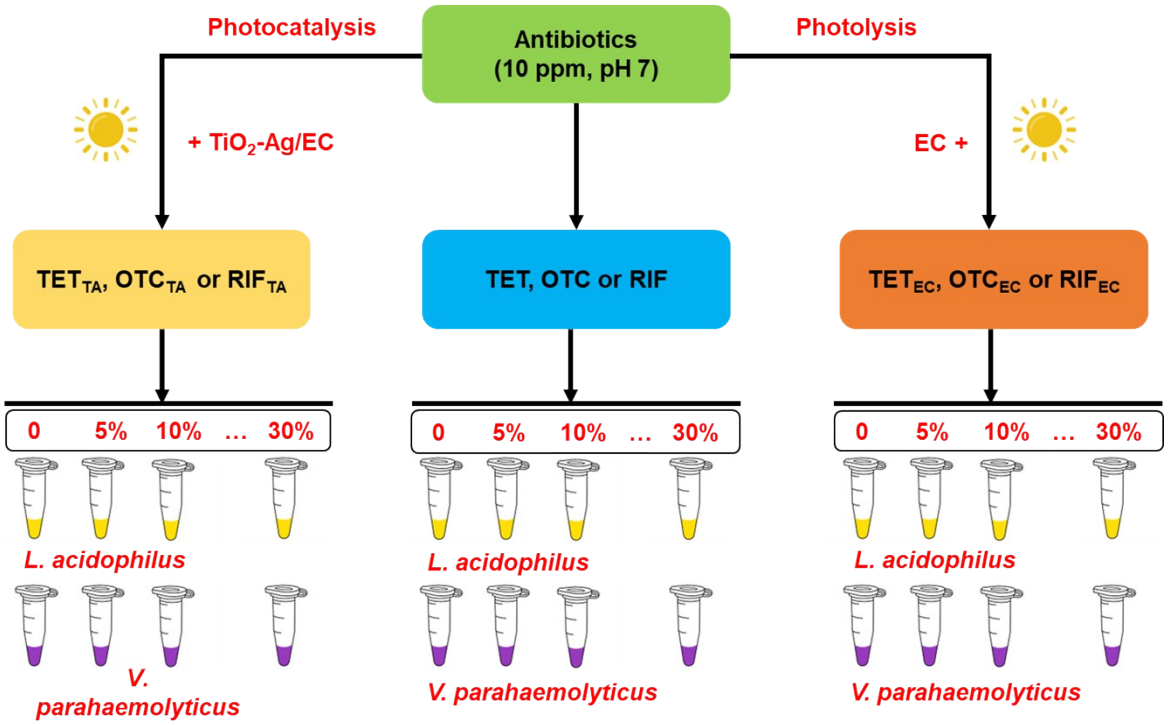


Fig. S1. Evaluation the effect of degraded antibiotics solution on the growth of *L. acidophilus* and *V. parahaemolyticus*.

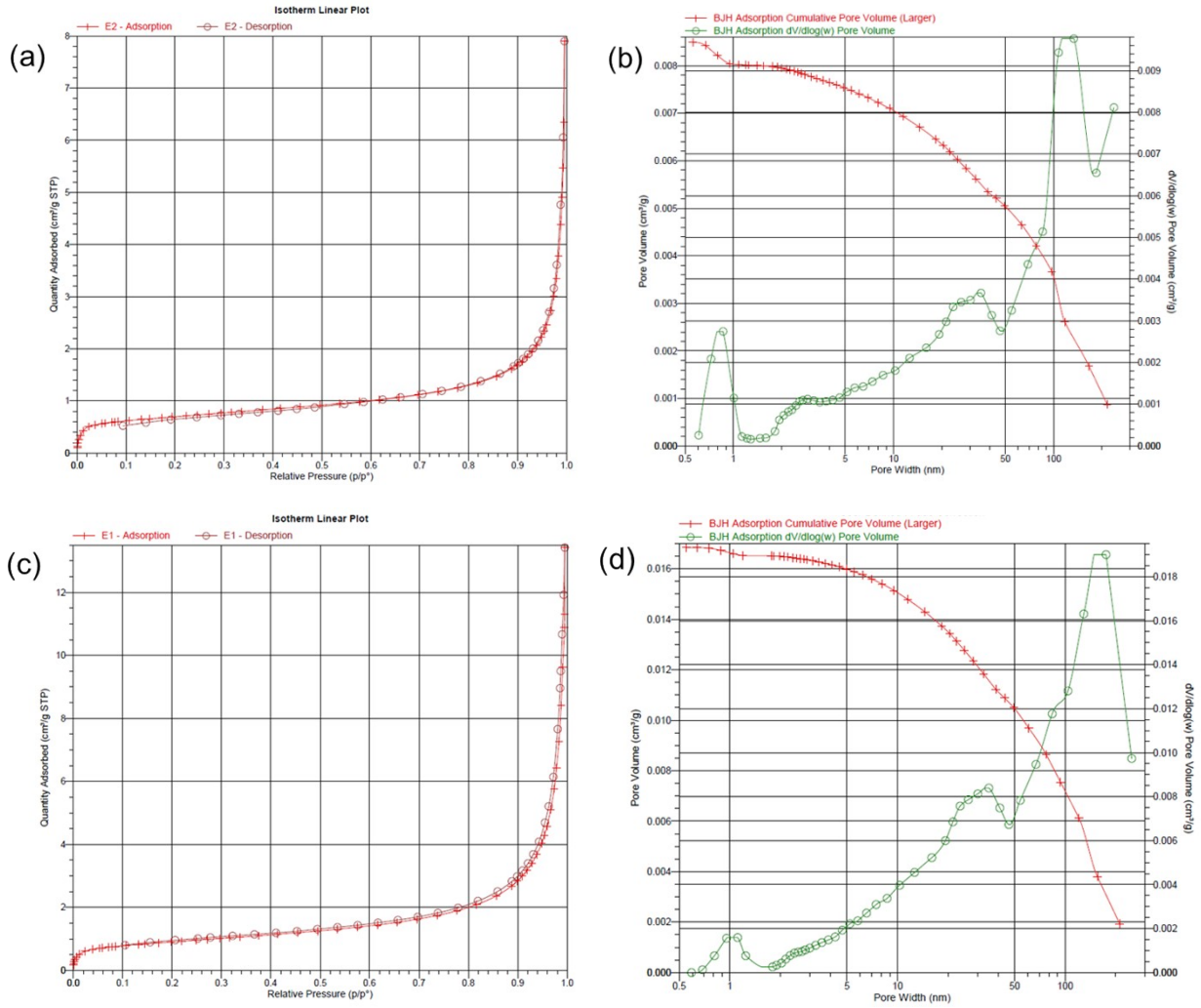
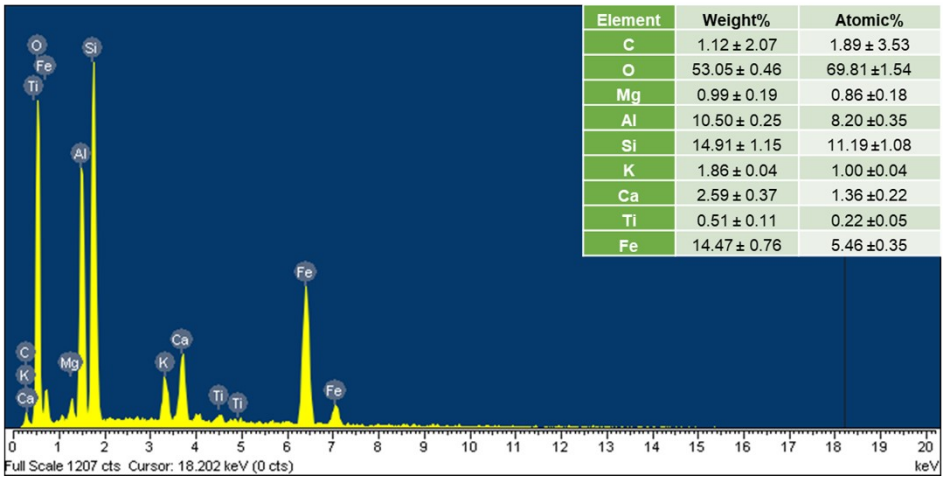


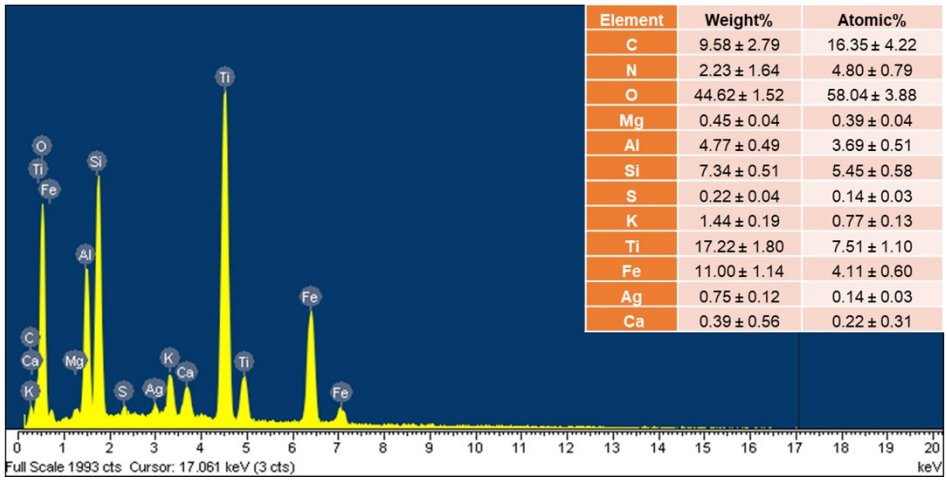
Fig. S2. Nitrogen dsorption –desorption isotherms (a, c), and Pore size distributions (b, d) of the EC and TiO_2-Ag/EC materials, respectively.

(a)



Element	Weight%	Atomic%
C	1.12 ± 2.07	1.89 ± 3.53
O	53.05 ± 0.46	69.81 ±1.54
Mg	0.99 ± 0.19	0.86 ±0.18
Al	10.50 ± 0.25	8.20 ±0.35
Si	14.91 ± 1.15	11.19 ±1.08
K	1.86 ± 0.04	1.00 ±0.04
Ca	2.59 ± 0.37	1.36 ±0.22
Ti	0.51 ± 0.11	0.22 ±0.05
Fe	14.47 ± 0.76	5.46 ±0.35

(b)



Element	Weight%	Atomic%
C	9.58 ± 2.79	16.35 ± 4.22
N	2.23 ± 1.64	4.80 ± 0.79
O	44.62 ± 1.52	58.04 ± 3.88
Mg	0.45 ± 0.04	0.39 ± 0.04
Al	4.77 ± 0.49	3.69 ± 0.51
Si	7.34 ± 0.51	5.45 ± 0.58
S	0.22 ± 0.04	0.14 ± 0.03
K	1.44 ± 0.19	0.77 ± 0.13
Ti	17.22 ± 1.80	7.51 ± 1.10
Fe	11.00 ± 1.14	4.11 ± 0.60
Ag	0.75 ± 0.12	0.14 ± 0.03
Ca	0.39 ± 0.56	0.22 ± 0.31

Fig. S3. The elemental composition of the EC (a) and TiO_2-Ag/EC (b) material isn the EDX spectrum.

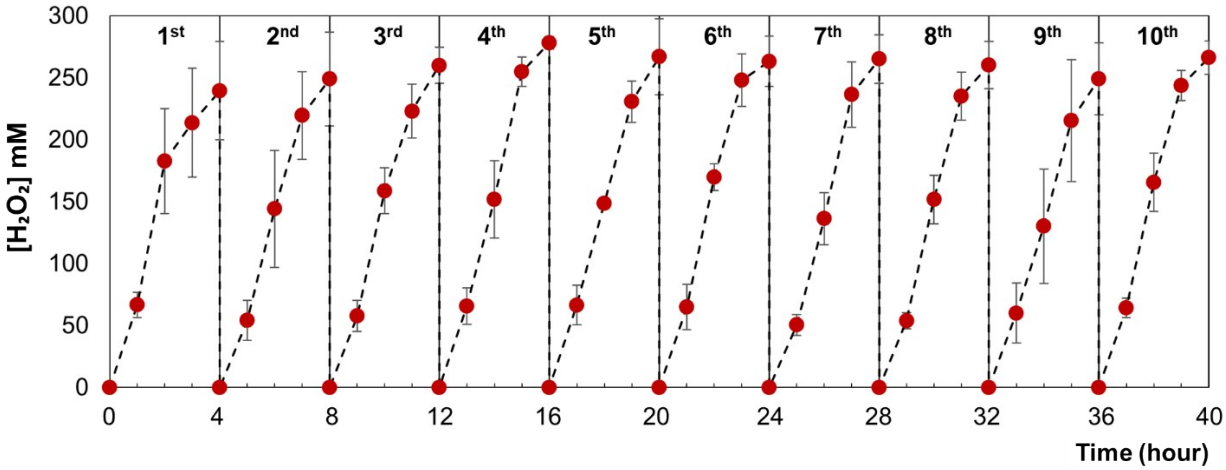


Fig. S4. Recycling H_2O_2-formation performance of TiO_2-Ag/EC.

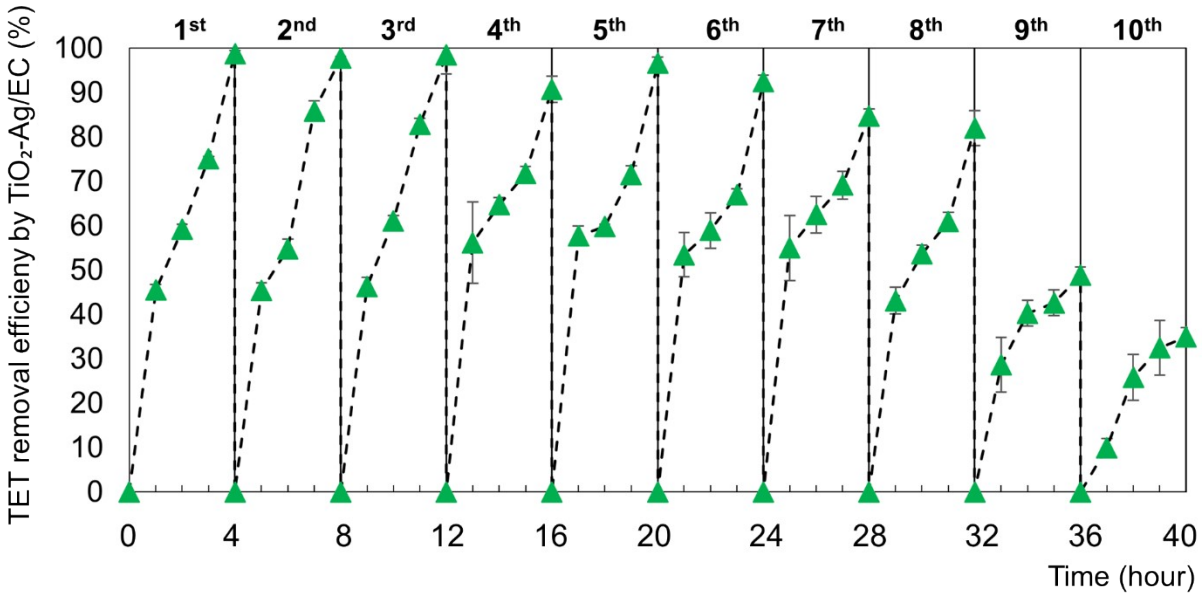


Fig. S5. Recycle stability of TiO_2-Ag/EC material for the degrading TET antibiotic at an initiatl concentration of 10 ppm, pH 7.

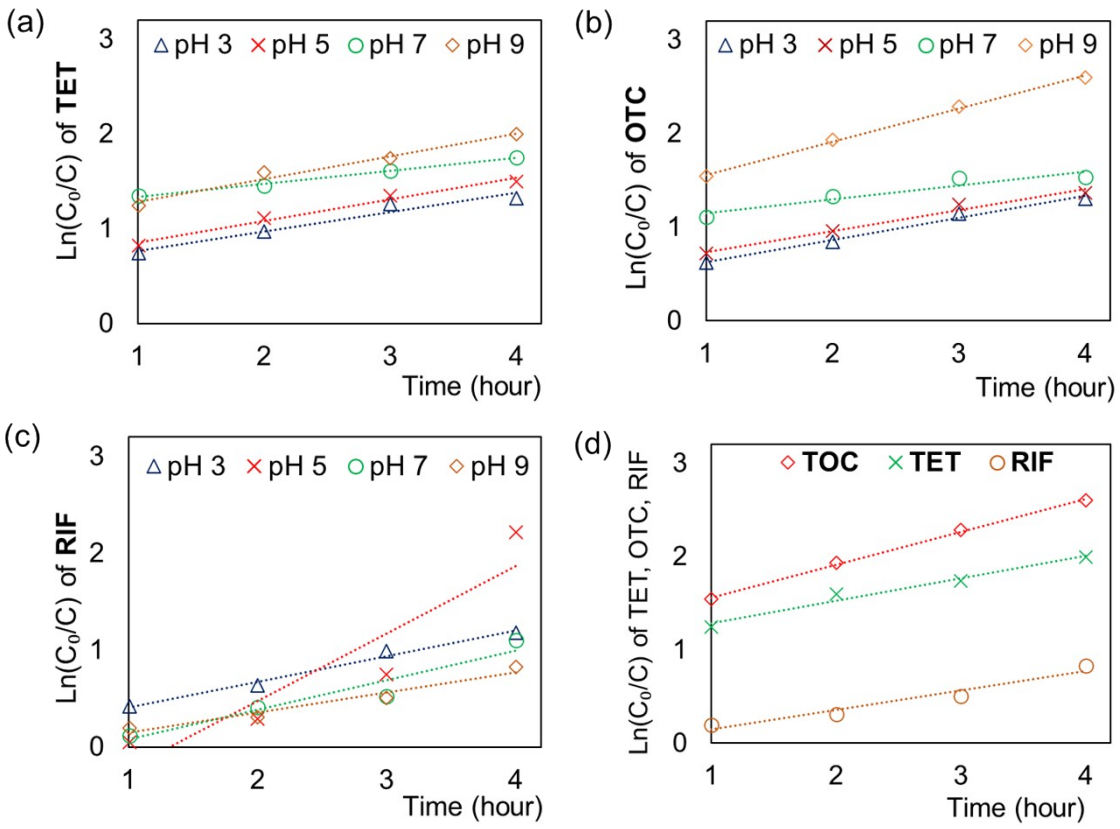


Fig. S6. Degradation kinetics of TET (a), OTC (b), RIF (c) with initial concentration of 20 ppm at different pH using TiO_2-Ag/EC material under sunlight; comparison of degradation reaction rate constants (k) of three antibiotics at pH 9 (d).