

**Supporting Information**

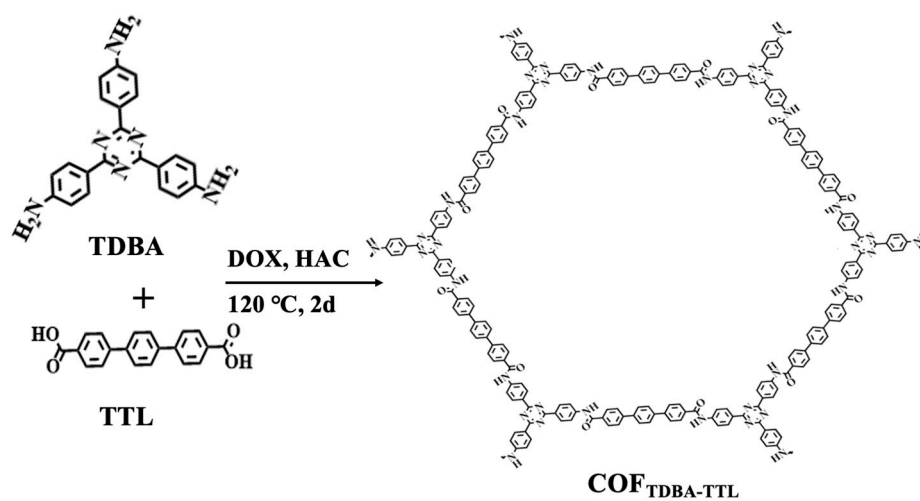
**A Novel Rare Earth and Covalent Organic  
Framework Composite for Rapid and Highly  
Sensitive Electrochemical Analysis of  
Sulfadiazine in Fish Muscle**

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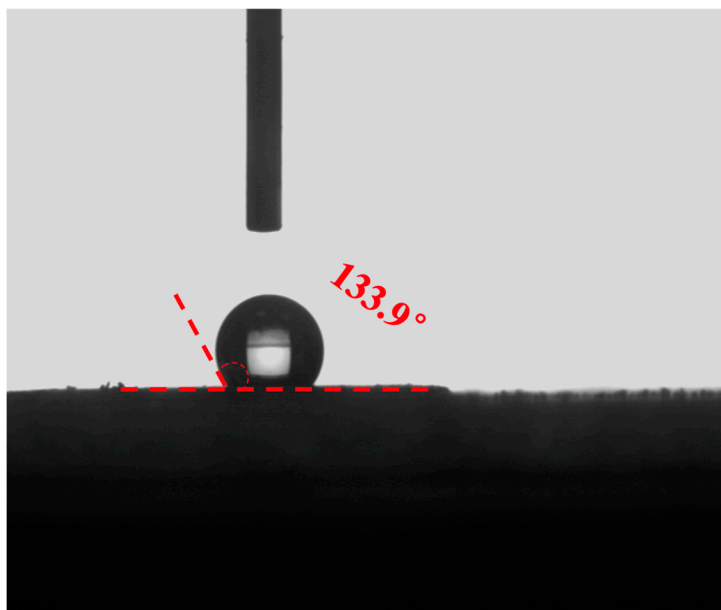
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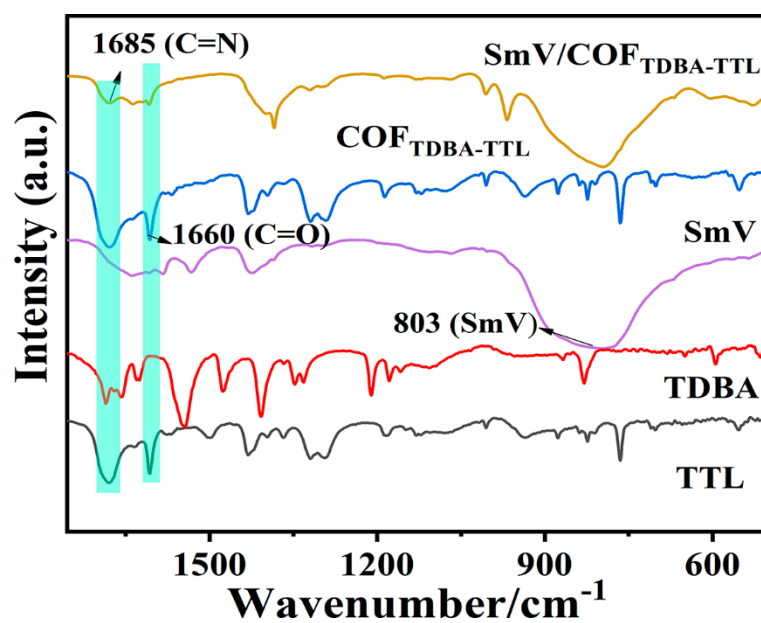
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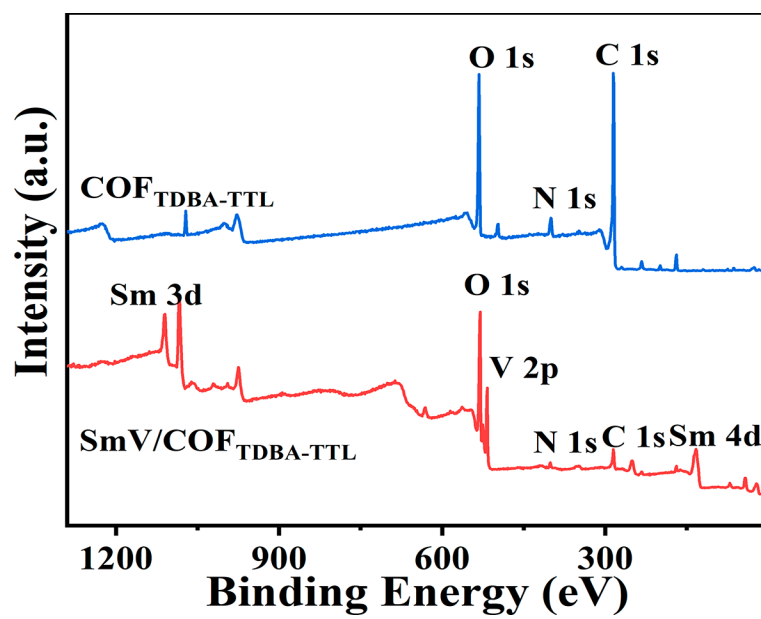
**Figure S1.** Schematic illustrating preparation of  $\text{COF}_{\text{TDBA-TTL}}$  and the structure of  $\text{COF}_{\text{TDBA-TTL}}$ .



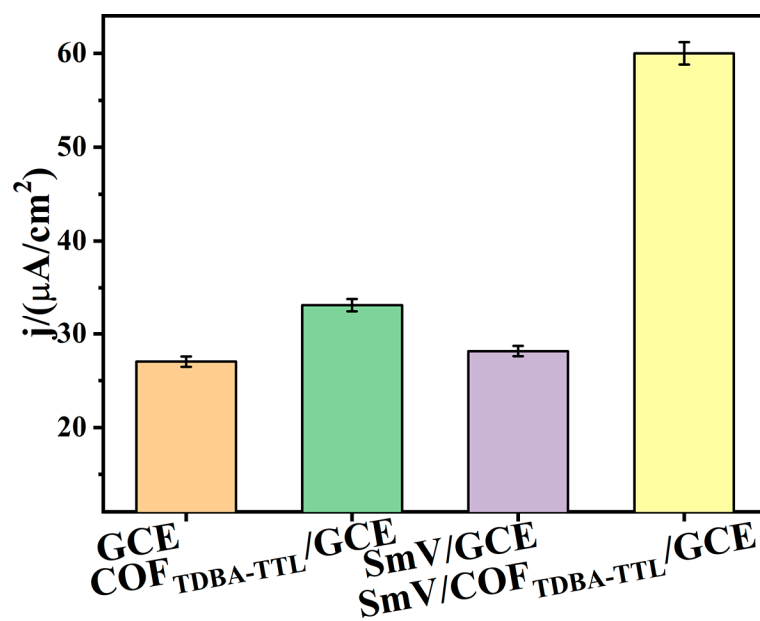
**Figure S2.** (a) The water contact angle (CA) of COF<sub>TDBA-TTL</sub>. The deviation of measurement of CA is between  $133.9 \pm 0.002^\circ$ .



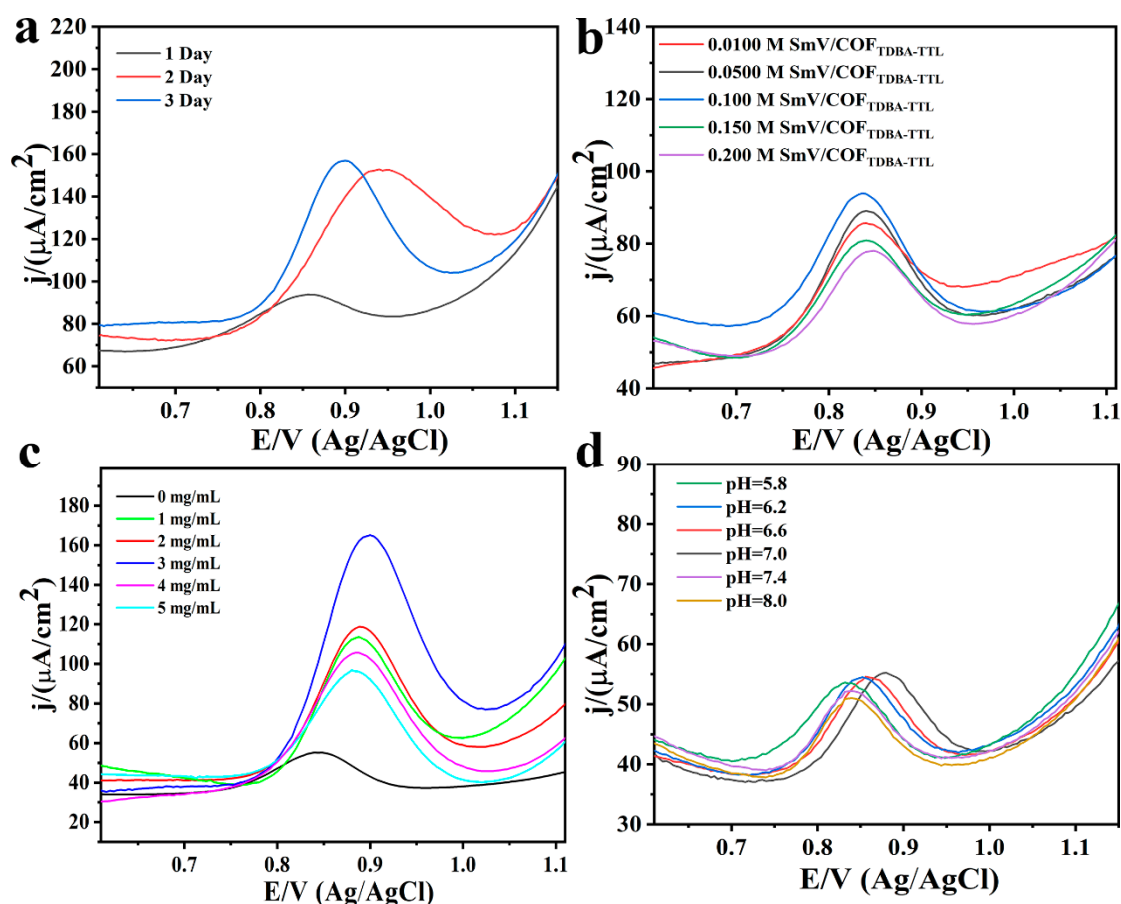
**Figure S3.** The FT-IR spectra of TTL, TDBA, COF<sub>TDBA-TTL</sub>, SmV/COF<sub>TDBA-TTL</sub>.



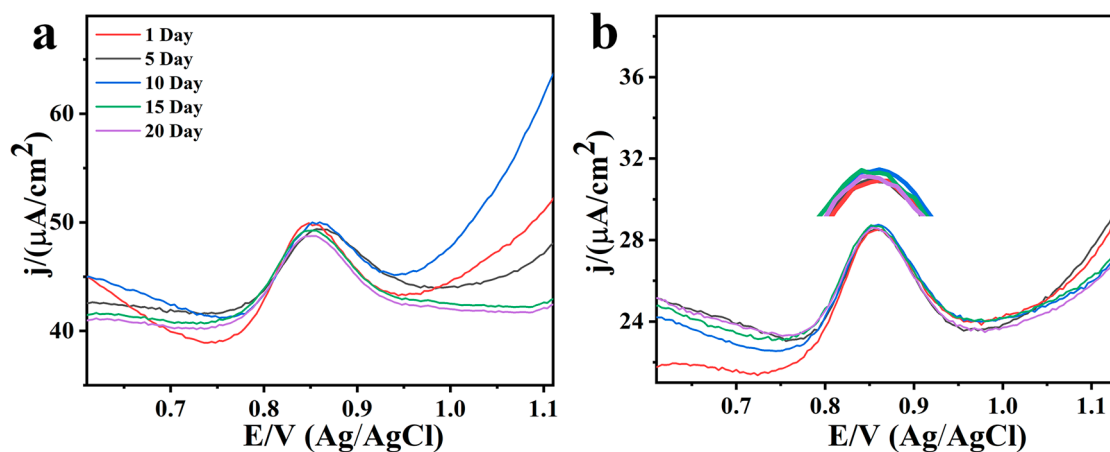
**Figure S4.** The XPS spectra of  $\text{COF}_{\text{TDBA-TTL}}$  and  $\text{SmV/COF}_{\text{TDBA-TTL}}$ .



**Figure S5.** (a) SWV of GCE,  $\text{COF}_{\text{TDBA-TTL}}/\text{GCE}$ , SmV/GCE and SmV/ $\text{COF}_{\text{TDBA-TTL}}/\text{GCE}$  modified electrode. The electrolyte was PB (5.00 mM, pH=7.0) containing 5.00  $\mu\text{M}$  SFZ.



**Figure S6.** (a) Comparison of electrochemical properties of COF<sub>TDBA-TTL</sub> synthesized at different time (1 day, 2 days, 3 days) to SFZ; (b) Optimization of different SmV (0.0100 M, 0.0500 M, 0.100 M, 0.150 M, 0.200 M) modification amount; (c) The optimization of different modification amount, adding 0 mg/mL, 1 mg/mL, 2 mg/mL, 3 mg/mL, 4 mg/mL, 5 mg/mL SmV/COF<sub>TDBA-TTL</sub>, respectively; (d) The current response of the SmV/COF<sub>TDBA-TTL</sub>/GCE modified electrode to SFZ was compared in the range of pH 5.8-8.0. The electrolyte was PB (5.00 mM, pH=7.0) containing 5.00  $\mu$ M SFZ. SWV was used to monitor the effects current response of SFZ.



**Figure S7.** (a) Stability of SmV/COF<sub>TDBA-TTL</sub>/GCE modified electrode; (b)

Reproducibility of SmV/COF<sub>TDBA-TTL</sub>/GCE modified electrode. The electrolyte was PB (5.00 mM, pH=7.0), and 5.00  $\mu\text{M}$  SFZ was added. SWV was used to monitor the effects current response of SFZ.