Improved Degradation Efficiency of Levofloxacin by a Self-Powered Electrochemical System with Pulsed Direct-Current

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Author Contributions

Li Liu, Linglin Zhou, Di Liu contributed equally to this work.

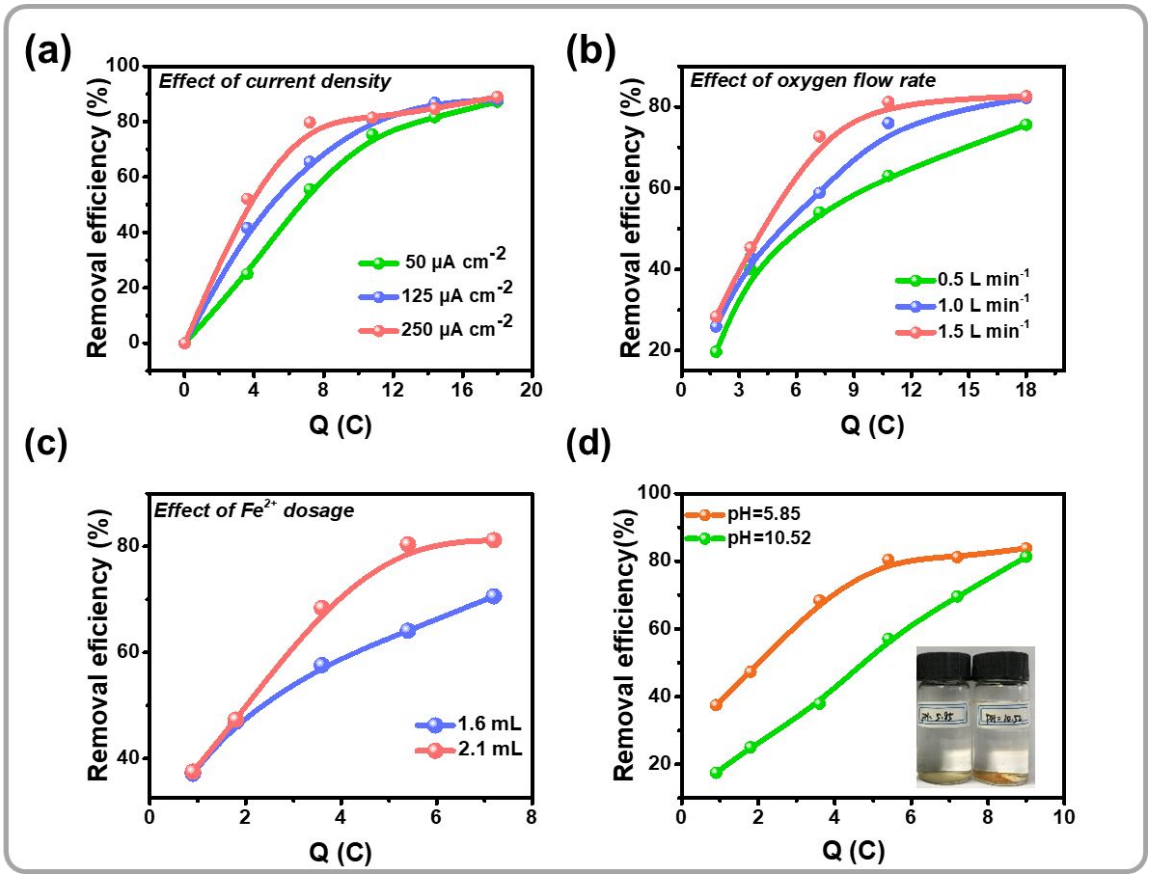

Figure S1. The influence of various factors on the removal efficiency of OFL driven by electrochemical workstation. (a) Effect of different current density. (b) Effect of different oxygen flow rate. (c) Effect of different Fe^{2+} dosage. (d) Removal efficiency of OFL at acid and alkaline conditions.

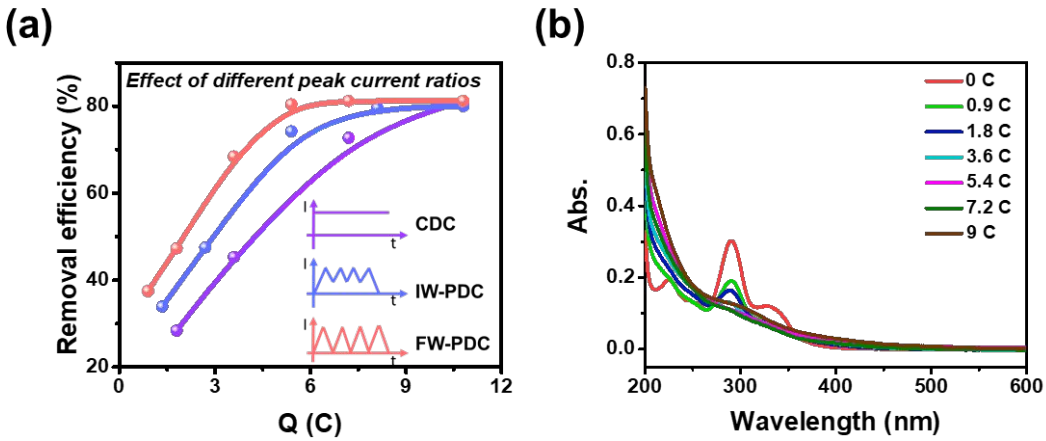

Figure S2. Effect of different current waveforms on OFL removal. (a) Effect of different current waveforms. (b) UV-Vis adsorption spectra of OFL removal for the different energy consumption by using FW-PDC.

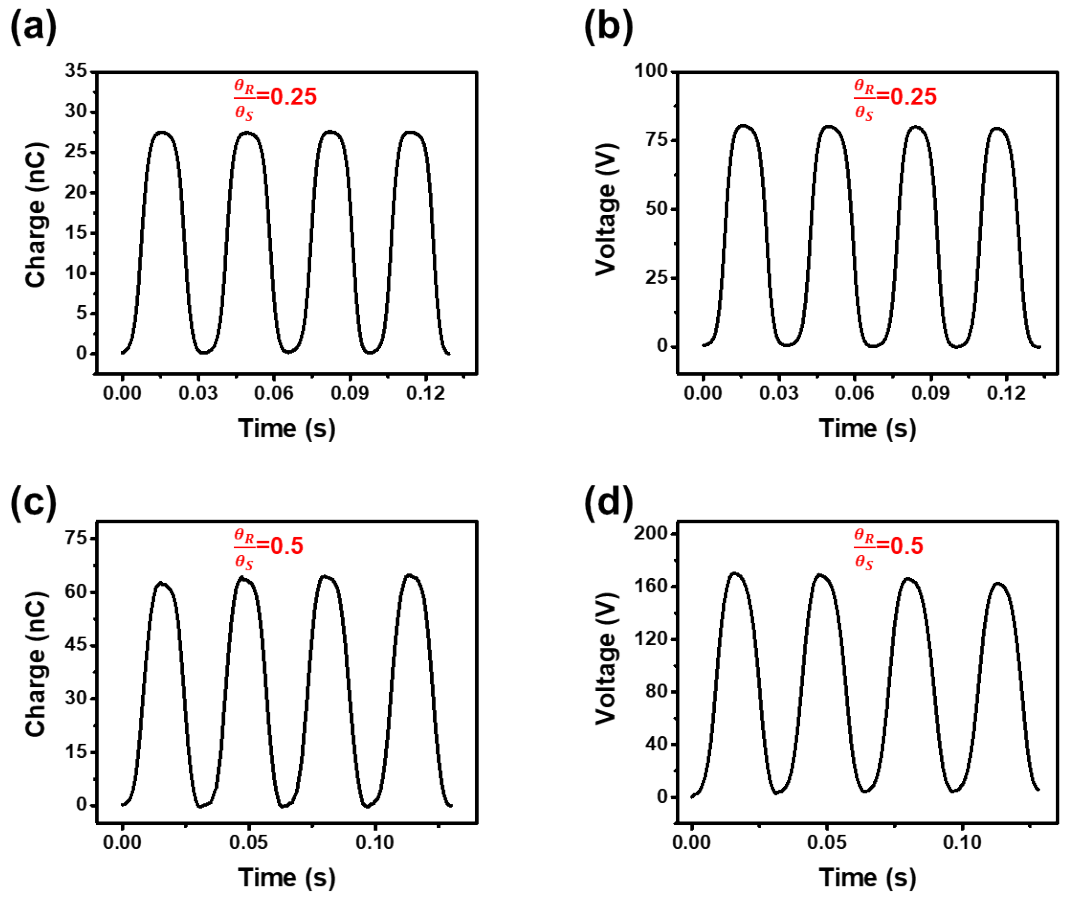

Figure S3. Electric output performances of R-TENG-θ_R with different ratios between θ_R and θs at the rotation speed of 100 rpm. (a,b) A transferred charge and open-circuit voltage output performances of R-TENG-2.5˚. (c,d) A transferred charge and open-circuit voltage output performances of R-TENG-5˚. The diameter of R-TENG is 88 mm.

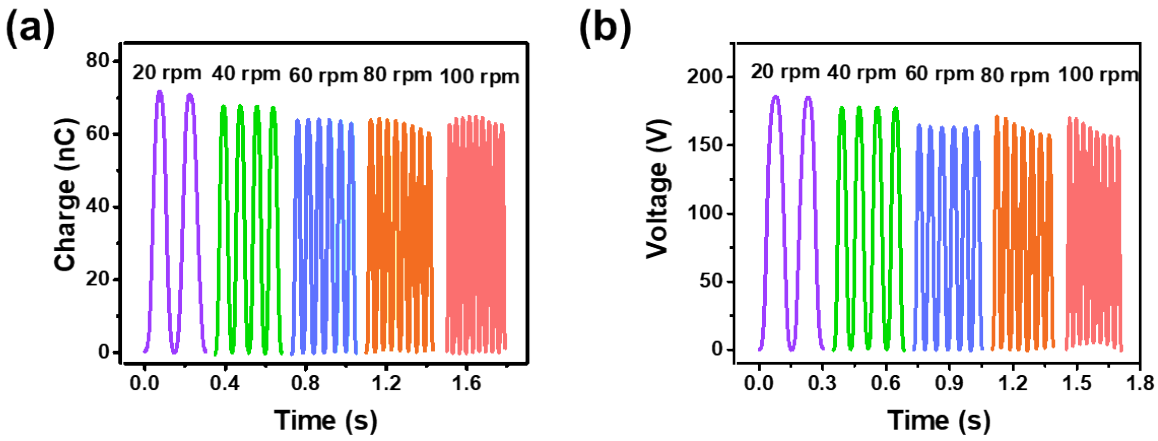

Figure S4. Electric output performances of R-TENG-5° with ratio between θ_R and θ_S of 0.5. (a) The transferred charge of R-TENG-5° at different speed. (b) The open-circuit voltage of the R-TENG-5° at different rotation speed. The diameter of R-TENG-5° is 88 mm.

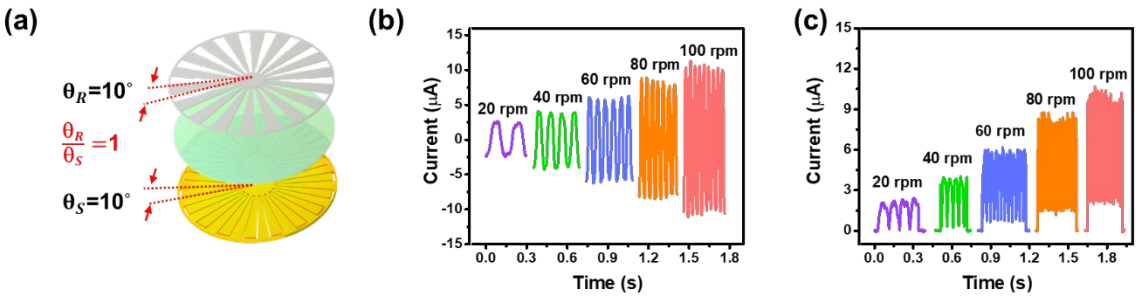

Figure S5. The output performances of R-TENG-10° with ratio between θ_R and θ_S of 1 at different rotation speed. (a) Schematic diagram of the R-TENG-10° structure with multiple rotating electrodes. (b) Short-circuit current output performances. (c) Rectified short-circuit current. The diameter of R-TENG-10° is 88 mm.

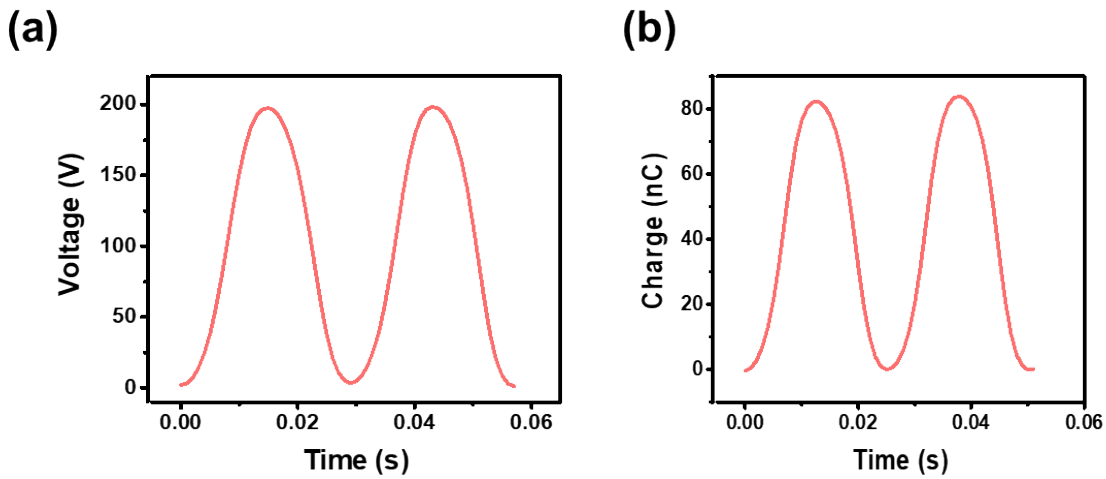

Figure S6. The electric output performances of the self-powered system based on R-TENG-5° driven by wind. (a) A voltage output performance. (b) The transferred charge output performance. The diameter of R-TENG-5° is 208 mm.