

Supplementary material

Selective degradation of acetaminophen from hydrolyzed urine by peroxymonosulfate alone: performances and mechanisms

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Table S1. Composition of FU and HU matrices.

Species	MW (g•mol ⁻¹)	Concentration (mM•L ⁻¹)	
		FU	HU
Urea	60.6	250	-
NaCl	58.44	44	60
Na ₂ SO ₄	142.04	15	15
KCl	74.55	40	40
NH ₄ OH	35.04	-	250
MgCl ₂ •6H ₂ O	203.31	4	-
NaH ₂ PO ₄ •2H ₂ O	156.01	20	13.6
CaCl ₂	110.98	4	-
NH ₄ HCO ₃	79.06	-	250
Creatinine	113.12	-	7.4
Creatine	149.15	-	1.38
Hippuric acid	179.17	-	0.16
Na ₃ Citrate•2H ₂ O	249.1	2.7	-
pH	-	6	9

Table S2. The details HPLC parameters for the analysis of target organic compounds.

Target organic compound	Test wavelength (nm)	Eluent	Flow rate (mL•min ⁻¹)
ACE	286	10/90 (v/v) acetonitrile/water with 0.05% trifluoroacetic acid	0.15
FFA	214	10/90 (v/v) methanol/water with 0.05% trifluoroacetic acid	0.2
NB	262	10/60 (v/v) water/methanol	0.2

Table S3. The details LC-MS solvents parameters for the analysis of the ACE intermediate products.

Time (min)	Solvent B	Flow rate (mL•min ⁻¹)
0.00	7.0	0.35
2.00	7.0	0.35
8.50	93.0	0.35
11.50	93.0	0.35
11.51	7.0	0.35
15.00	7.0	0.35

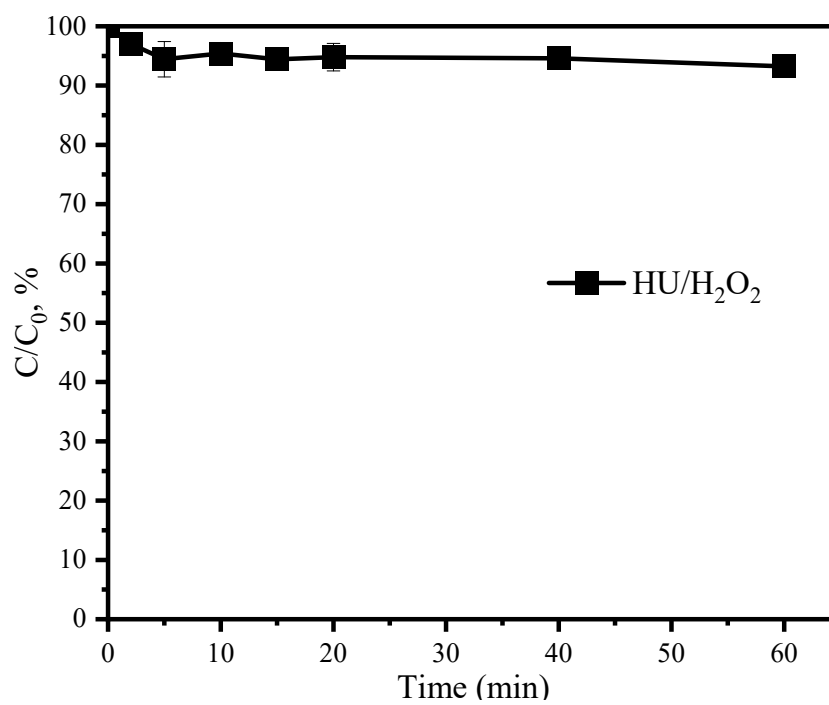


Fig. S1 Degradation of ACE in the system of HU/H₂O₂. Experiment conditions: [H₂O₂]₀ = 3 mM; [ACE]₀ = 5 μM.

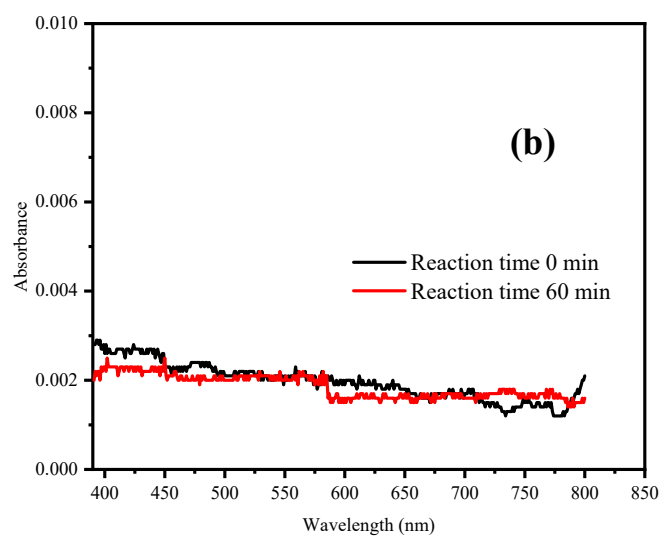
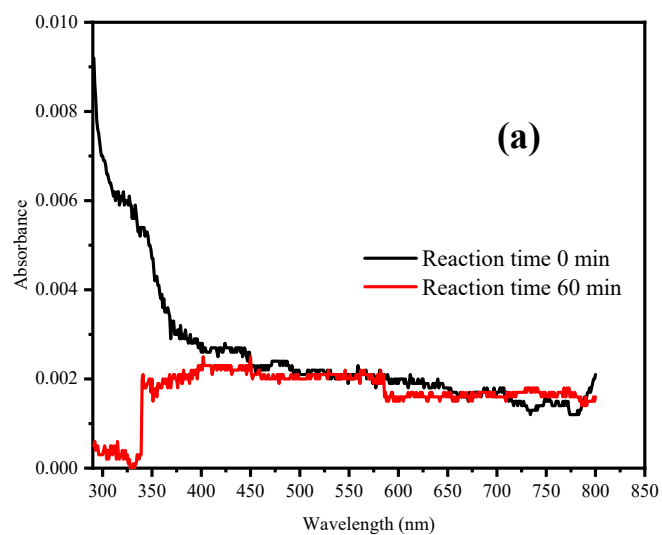


Fig. S2 The variation of absorbance of the HU/PMS system during predetermined reaction time.

$[PMS]_0 = 3 \text{ mM}$; $[ACE]_0 = 5 \text{ }\mu\text{M}$; (a) [wavelength] = 291-810 nm; (b) [wavelength] = 391-810 nm.