

Supplementary Information

Sorptive removal versus catalytic degradation of aqueous BTEX: A comprehensive review under life-cycle assessment (LCA) perspective

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Table S1. Life cycle inventory data estimated for each advanced treatment technology for 1 m³ of wastewater treatment

	Fenton	Ads.	Ozonation	PC	EO	AuC	HdC	US-PS	Unit
Total Electricity	7.35	0.468	37.26	102.12	2.238	129.11	789.11	206.4	kWh
Adsorbent/catalyst dose	10000	600						500	g
Sodium persulfate								200	g
Zinc Acetate				73.39					g
Zinc Nitrate				151.5					g
Hexamethylene-tetramine				112.16					g
Ozone						7392	7392		g
H₂O₂	924					216000	216000		ml
Mn SO₄	1000								g
KMnO₄	1000								g
FeCl₃	1000								
Fe Cl₂	1000								
Ammonia	15000								g
NaOH						20000	20000		g
NaCl					1.5				g
Benzene IN	120	200	10	10	1.995	40	40	40	mg/L
Toluene IN	120	200	10	10	1.995	40	40	40	mg/L
Ethyl benzene IN	120	200	10	10	1.995	40	40	40	mg/L
Xylene IN	120	200	10	10	1.995	40	40	40	mg/L
Benzene EF	7.056	69.8	0	3.5	0.0399	0	0	8.8	mg/L
Toluene EF	13.944	67.4	0	1	0	0	0	2.4	mg/L
Ethyl benzene EF	20.34	49.4	0	2	0.01995	0	0	0.8	mg/L
Xylene EF	18	19.4	0	1	0	0	0	1.2	mg/L

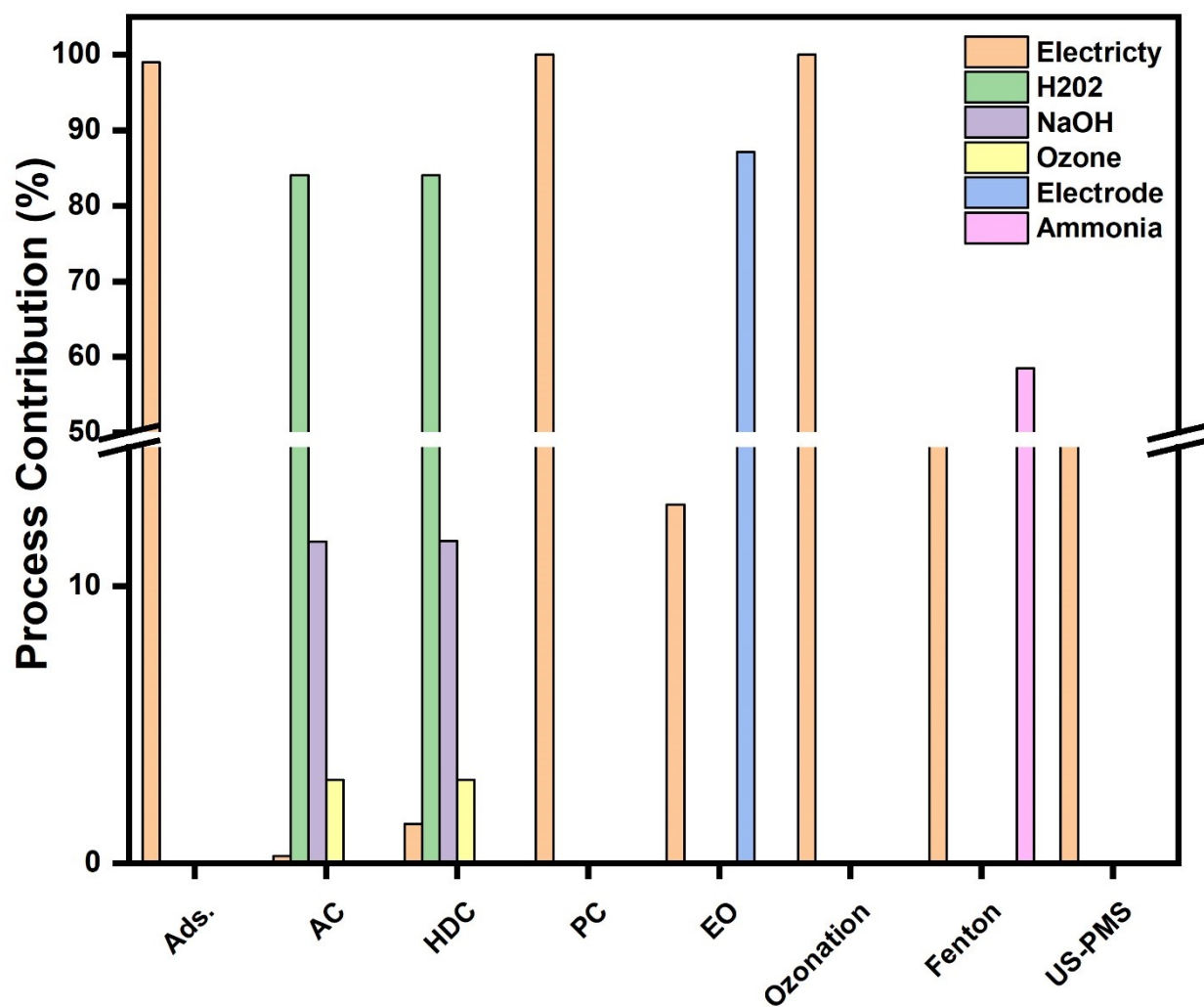


Figure S1. Process contribution of each treatment technology

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