

Supplementary materials

Table S1 The dosages of different proportions of raw materials when preparing catalysts

Proportion	Co(NO ₃) ₃ ·6H ₂ O	Fe(NO ₃) ₃ ·9H ₂ O
Co:Fe(2:1)	2 mmol (0.5820 g)	1 mmol (0.4040 g)
Co:Fe(1:1)	1.5 mmol (0.4366 g)	1.5 mmol (0.6060 g)
Co:Fe(1:2)	1 mmol (0.2910 g)	2 mmol (0.8080 g)
Co	3 mmol (0.8730 g)	/
Fe	/	3 mmol (1.2120 g)

Three standard buffer solutions were brought for pH meter calibration, including potassium hydrogen phthalate (0.05 mol/L, pH=4.01), phosphate buffer (0.025 mol/L, pH=6.86) and boric acid (0.01 mol/L, pH=9.18). Immerse the electrode into the standard buffer solution with different pH value and adjust the measured value to the standard pH value in calibration mode of pH meter.

In order to improve the separation degree of pollutants and degradation products, 1‰ formic acid methanol was prepared by adding 1/1000 formic acid into the mobile phase of methanol. The detailed detect conditions for different pollutants were as followed.

Table S2 The detailed HPLC conditions for the determination of different pollutants

Pollutants	Measure wavelength/nm	V _{H₂O} :V _{Me}
BSM	280	20:80
TCP	295	10:90
SPY	270	50:50
PNT	240	30:70

The concentration of positive ions was obtained by Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES), while that of anions was obtained by ion chromatograph. Moreover, total organic carbon analyzer was used to analyze TOC concentration in Yangtze River and Xuanwu Lake.

Table S3 Main parameters of Yangtze River and Xuanwu Lake water samples

Test Project	Yangtze River	Xuanwu Lake
TOC(ppm)	17.89	19.96
pH	7.04	7.65
Cl ⁻ (mM)	1.46	0.77
NO ₃ ⁻ (mM)	0.20	0.15
PO ₄ ²⁻ (mM)	0.08	0.07
HCO ₃ ⁻ (mM)	0.65	0.08
SO ₄ ²⁻ (mM)	0.56	0.06
Ca ²⁺ (mg·L ⁻¹)	44.42	27.83
Mg ²⁺ (mg·L ⁻¹)	9.98	8.31
Na ⁺ (mg·L ⁻¹)	27.94	17.77
K ⁺ (mg·L ⁻¹)	27.63	3.37

Table S4 Co 2p, Fe 2p, C 1s and O 1s content of CoFe-Co/MC before and after use

Element	Valance	Peak (eV)	Peak area (Before)	Peak area (After)	
Co 2p	Co(0)	778.8	5893.10	2341.57	
		798.5	16320.17	11575.31	
	Co(II)	782.7	35124.09	34651.53	
		781.1	41033.24	50172.90	
	Co(III)	796.9	18022.22	22261.32	
		Sat.	786.8	61827.51	59366.03
			803.3	33236.74	27155.54
Fe 2p	Fe(0)	708.8	3641.08	0	
		720.3	8416.54	9281.70	
	Fe(II)	711.6	17795.51	17805.97	
		713.7	16521.52	22974.09	
	Fe(III)	723.6	6470.01	8723.68	
		Sat.	716.6	23321.76	17427.90
			725.9	7732.35	6042.51
C 1s	C-C	284.6	180148.95	175832.96	
		defect	285.1	89638.10	82821.10
	C-O	286.1	21852.91	28824.85	
		C=O	288.8	18767.14	22443.85
O 1s	O _{O-H}	531.8	109592.98	115266.74	
	O _{ab}	533.2	101780.17	146165.74	

Table S5 HPLC-HRMS data of the intermediates for the degradation of BSM in the
CoFe-Co/MC/PMS system

Products number	Formula	Found at (min)	Mass [M-H]⁻	Found at Mass [M-H]⁻	Error (ppm)	Main MS²
P1	C ₉ H ₁₁ NO ₄ S	10.12	228.0336	228.03403	1.9	196、132
P2	C ₉ H ₁₀ O ₅ S	4.12	229.01762	229.01782	0.9	80
P3	C ₈ H ₉ NO ₄ S	9.3	214.01795	214.01874	3.7	/
P4	C ₉ H ₁₀ O ₂	4.91	149.0608	149.06097	1.1	117、90
P5	C ₈ H ₈ O ₂	4.29	135.04515	135.0444	-5.5	120、92
P8	C ₇ H ₁₀ N ₄ O ₆ S	4.34	277.02483	277.02532	1.8	122、96
P11	C ₅ H ₇ N ₃ O ₂	7.56	140.04655	140.4653	-0.2	/
Products number	Formula	Found at (min)	Mass [M-H]⁺	Found at Mass [M-H]⁺	Error (ppm)	Main MS²
P6	C ₆ H ₆ O ₂	11.05	111.04406	111.04446	3.6	/
P7	C ₇ H ₅ NO ₃ S	5.78	184.00629	184.00519	-6	/
P9	C ₇ H ₁₀ N ₄ O ₃	5.94	199.08257	199.08286	1.5	156、100
P10	C ₆ H ₉ N ₃ O ₂	2.53	156.07675	156.07698	1.4	68、57
P12	C ₆ H ₇ N ₃ O ₄	5.74	186.05093	186.05091	-0.1	139、93
P13	C ₄ H ₄ N ₂ O ₃	0.44	129.02947	129.02962	1.2	82、56

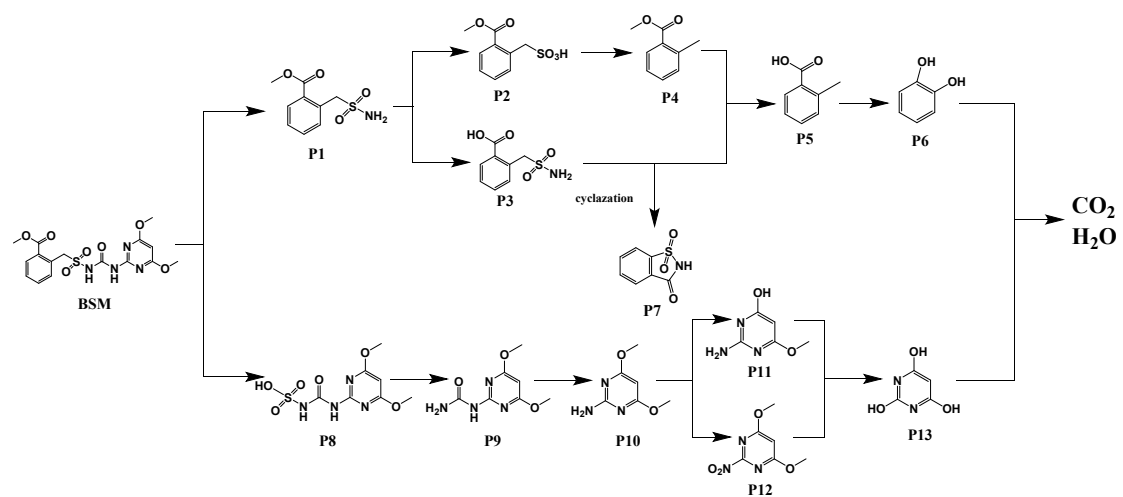


Fig. S1 The possible degradation pathways of BSM detected by HPLC-HRMS.

Raw data

	Co+PMS		Fe+PMS		Co:Fe(2.1) + PMS		MC + PMS		Co/MC + PMS		Fe/MC + PMS		Co:Fe(2.1)/MC + PMS		PMS only		
1																	
2	0	705045	705045	722295	722295	718506	718506	737912	737912	730666	730666	746355	746355	730666	730666	730272	730272
3	1	648286	659830	705328	710676	689749	693461	720810	720650	564816	577314	707980	688177	686112	669069	700663	697866
4	3	605179	624130	695965	697750	684398	671292	719000	697954	221544	242390	667309	689032	492137	501234	683701	691866
5	5	511236	517597	686928	673266	634742	642391	703142	692746	87613	41231	656575	669703	308945	296217	668793	685122
6	7	415561	412234	654347	660142	579588	576902	697164	688811	10258	12086	653406	655213	156938	140053	670524	675648
7	10	273139	274486	650427	642672	487765	485851	650427	677335	0	0	628154	630339	34213	39424	660158	669918
8																	
9																	
10	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
11	1	0.919496	0.935869	0.97651	0.983914	0.959977	0.965143	0.976824	0.976607	0.773015	0.79012	0.948583	0.92205	0.939023	0.915697	0.959455	0.955625
12	3	0.858355	0.885234	0.963547	0.966018	0.952529	0.934289	0.974371	0.94585	0.303208	0.331738	0.894091	0.923196	0.673546	0.685996	0.936228	0.947409
13	5	0.725111	0.734133	0.951035	0.932121	0.883419	0.894065	0.952881	0.938792	0.119908	0.056429	0.879709	0.897298	0.422827	0.405407	0.915814	0.938174
14	7	0.589411	0.584692	0.905928	0.913951	0.806657	0.802919	0.944779	0.93346	0.014039	0.016541	0.875463	0.877884	0.214788	0.191679	0.918184	0.9252
15	10	0.387406	0.389317	0.9005	0.889764	0.67886	0.676196	0.881443	0.917908	0	0	0.841629	0.844557	0.046824	0.053956	0.903989	0.917217
16																	
17																	
18																	
19																	
20																	

Fig. 3a

Reaction conditions: $c(\text{PMS}) = 0.3 \text{ mmol}\cdot\text{L}^{-1}$, $c(\text{catalyst}) = 50 \text{ mg}\cdot\text{L}^{-1}$, $c(\text{BSM}) = 10 \text{ mg}\cdot\text{L}^{-1}$, $\text{pH} = 7.0$, $T = 25^\circ\text{C}$.

	Co:Fe(1.2)+PMS		Co:Fe(1.1)+PMS		Co:Fe(2.1)+PMS		
1							
2	0	730666	730666	742762	697255	730666	730666
3	1	684316	679132	694564	660764	686112	669069
4	3	557006	527846	595232	576069	492137	501234
5	5	485331	482791	523089	463302	308945	296217
6	7	403498	415938	414475	351259	156938	140053
7	10	298144	310616	245637	203342	34213	39424
8							
9	0	1	1	1	1	1	1
10	1	0.936565	0.92947	0.93511	0.889604	0.939023	0.915697
11	3	0.762326	0.722418	0.801376	0.775577	0.673546	0.685996
12	5	0.664231	0.660755	0.704248	0.623756	0.422827	0.405407
13	7	0.552233	0.569259	0.558019	0.472909	0.214788	0.191679
14	10	0.408044	0.425114	0.330708	0.273765	0.046824	0.053956
15							
16							
17							
18							
19							
20							

Fig. 3b

Reaction conditions: $c(\text{PMS}) = 0.3 \text{ mmol}\cdot\text{L}^{-1}$, $c(\text{catalyst}) = 50 \text{ mg}\cdot\text{L}^{-1}$, $c(\text{BSM}) = 10 \text{ mg}\cdot\text{L}^{-1}$, $\text{pH} = 7.0$, $T = 25^\circ\text{C}$.

	700		800		900		
1							
2	0	715031	715031	738036	738036	730666	730666
3	1	714234	711018	676140	687234	686112	669069
4	3	708346	707808	512989	498860	492137	501234
5	5	637639	648648	385466	356671	308945	296217
6	7	513486	535989	244548	237850	156938	140053
7	10	421032	410131	103150	86513	34213	39424
8	20	365629	403128	16646	17380	0	0
9							
10	0	1	1	1	1	1	1
11	1	0.998885	0.994388	0.916134	0.931166	0.939023	0.915697
12	3	0.990651	0.989898	0.695073	0.675929	0.673546	0.685996
13	5	0.891764	0.907161	0.522286	0.48327	0.422827	0.405407
14	7	0.718131	0.749602	0.33135	0.322274	0.214788	0.191679
15	10	0.58883	0.573585	0.139763	0.117221	0.046824	0.053956
16	20	0.511347	0.563791	0.022554	0.023549	0	0
17							
18							
19							
20							

Fig. 3d

Reaction conditions: $c(\text{PMS}) = 0.3 \text{ mmol}\cdot\text{L}^{-1}$, $c(\text{catalyst}) = 50 \text{ mg}\cdot\text{L}^{-1}$, $c(\text{BSM}) = 10 \text{ mg}\cdot\text{L}^{-1}$, $\text{pH} = 7.0$, $T = 25^\circ\text{C}$.

	0		10		20		30		40		50		
1													
2	0	712.217	712.217	765387	765387	730272	730272	730272	730272	730272	730666	730666	
3	1	677.814	682.087	712630	708789	711272	726674	678913	672920	671594	673584	686112	669069
4	3	680.562	685.416	680423	666239	649405	643587	528212	556276	537087	503006	492137	501234
5	5	688.405	679.612	589131	539131	564750	538668	397144	385274	360659	305670	308945	296217
6	7	680.157	670.542	506374	518575	493283	546481	257369	263323	169758	130715	156938	140053
7	10	665.241	657.022	428285	424904	411421	364384	91235	46237	45783	34491	34213	39424
8	20	668.07	599.171	181996	193123	145898	132043	5631	4320	5602	4827	0	0
9													
10	0	1	1	1	1	1	1	1	1	1	1	1	1
11	1	0.951696	0.957695	0.931071	0.926053	0.973982	0.995073	0.929671	0.921465	0.919649	0.922374	0.939023	0.915697
12	3	0.955554	0.96237	0.888992	0.87046	0.889265	0.881298	0.723309	0.761738	0.735462	0.688793	0.673546	0.685996
13	5	0.966566	0.95422	0.769716	0.70439	0.773342	0.737627	0.54383	0.527576	0.493869	0.41857	0.422827	0.405407
14	7	0.954986	0.941486	0.661592	0.677533	0.675478	0.748325	0.352429	0.360582	0.232459	0.178995	0.214788	0.191679
15	10	0.934043	0.922503	0.559567	0.555149	0.56338	0.49897	0.124933	0.063315	0.062693	0.04723	0.046824	0.053956
16	20	0.938015	0.841276	0.237783	0.252321	0.199786	0.180813	0.007711	0.005916	0.007671	0.00661	0	0
17													
18													
19													
20													

Fig. 4a

Reaction conditions: $c(\text{PMS}) = 10 \text{ mmol}\cdot\text{L}^{-1}$, $c(\text{BSM}) = 10 \text{ mg}\cdot\text{L}^{-1}$, $T = 25^\circ\text{C}$.

1	PMS	0	0.1	0.2	0.3	0.4					
2	0	730272	730272	735179	735179	793990	793990	730272	730272	730666	730666
3	1	700663	697866	719778	716946	721936	734503	671594	673584	676785	654031
4	3	683701	691866	691912	699457	562708	584462	537087	533006	419779	460412
5	5	668793	685122	693203	638768	476581	516257	360659	365670	159622	189244
6	7	670524	675648	619204	609204	385530	443453	169758	160715	71535	84327
7	10	660158	669818	545456	537045	317761	268179	45783	34491	20029	33891
8	20	652136	660143	500836	453621	60619	54851	5602	4827	0	0
9											
10	0	1	1	1	1	1	1	1	1	1	1
11	1	0.959455	0.955625	0.979051	0.975199	0.909251	0.925078	0.919649	0.922374	0.926258	0.895116
12	3	0.936228	0.947409	0.941148	0.95141	0.708709	0.736108	0.735462	0.729873	0.574516	0.630126
13	5	0.915814	0.938174	0.942904	0.868861	0.600236	0.650206	0.493869	0.500731	0.218461	0.259002
14	7	0.918184	0.9252	0.842249	0.828647	0.48556	0.558512	0.232459	0.220076	0.097904	0.115411
15	10	0.903989	0.917217	0.741936	0.730496	0.400208	0.337761	0.062693	0.04723	0.027412	0.046384
16	20	0.893004	0.903969	0.681244	0.617021	0.076347	0.069083	0.007671	0.00661	0	0
17											
18											
19											
20											

Fig. 4b
Reaction conditions: c(catalyst) = 40 mg·L⁻¹, c(PMS) = 10 mmol·L⁻¹, c(BSM) = 10 mg·L⁻¹, T = 25°C.

1	pH	3	5	7	9	11					
2	0	720691	720691	716013	716013	730272	730272	736220	736220	744856	744856
3	1	638048	641276	633914	632172	671594	673584	708399	725687	716689	703354
4	3	602363	593840	474533	529012	537087	533006	675457	681132	661561	677953
5	5	559659	553208	395023	360479	360659	365670	622014	617352	635932	661260
6	7	535316	547291	265200	226505	169758	160715	592448	596461	645100	647706
7	10	517119	497189	53516	94650	45783	34491	518976	518011	645086	645263
8	20	345443	354118	9519	11321	5602	4827	102434	121505	608962	615305
9											
10											
11	0	1	1	1	1	1	1	1	1	1	1
12	1	0.885328	0.889807	0.885339	0.882906	0.919649	0.922374	0.962211	0.985693	0.962185	0.944282
13	3	0.835813	0.823987	0.662744	0.73883	0.735462	0.729873	0.917466	0.925175	0.888173	0.91018
14	5	0.776559	0.767608	0.551698	0.503453	0.493869	0.500731	0.844875	0.838543	0.853765	0.887769
15	7	0.742782	0.759398	0.370384	0.316342	0.232459	0.220076	0.804716	0.810167	0.866073	0.869572
16	10	0.717532	0.689878	0.074742	0.13219	0.062693	0.04723	0.70492	0.703609	0.866055	0.866292
17	20	0.479322	0.491359	0.013294	0.015811	0.007671	0.00661	0.139135	0.165039	0.817557	0.826072
18											
19											
20											

Fig. 4c
Reaction conditions: c(catalyst) = 40 mg·L⁻¹, c(BSM) = 10 mg·L⁻¹, T = 25°C.

1	C(Cl ⁻)	1	5	10	control				
2	0	722347	722347	712417	712417	681109	681109	730272	730272
3	1	670675	672130	698414	679214	661187	656130	671594	673584
4	3	532416	538157	552167	557367	540927	538157	537087	533006
5	5	380421	382168	401456	421045	387246	409031	360659	365670
6	7	201468	214035	270451	280167	269413	293387	169758	160715
7	10	71453	84241	110542	123587	122818	151698	45783	34491
8	20	6358	6658	6487	7594	8224	8763	5602	4827
9									
10	0	1	1	1	1	1	1	1	1
11	1	0.928467	0.930481	0.980344	0.953394	0.970751	0.963326	0.919649	0.922374
12	3	0.737064	0.745012	0.775062	0.782361	0.794186	0.790119	0.735462	0.729873
13	5	0.526646	0.529064	0.563513	0.591009	0.568552	0.600537	0.493869	0.500731
14	7	0.278908	0.296305	0.379625	0.393263	0.39555	0.430749	0.232459	0.220076
15	10	0.098918	0.116621	0.155165	0.173476	0.180321	0.222722	0.062693	0.04723
16	20	0.008802	0.009217	0.009106	0.010659	0.012074	0.012866	0.007671	0.00661
17									
18									
19									
20									

Fig. 5a
Reaction conditions: c(PMS) = 0.3 mmol·L⁻¹, c(catalyst) = 40 mg·L⁻¹, c(BSM) = 10 mg·L⁻¹, pH = 7.0, T = 25°C.

1	C(NO ₂ ⁻)	1	5	10	control				
2	0	736854	736854	745871	745871	734271	734271	730272	730272
3	1	672450	662451	673684	664512	674066	649091	671594	673584
4	3	537142	541451	542012	522042	549205	506787	537087	533006
5	5	380415	370514	390451	372984	390446	372950	360659	365670
6	7	187245	154052	165012	177536	197913	150706	169758	160715
7	10	54812	44812	54871	45712	62722	33736	45783	34491
8	20	4152	6524	3687	7821	18082	0	5602	4827
9									
10	0	1	1	1	1	1	1	1	1
11	1	0.912596	0.899026	0.903218	0.890921	0.918007	0.883994	0.919649	0.922374
12	3	0.728967	0.734814	0.726683	0.699909	0.74796	0.690191	0.735462	0.729873
13	5	0.516269	0.502832	0.523483	0.500065	0.531746	0.507919	0.493869	0.500731
14	7	0.254114	0.209067	0.221234	0.238025	0.269537	0.205246	0.232459	0.220076
15	10	0.074387	0.060815	0.073566	0.061287	0.085421	0.045945	0.062693	0.04723
16	20	0.005635	0.008854	0.004943	0.010486	0.024626	0	0.007671	0.00661
17									
18									
19									
20									

Fig. 5b
Reaction conditions: c(PMS) = 0.3 mmol·L⁻¹, c(catalyst) = 40 mg·L⁻¹, c(BSM) = 10 mg·L⁻¹, pH = 7.0, T = 25°C.

1	C(HA)	1	5	10	control		
2	0	736272	736272	725487	725487	697052	730272
3	1	702513	698015	698124	695142	675660	660875
4	3	532045	530214	538462	534613	504273	503697
5	5	365415	370845	366142	364259	368468	359481
6	7	169451	176458	182054	172542	172283	187028
7	10	34154	35142	20574	25167	14120	17872
8	20	6451	0	1432	2154	0	5602
9							
10	0	1	1	1	1	1	1
11	1	0.954149	0.94804	0.962283	0.958173	0.969311	0.9481
12	3	0.72262	0.720133	0.742208	0.736902	0.723437	0.72261
13	5	0.496304	0.503679	0.504684	0.502089	0.528609	0.515716
14	7	0.230147	0.239664	0.25094	0.237829	0.247159	0.268313
15	10	0.046388	0.04773	0.028359	0.03469	0.020257	0.025639
16	20	0.008762	0	0.001974	0.002969	0	0.007671
17							
18							
19							
20							
21							

Fig. 5c
Reaction conditions: $c(\text{PMS}) = 0.3 \text{ mmol}\cdot\text{L}^{-1}$, $c(\text{catalyst}) = 40 \text{ mg}\cdot\text{L}^{-1}$, $c(\text{BSM}) = 10 \text{ mg}\cdot\text{L}^{-1}$, $\text{pH} = 7.0$, $T = 25^\circ\text{C}$.

1	C(HCO ₃ ⁻)	1	5	10	control		
2	0	759174	759174	748147	748147	759976	759976
3	1	727617	712860	710629	706275	700939	722860
4	3	694143	701348	701103	702435	709531	707656
5	5	671622	659345	674451	674145	693227	680573
6	7	633151	640512	651600	653753	686146	662467
7	10	591740	600667	633709	642154	661828	659651
8	20	528303	540215	585656	590146	593721	618939
9							
10	0	1	1	1	1	1	1
11	1	0.958432	0.938994	0.949852	0.944032	0.922317	0.951162
12	3	0.91434	0.92383	0.937119	0.9389	0.933623	0.931156
13	5	0.884675	0.868503	0.901495	0.901086	0.91217	0.895519
14	7	0.834	0.843696	0.870952	0.87383	0.902852	0.871695
15	10	0.779452	0.791211	0.847038	0.858326	0.870854	0.867989
16	20	0.695892	0.711583	0.782809	0.78881	0.781237	0.814419
17							
18							
19							
20							
21							

Fig. 5d
Reaction conditions: $c(\text{PMS}) = 0.3 \text{ mmol}\cdot\text{L}^{-1}$, $c(\text{catalyst}) = 40 \text{ mg}\cdot\text{L}^{-1}$, $c(\text{BSM}) = 10 \text{ mg}\cdot\text{L}^{-1}$, $\text{pH} = 7.0$, $T = 25^\circ\text{C}$.

1	C(H ₂ PO ₄ ⁻)	1	5	10	control		
2	0	736395	736395	737158	737158	728279	728279
3	1	688710	678710	656684	698041	645689	679750
4	3	526784	529726	529643	546614	499161	550237
5	5	387514	398416	395743	410687	406331	438966
6	7	294856	274135	278437	331456	306922	336515
7	10	164872	185241	205483	173514	195369	237783
8	20	34152	52341	80581	79694	89653	97136
9							
10	0	1	1	1	1	1	1
11	1	0.935245	0.921666	0.890832	0.946935	0.886596	0.933365
12	3	0.715355	0.71935	0.718493	0.741515	0.685398	0.755531
13	5	0.526231	0.541036	0.53685	0.557122	0.557933	0.602744
14	7	0.400405	0.372266	0.377717	0.44964	0.421435	0.462069
15	10	0.223891	0.251551	0.27875	0.235382	0.268261	0.3265
16	20	0.046377	0.071077	0.109313	0.10811	0.123103	0.133377
17							
18							
19							
20							
21							

Fig. 5e
Reaction conditions: $c(\text{PMS}) = 0.3 \text{ mmol}\cdot\text{L}^{-1}$, $c(\text{catalyst}) = 40 \text{ mg}\cdot\text{L}^{-1}$, $c(\text{BSM}) = 10 \text{ mg}\cdot\text{L}^{-1}$, $\text{pH} = 7.0$, $T = 25^\circ\text{C}$.

1		R1	R2	R3			
2	0	730666	730666	730241	730241	727587	727587
3	1	686112	669069	659606	641305	637606	642308
4	3	492137	501234	587123	580662	539219	557326
5	5	308945	296217	474922	464137	496382	487654
6	10	34213	39424	262986	248017	280198	247708
7	20	0	0	75219	69634	96279	106349
8							
9	0	1	1	1	1	1	1
10	1	0.939023	0.915697	0.903272	0.87821	0.87633	0.882792
11	3	0.673546	0.685996	0.804013	0.795165	0.741106	0.765992
12	5	0.422827	0.405407	0.650363	0.635594	0.68223	0.670235
13	10	0.046824	0.053956	0.360136	0.339637	0.385106	0.340451
14	20	0	0	0.103006	0.095358	0.132326	0.146167
15							
16							
17							
18							
19							
20							
21							

Fig. 5f
Reaction conditions: $c(\text{PMS}) = 0.3 \text{ mmol}\cdot\text{L}^{-1}$, $c(\text{catalyst}) = 40 \text{ mg}\cdot\text{L}^{-1}$, $c(\text{BSM}) = 10 \text{ mg}\cdot\text{L}^{-1}$, $\text{pH} = 7.0$, $T = 25^\circ\text{C}$.

	Yantze River			Xuanwu Lake	
1					
2	0	793990	793990	791875	791875
3	3	606080	592439	648972	628461
4	7	280105	270151.5	301650	307379
5	10	256093	258443	270313	277379
6	15	230789	232607	231558	221400
7	20	197262	190271	186292	171292
8					
9	0	1	1	1	1
10	3	0.763335	0.746154	0.819538	0.793637
11	7	0.352782	0.340245	0.380931	0.388166
12	10	0.322539	0.325499	0.341358	0.350281
13	15	0.29067	0.29296	0.292417	0.27959
14	20	0.248444	0.239639	0.235254	0.216312
15					
16					
17					
18					
19					
20					

Fig. 5g
Reaction conditions: $c(\text{PMS}) = 0.3 \text{ mmol}\cdot\text{L}^{-1}$, $c(\text{catalyst}) = 40 \text{ mg}\cdot\text{L}^{-1}$, $c(\text{BSM}) = 10 \text{ mg}\cdot\text{L}^{-1}$, $\text{pH} = 7.0$, $T = 25^\circ\text{C}$.

	MA	TBA		PBQ		FFA		control	
1									
2	0	710661	710661	710661	720278	720278	701321	701321	730272
3	1	694398	679537	693094	678447	689331	668766	684457	676532
4	3	637776	645882	622921	629538	626752	627727	634459	626186
5	5	609918	617629	571920	581944	587989	559761	620726	617413
6	7	604212	612067	498687	493431	521824	502321	616679	607876
7	10	584692	600277	369603	382803	345448	300170	592458	585418
8	20	548295	560352	162321	151791	92464	76625	549382	553418
9									
10	0	1	1	1	1	1	1	1	1
11	1	0.977116	0.956204	0.975281	0.95467	0.957035	0.928483	0.975954	0.964654
12	3	0.897441	0.908847	0.876537	0.885849	0.870153	0.871507	0.904663	0.892866
13	5	0.85824	0.869091	0.804772	0.818877	0.816336	0.777146	0.885081	0.880357
14	7	0.850211	0.861264	0.701723	0.694327	0.724476	0.697399	0.879311	0.866759
15	10	0.822744	0.844674	0.520083	0.538658	0.479604	0.416742	0.844774	0.834736
16	20	0.771528	0.788494	0.228408	0.213591	0.128373	0.106383	0.783353	0.789108
17									
18									
19									
20									

Fig. 6a
Reaction conditions: $c(\text{PMS}) = 0.3 \text{ mmol}\cdot\text{L}^{-1}$, $c(\text{catalyst}) = 40 \text{ mg}\cdot\text{L}^{-1}$, $c(\text{BSM}) = 10 \text{ mg}\cdot\text{L}^{-1}$, $\text{pH} = 7.0$, $T = 25^\circ\text{C}$.

	p-BQ(1)	p-BQ(5)		p-BQ(10)		N2	
1							
2	0	720278	720278	715055	715055	724911	724911
3	1	689331	668766	683601	704802	714537	716524
4	3	626752	627727	677080	663902	703154	698451
5	5	587989	559761	656528	681943	702457	695412
6	7	521824	502321	597868	655601	681254	695874
7	10	345448	300170	576925	566403	685481	684781
8	20	92464	76625	480147	445447	651321	654125
9							
10	0	1	1	1	1	1	1
11	1	0.957035	0.928483	0.956012	0.985661	0.985689	0.98843
12	3	0.870153	0.871507	0.946892	0.928463	0.969987	0.963499
13	5	0.816336	0.777146	0.91815	0.953693	0.969025	0.959307
14	7	0.724476	0.697399	0.836115	0.916854	0.939776	0.959944
15	10	0.479604	0.416742	0.806826	0.792111	0.945607	0.944641
16	20	0.128373	0.106383	0.671483	0.622955	0.898484	0.902352
17							
18							
19							
20							
21							
22							

Fig. 7a
Reaction conditions: $c(\text{PMS}) = 0.3 \text{ mmol}\cdot\text{L}^{-1}$, $c(\text{catalyst}) = 40 \text{ mg}\cdot\text{L}^{-1}$, $c(\text{BSM}) = 10 \text{ mg}\cdot\text{L}^{-1}$, $\text{pH} = 7.0$, $T = 25^\circ\text{C}$.