

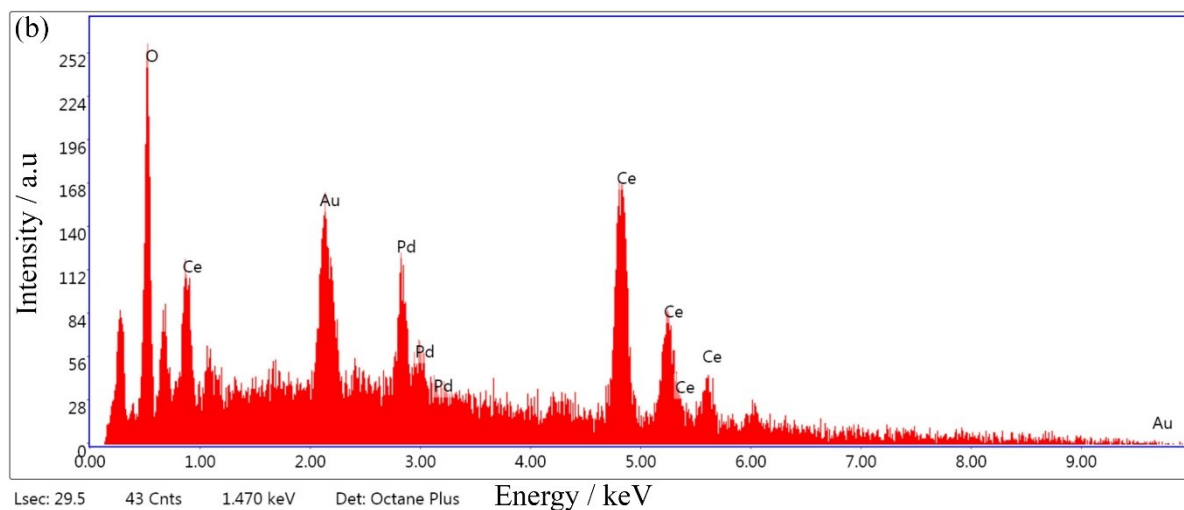
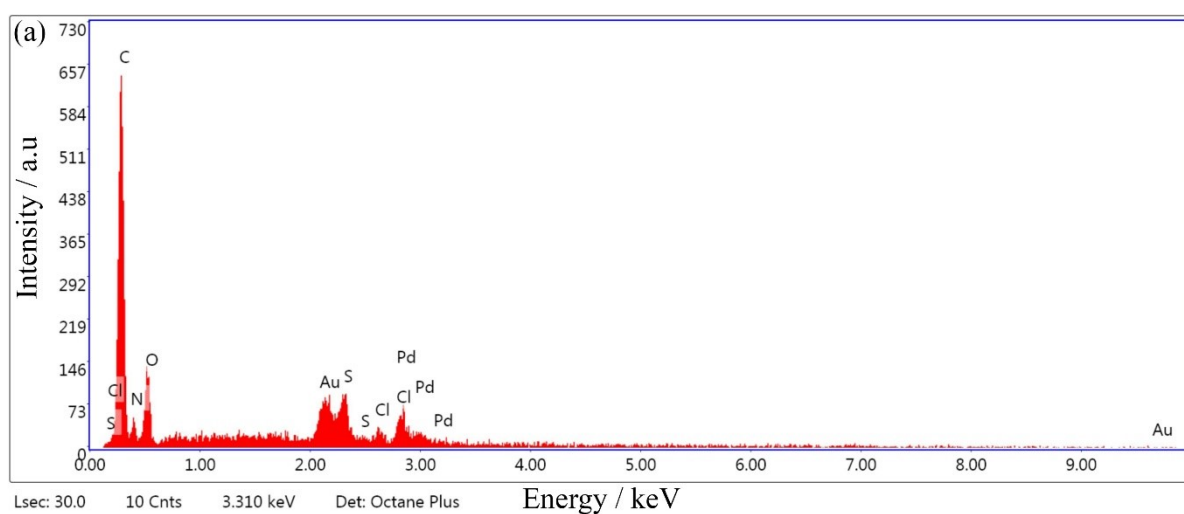
## Development of a facile electrochemical sensor based on GCE modified with one-step prepared PNMA-CeO<sub>2</sub>-fMWCNTs composite for simultaneous detection of UA and 5-FU

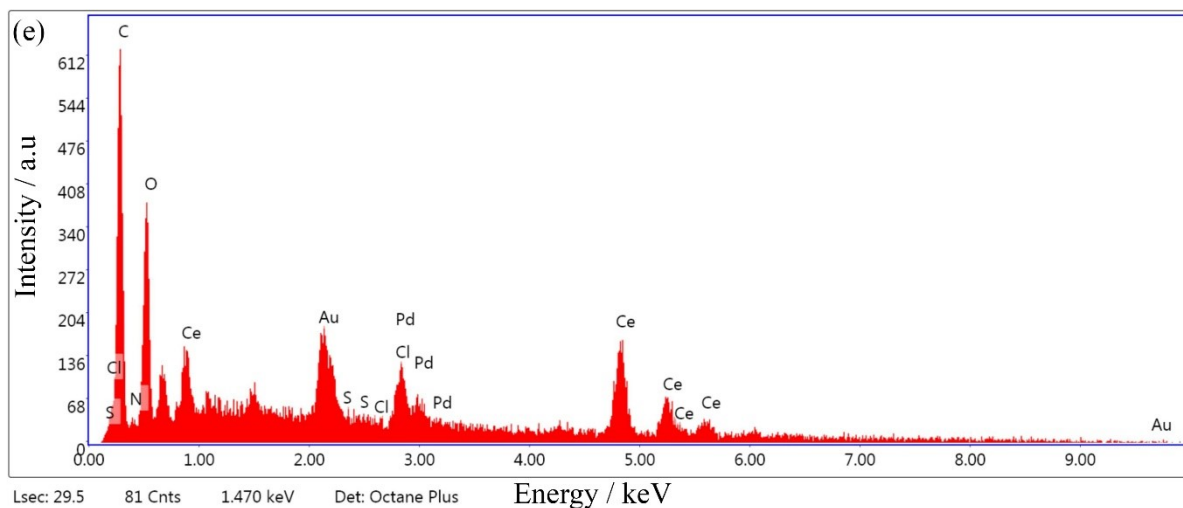
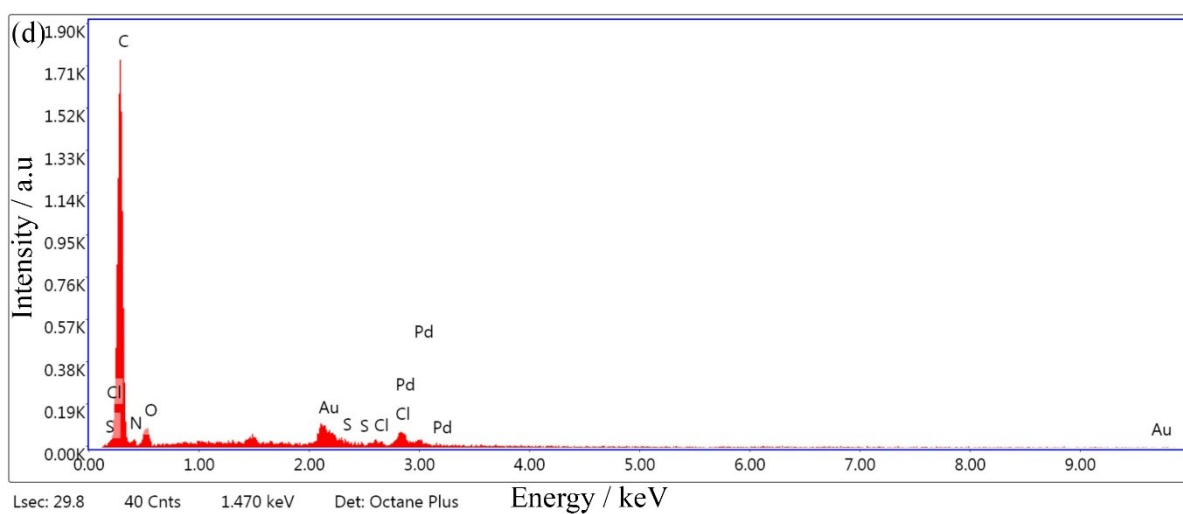
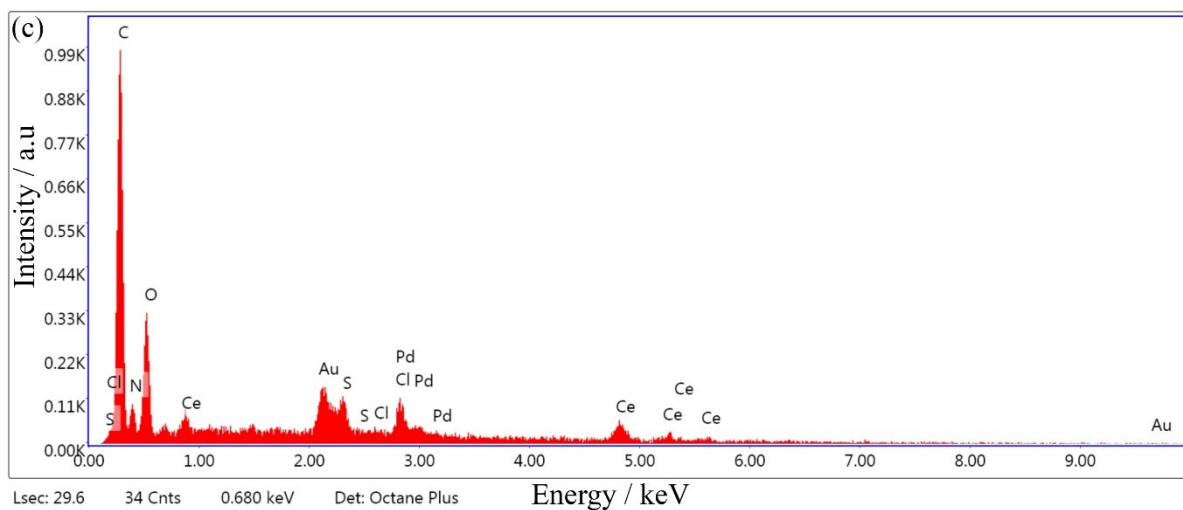
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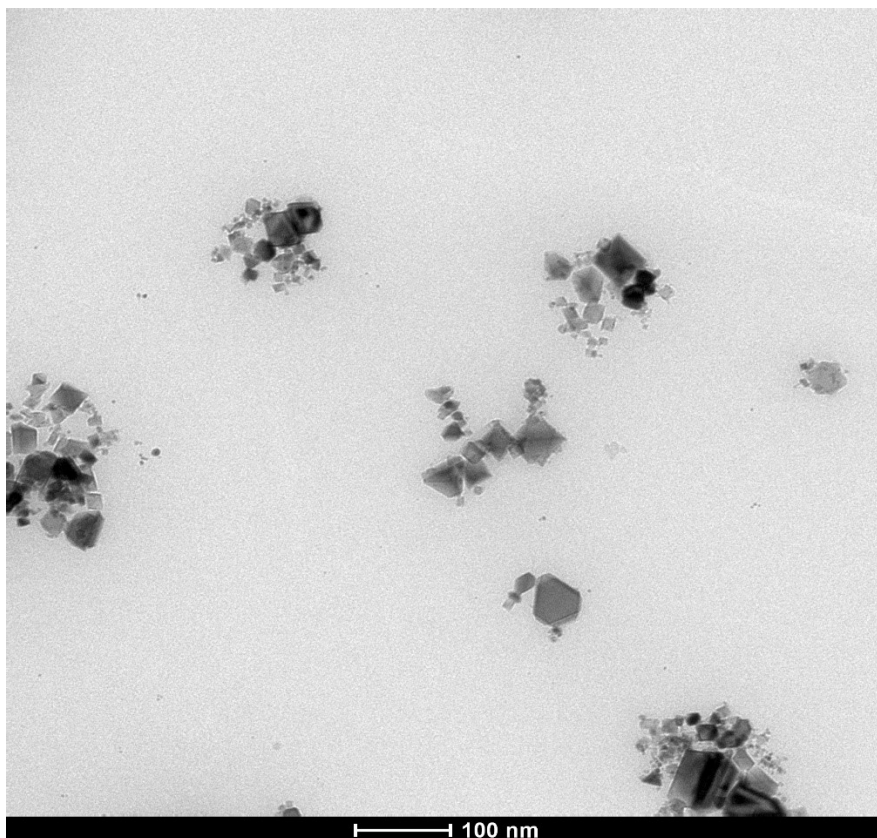
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### Supplementary Material

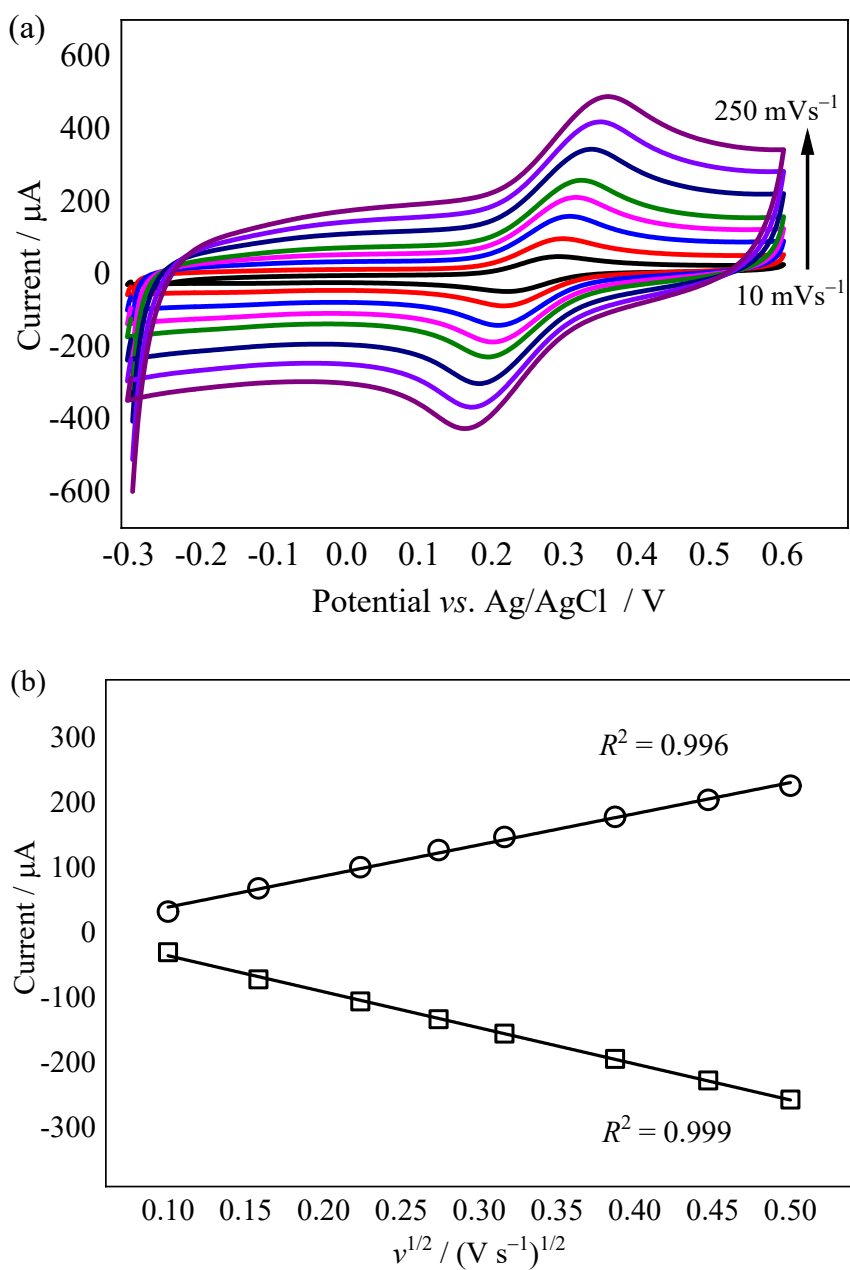




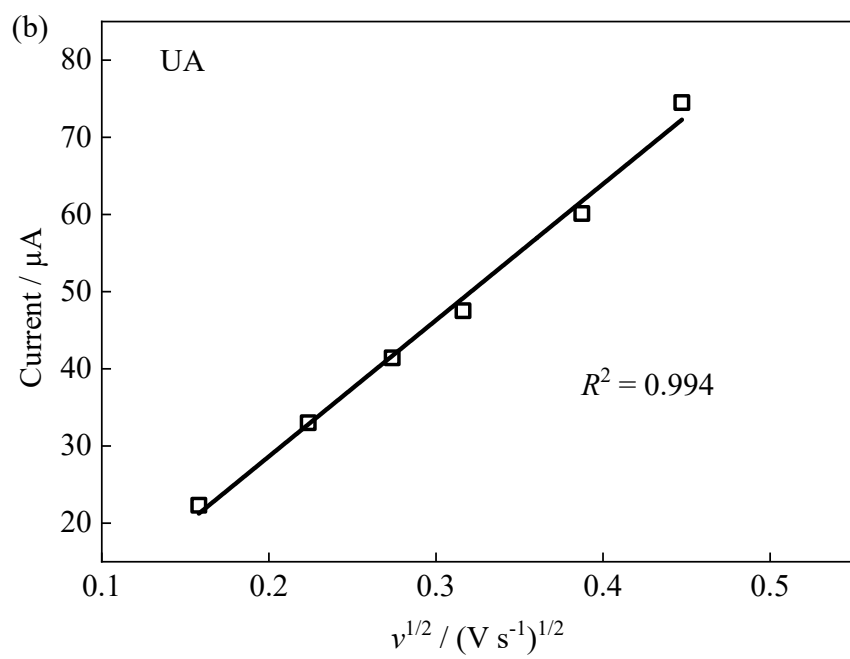
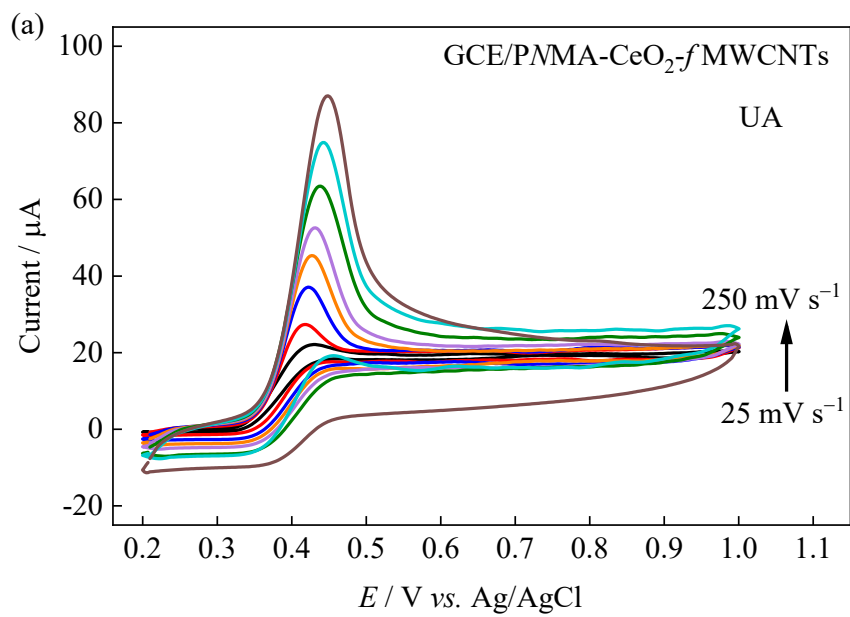
**Fig. S1** EDX analysis of (a) PNMA, (b) CeO<sub>2</sub> NPs, (c) PNMA-CeO<sub>2</sub>, (d) PNMA-*f*MWCNT, and (e) PNMA-CeO<sub>2</sub>-*f*MWCNT composites.

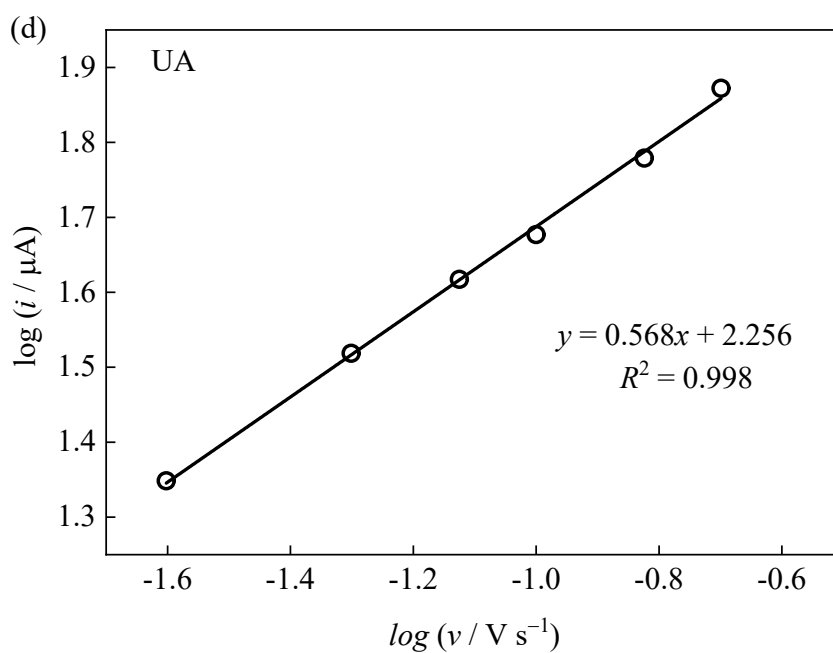
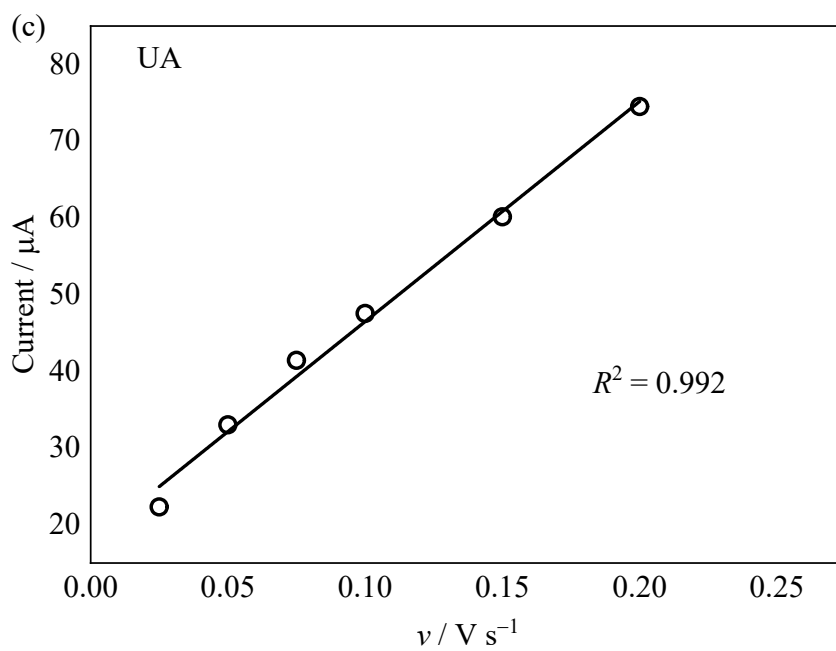


**Fig. S2** TEM micrograph of CeO<sub>2</sub> NPs.

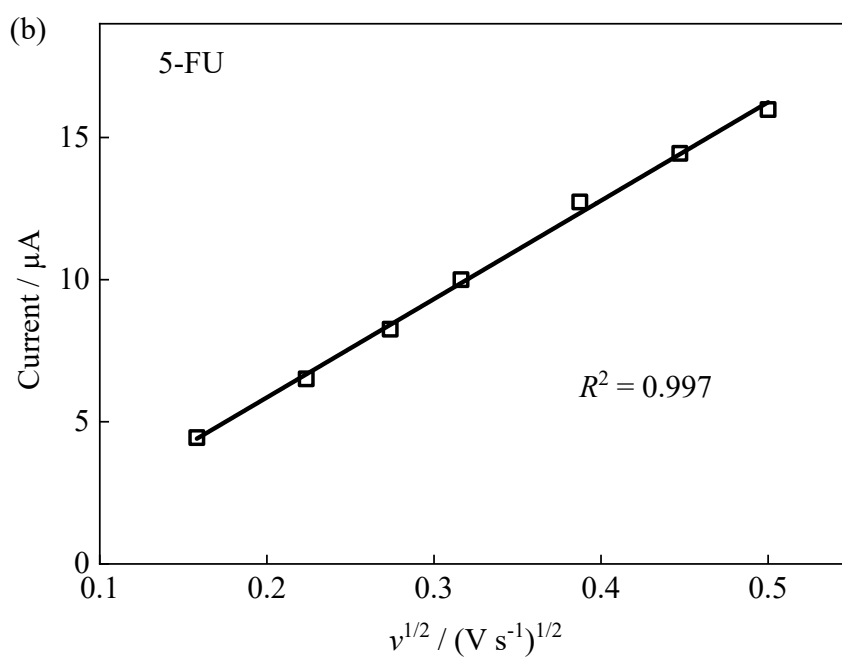
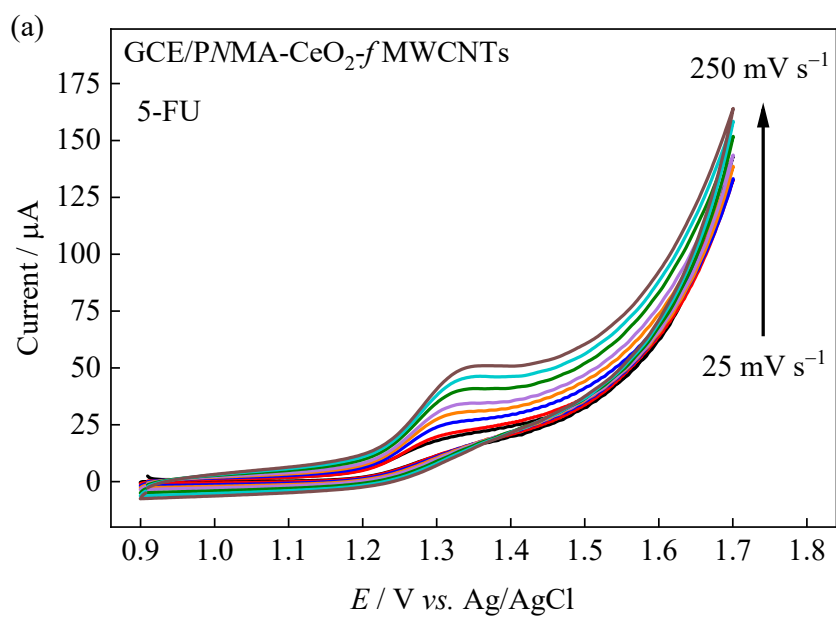


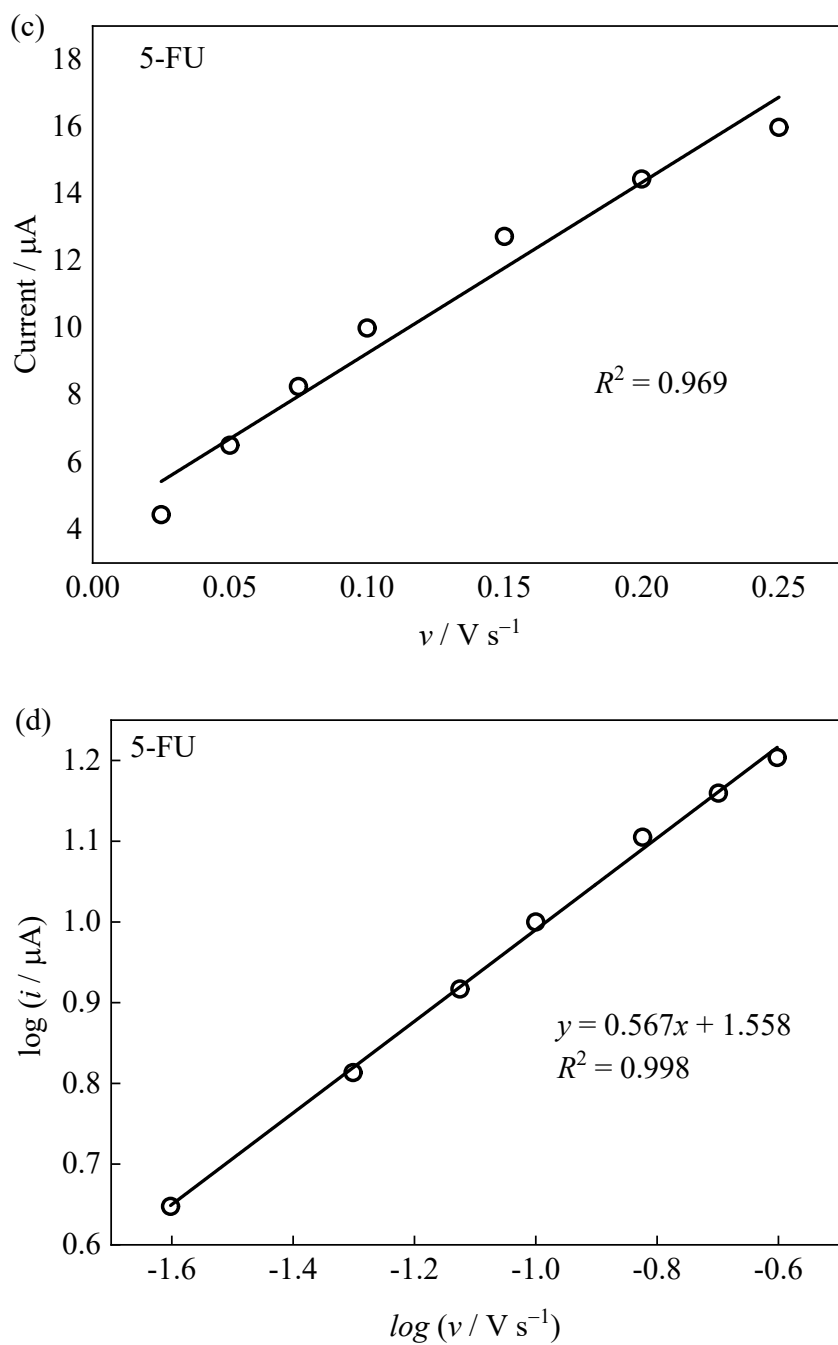
**Fig. S3** (a) CVs recorded at different scan rates, (b) the plot of the peak current against the square root of the scan rate at the GCE/PMMA-CeO<sub>2</sub>-fMWCNTs electrode in 0.1 mol L<sup>-1</sup> KCl solution containing 5.0 mmol L<sup>-1</sup> Fe(CN)<sub>6</sub><sup>3-/4-</sup>.





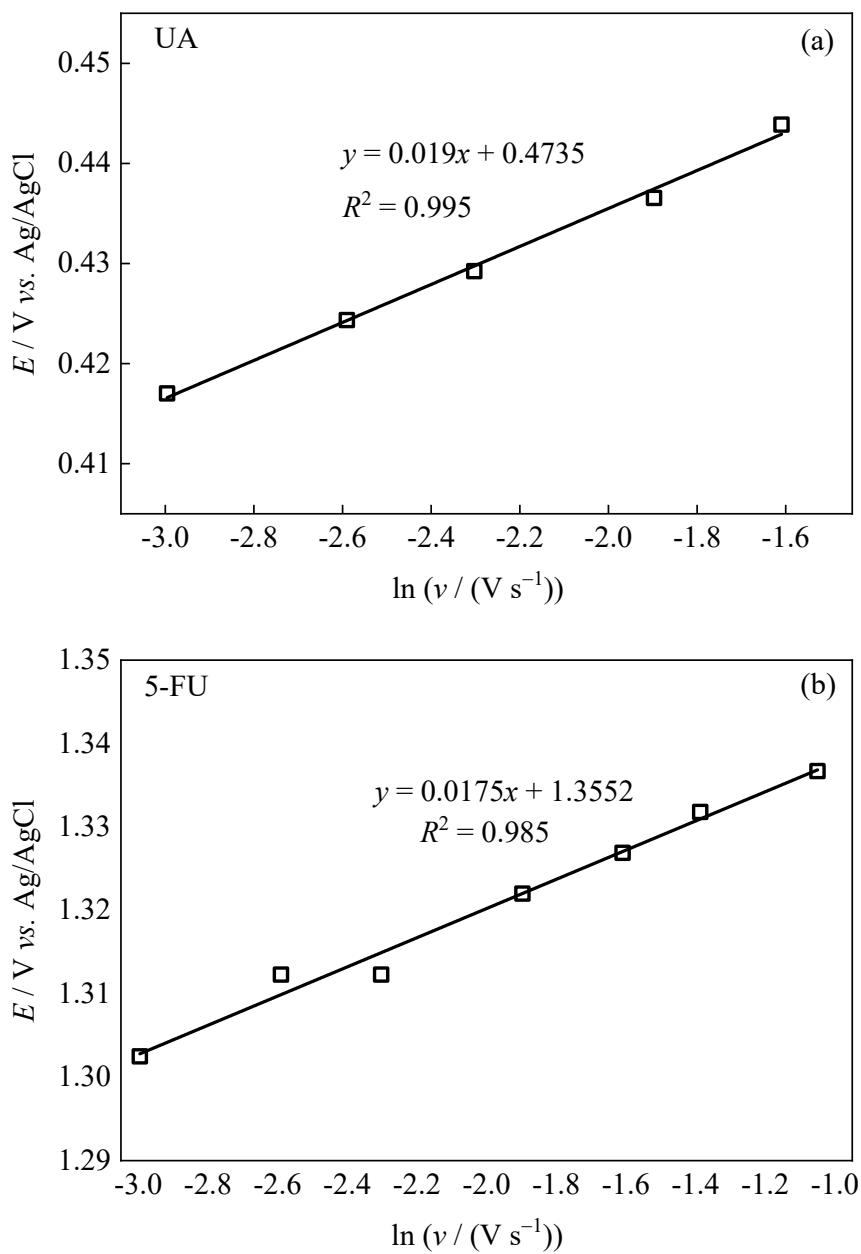
**Fig. S4** CVs of (a) GCE/PMMA-CeO<sub>2</sub>-fMWCNTs electrode at the scanning speeds of 0.025–0.250 V s<sup>-1</sup> in 0.1 mol L<sup>-1</sup> PBS with 0.3 mmol L<sup>-1</sup> UA. The plots of the (b) Current vs.  $\nu^{1/2}$ , (c) Current vs.  $\nu$ , and (d)  $\log i_p$  vs.  $\log \nu$ .





**Fig. S5** CVs of (a) GCE/PMMA-CeO<sub>2</sub>-fMWCNTs electrode at the scanning speeds of 0.025–0.250 V s<sup>-1</sup> in 0.1 mol L<sup>-1</sup> PBS with 1.2 mmol L<sup>-1</sup> 5-FU. The plots of the (b) Current vs.  $\nu^{1/2}$ , (c) Current vs.  $\nu$ , and (d)  $\log i_p$  vs.  $\log \nu$ .





**Fig. S6** The plots of the  $E_p$  vs.  $\ln v$  for (a) UA and (b) 5-FU in 0.1 mol L<sup>-1</sup> PBS containing (a) 1.2 mmol L<sup>-1</sup> UA and (b) 1.2 mmol L<sup>-1</sup> 5-FU at GCE/PNMA-CeO<sub>2</sub>- $\beta$ MWCNTs.