Sonoelectrochemical oxidation of sulfamethoxazole in synthetic and real wastewater on a FTO/$BaZr_xTi_{(1-x)}O_3$ (x = 0.05 and 0.1) electrode: Reaction kinetics, mechanism and reaction pathway.

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Supplementary information

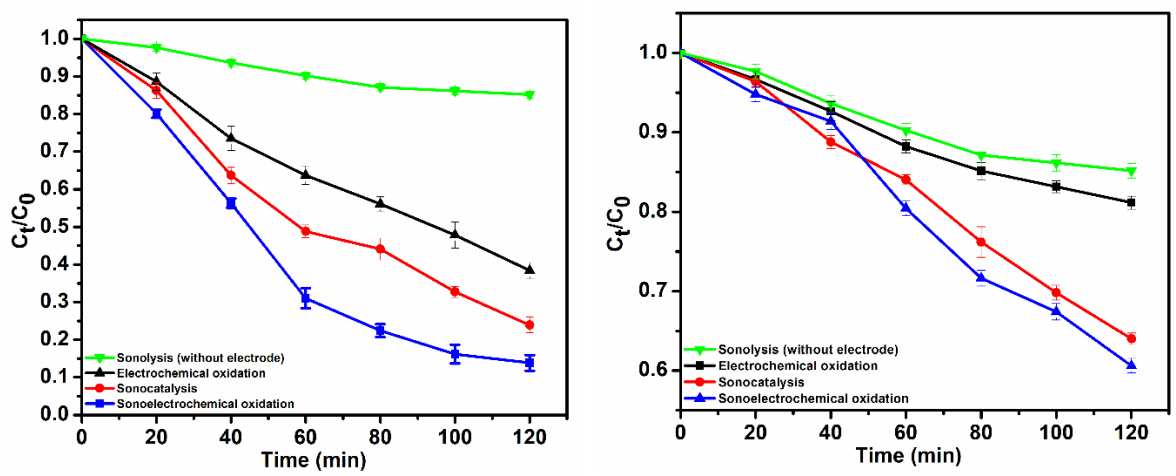


Fig. S1. Degradation efficiency plots with sonolysis (without electrode), sonocatalysis, electrochemical oxidation, sonoelectrochemical oxidation of SMX at optimum conditions using (a) FTO/$BaZr_{(0.1)}Ti_{(0.9)}O_3$, (b) FTO/$TiO_2$ electrodes.

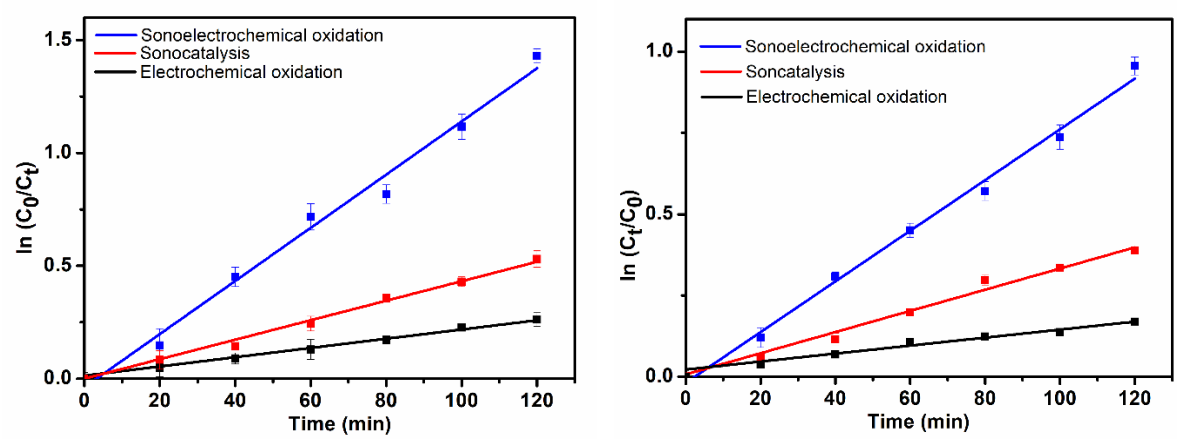
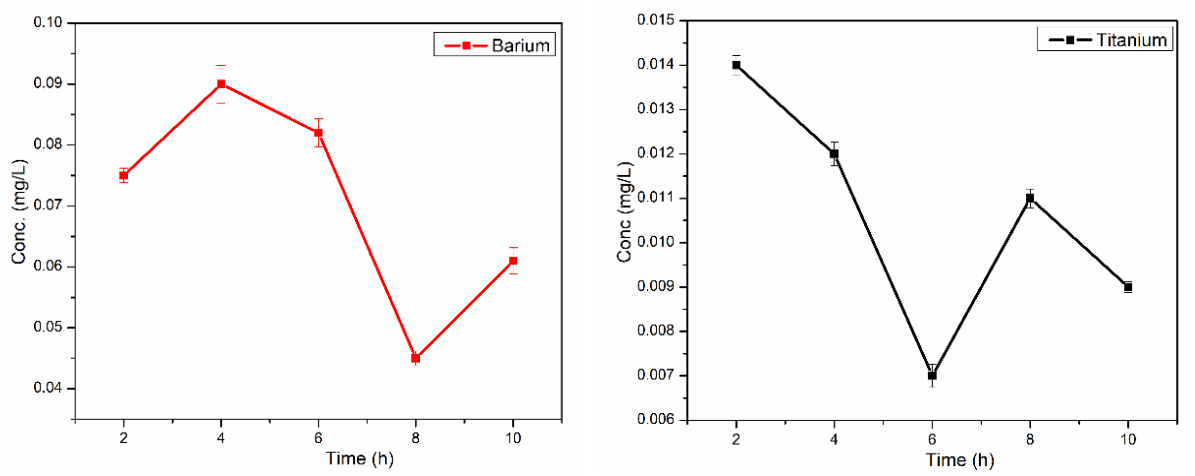
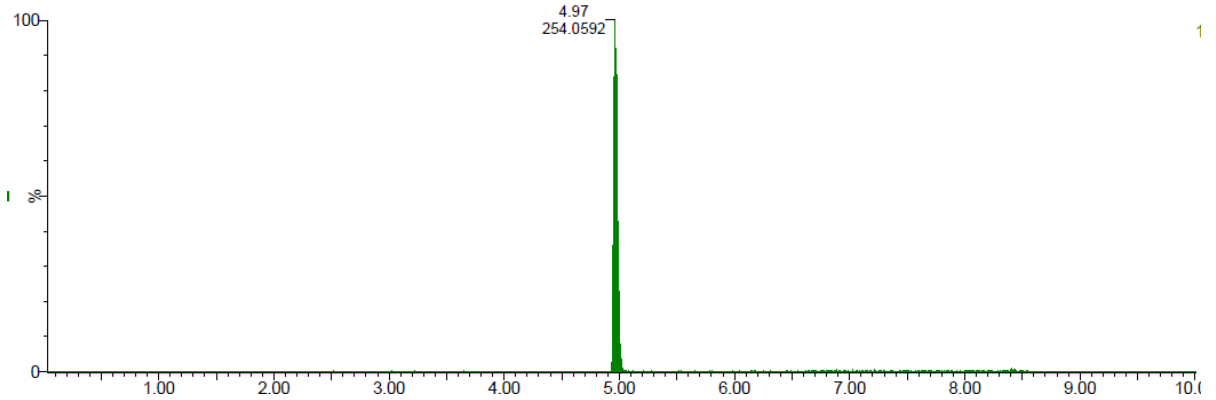


Fig. S2. Reaction kinetics plot comparing each technique on (a) FTO/$BaZr_{(0.1)}Ti_{(0.9)}O_3$ electrode, (b) FTO/$BaTiO_3$ electrode.

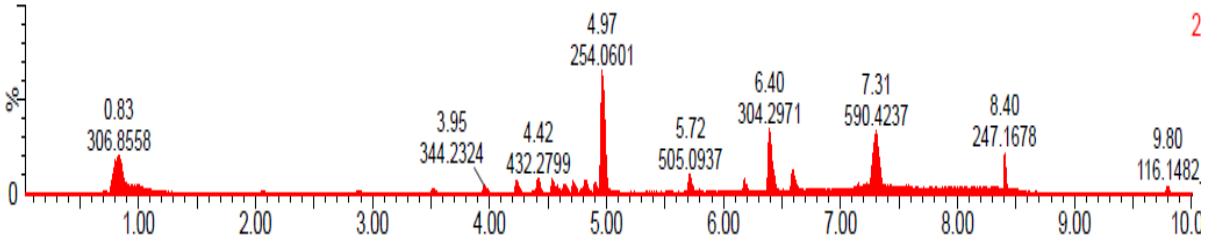


(a) **(b)**

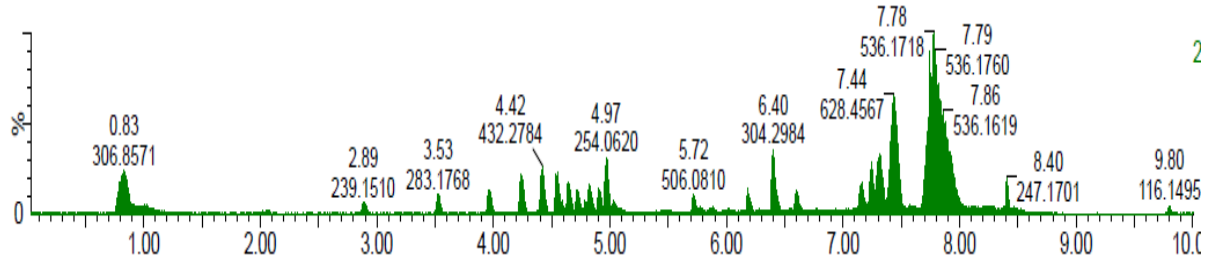
Fig. S3. Concentration of barium and titanium detected by ICP-OES in the SEC system after each degradation cycle.



(a)



(b)



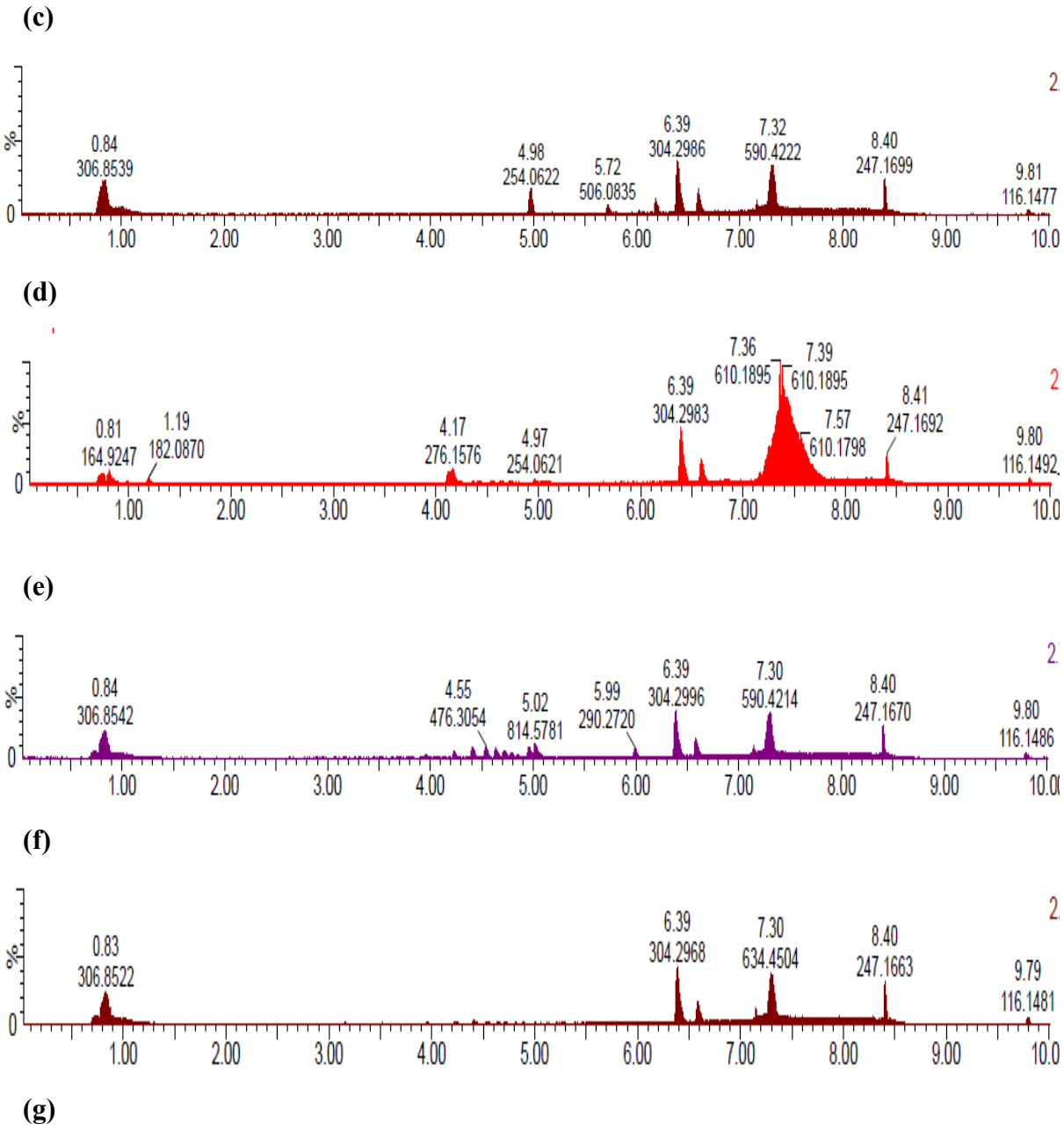


Fig. S4. UPLC-MS chromatograms of (a) sulfamethoxazole standard solution, (b) aliquot taken after 40 min, (c) aliquot taken after 80 min, (d) solution after 120 min, (e) initial solution of sulfamethoxazole spiked effluent wastewater (f) aliquot of SMX spiked effluent wastewater after 60 min, (g) aliquot of SMX spiked effluent wastewater after 120 min.