

Supplemental Data for

Pharmacokinetics study of isorhamnetin in rat plasma by a sensitive electrochemical sensor based on reduced graphene oxide

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Huaping Peng and Lingling Zhang contributed equally to the present study.

Experimental

Synthesis of MoS₂ nanosheets

MoS₂ powder (75 mg) and PAA (25 mg) were added to a 50 mL flask containing 10 mL of ultrapure water as the solvent and the mixture was sonicated for 6 h. Then, the dark green dispersion was centrifugated at 3000 rpm for 10 min to remove large-size masses. The supernatant was collected and further washed with water by centrifugation at 10000 rpm for 5 min. The as-obtained black precipitate was dispersed in water for further characterizations and applications.

Synthesis of Au nanoclusters

The BSA-stabilized Au nanoclusters (BSA-AuNCs) were prepared as reported previously [1]. In a typical experiment, aqueous HAuCl₄ solution (5 mL, 10 mM, 37 °C) was added to BSA solution (5 mL, 50 mg/mL, 37 °C) under vigorous stirring. NaOH solution (0.5 mL, 1 M) was introduced 2 min later, and the reaction was allowed to proceed under vigorous stirring at 37 °C for 12 h.

Synthesis of CdS QDs

The CdS QDs were prepared as reported method [2,3]. Briefly, 250 μL of TGA was added to 50 mL of 0.01 M CdCl₂ aqueous solution. N₂ was bubbled throughout the solution to remove O₂ for 30 min. During this period, 1.0 M NaOH was added to adjust the pH of the above solution to 11. After that, 5.5 mL of 0.1 M Na₂S aqueous solution was injected into this solution to obtain TGA-capped water-soluble CdS QDs and the reaction mixture was refluxed under N₂ atmosphere for 4 h. Finally, the

desired TGA-stabilized CdS QDs were obtained and then diluted with the same volume of water and stored in a refrigerator at 4 °C for further use.

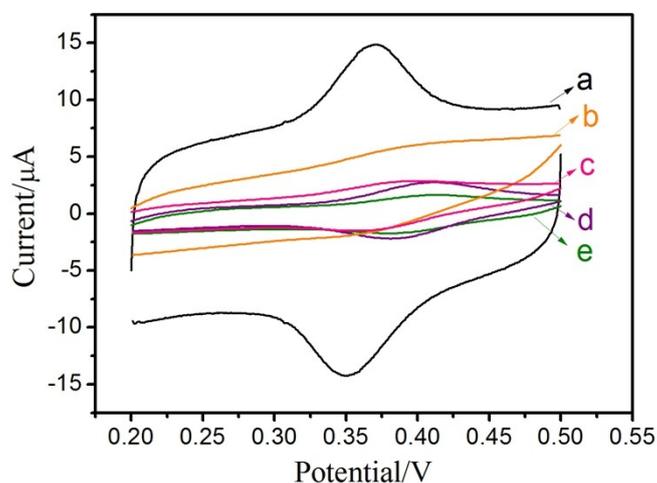


Fig. S1 Cyclic voltammetric responses of ISO with (a) ERGO, (b) CdS QDs, (c) TiO₂ nanomaterials, (d) BSA-Au NCs, (e) WS₂ Nanosheets.

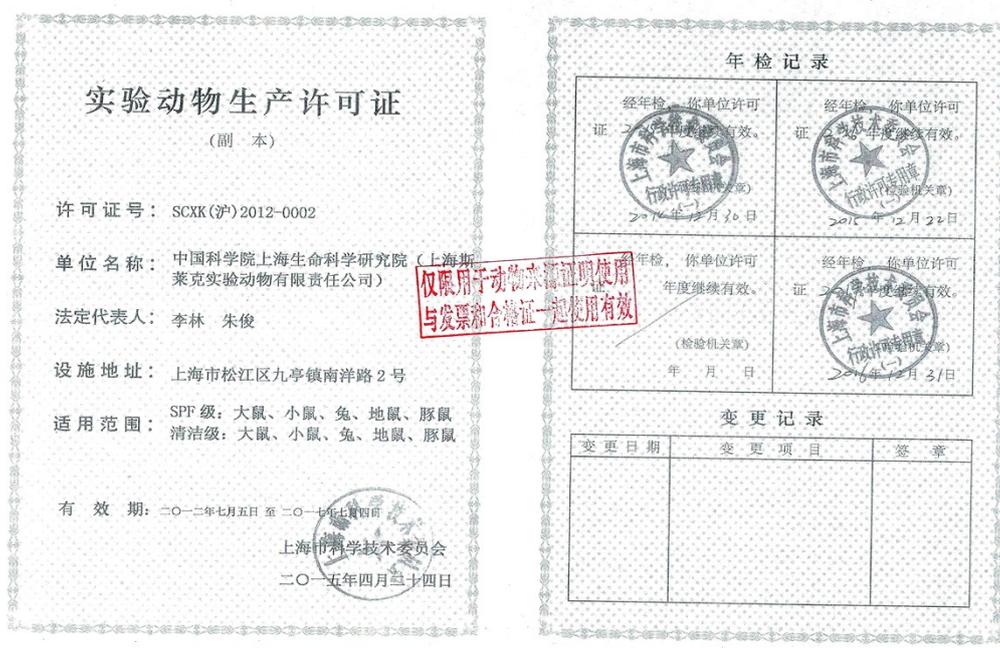


Fig. S2 Photo of experimental animal production license.

This is the experimental animal production license of the company that provided the rats for our experiments, the license number is SCXK (Hu) 2012-0002. This license is granted by the Shanghai science and technology committee of China.

References

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