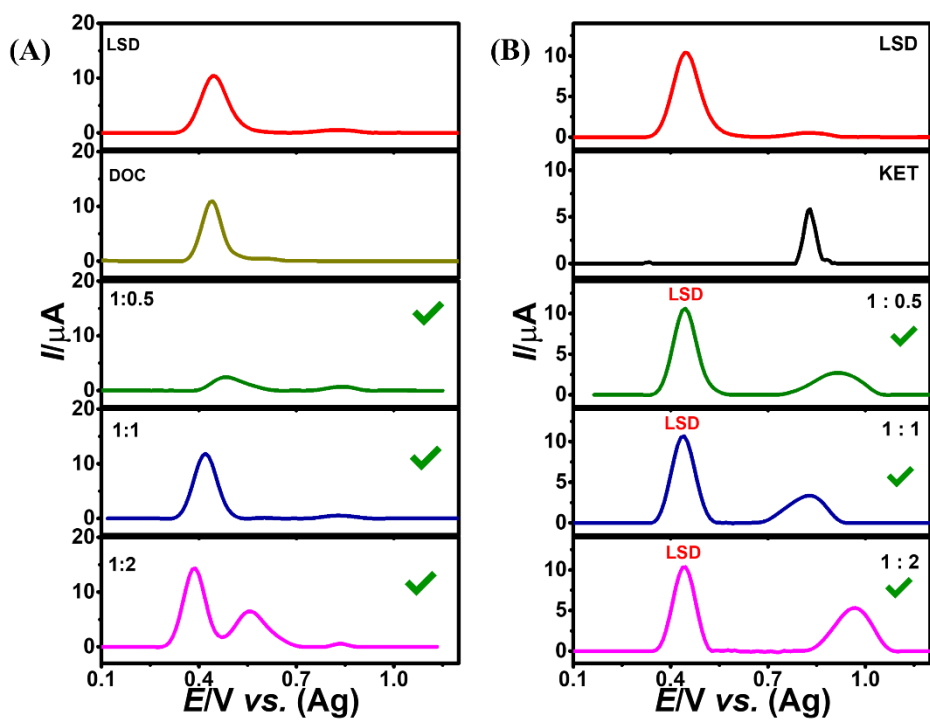


**Figure S3.** (A) CVs of  $1 \times 10^{-4}$  mol L<sup>-1</sup> LSD in 0.1 mol L<sup>-1</sup> phosphate buffer solution at pH 12.0 on SPE-MWCNT. All potential scans started at 0.0 V in the anodic direction (as indicated by the arrow).

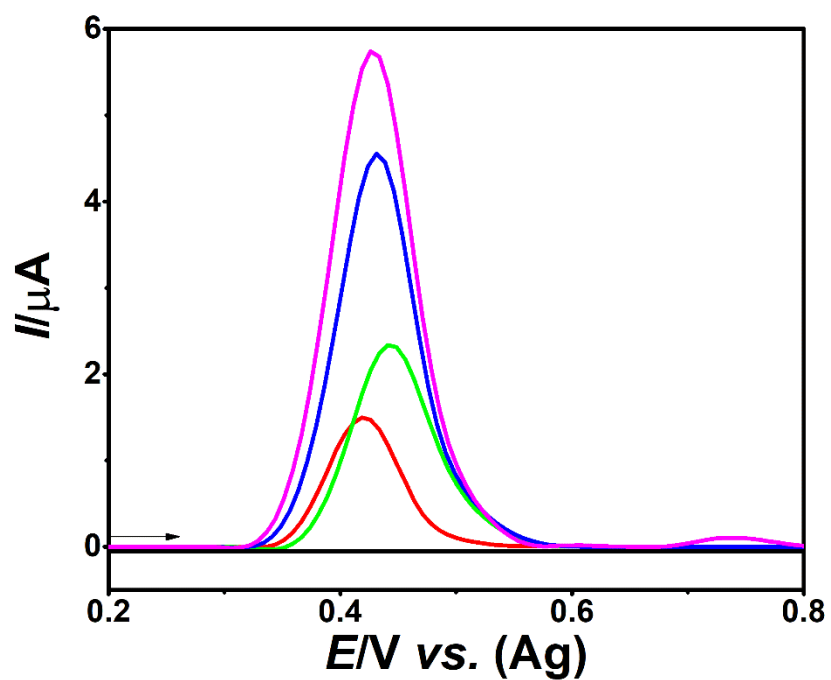
Scan rate ( $\nu$ ) ranged from  $10 \text{ mV s}^{-1}$  to  $400 \text{ mV s}^{-1}$ . Inset: Linear regressions of  $I_{pa1}$  vs.  $\nu^{1/2}$ . **(B)** Logarithm of  $I_{pa1}$  vs. logarithm of  $\nu$ .



**Figure S4.** SWV voltammograms on SPE-MWCNT for  $40 \mu\text{mol L}^{-1}$  LSD (red line) and **(A)** 25B-NBOH (blue line) and **(B)** 25E-NBOH (dark purple line) in concentrations  $20 \mu\text{mol L}^{-1}$  (green line),  $40 \mu\text{mol L}^{-1}$  (dark blue line) and  $80 \mu\text{mol L}^{-1}$  (pink line) in  $0.1 \text{ mol L}^{-1}$  phosphate buffer solution at pH 12.0. The experimental conditions are the same as in Figure 5. Experimental conditions are the same as in Fig.4.



**Figure S5.** SWV voltammograms on SPE-MWCNT for  $40 \mu\text{mol L}^{-1}$  LSD (red line) and (A) DOC (dark yellow line) and (B) 25E-NBOH (black line) in concentrations  $20 \mu\text{mol L}^{-1}$  (green line) ,  $40 \mu\text{mol L}^{-1}$  (dark blue line) and  $80 \mu\text{mol L}^{-1}$ (pink line) in  $0.1 \text{ mol L}^{-1}$  phosphate buffer solution at pH 12.0. The experimental conditions are the same as in Figure 5. Experimental conditions are the same as in Fig.4.



**Figure S6.** SWVs in  $0.1 \text{ mol L}^{-1}$  phosphate buffer solution at pH 12.0, showing the responses before (black line) and after the addition of a real seized sample (red line), and the subsequent spiking with a standard solution of LSD at concentrations of 5.0 (green line), 15.0 (blue line), and 20.0 (pink line)  $\mu\text{mol L}^{-1}$  on SPE-MWCNT, as described in Table 1. Experimental conditions are the same as in Fig. 4.