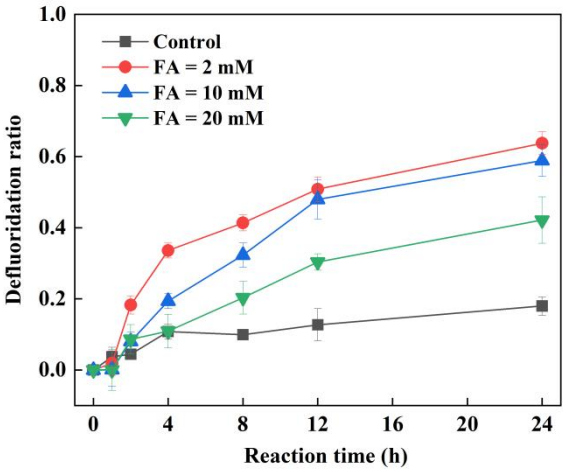

Figure S1 The effect of FA concentration on the defluorination of PFOA by the UV/H_2O_2/FA system. Reaction conditions: [PFOA] = 20 μM, [H_2O_2] = 4 mM. [FA] = 2-20 mM, initial pH of 2.5, anaerobic environment.

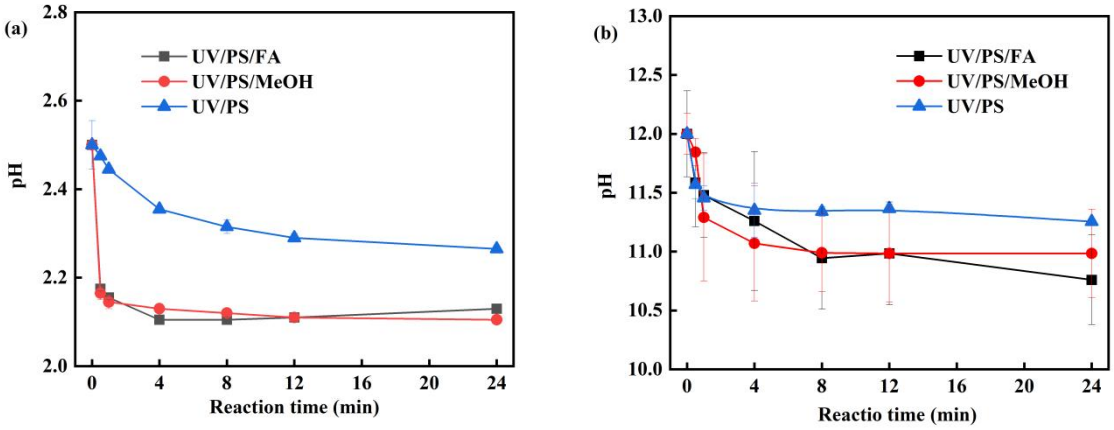

Figure S2 Variations of solution pH with reaction time under different initial pH conditions. Reaction conditions: [PFOA] = 20 μM, [PS] = 4 mM, [FA] = 2 mM, (a) initial pH of 2.5, (b) initial pH of 12, anaerobic environment.

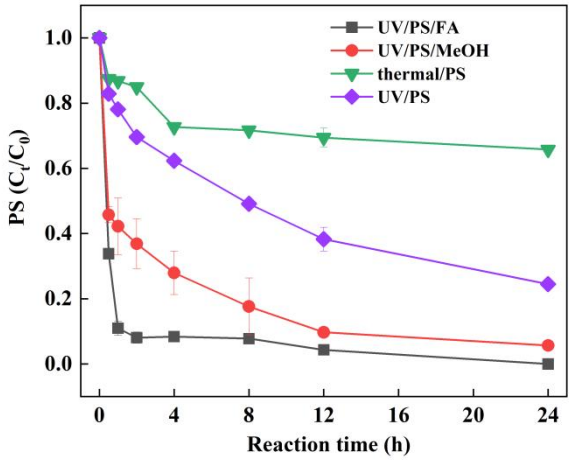

Figure S3 Decomposition of PS in PS activation systems in the presence or absence of FA/MeOH. Reaction conditions: [PFOA] = 20 μM, [PS] = 4 mM, [FA] = 2 mM, [MeOH] = 2 mM, initial pH of 2.5, anaerobic environment, 80 °C for the thermal/PS system, 20 °C for the rest of the systems.

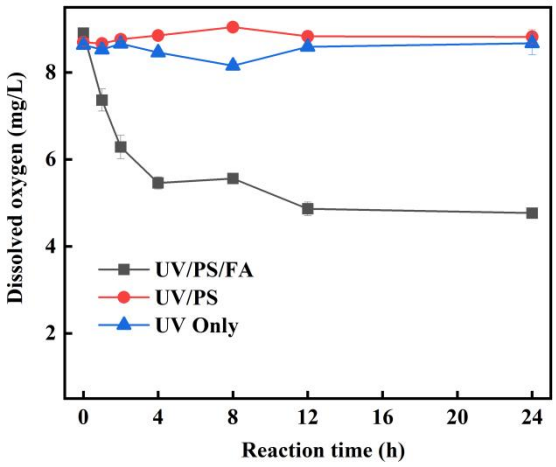

Figure S4 Variations of dissolved oxygen in UV/PS/FA, UV/PS, and UV systems. Reaction conditions: [PFOA] = 20 μM, [PS] = 4 mM, [FA] = 2 mM, initial pH of 2.5, initial DO of 8.5 mg/L.