Supplementary Material

Table S1 L_{25}（5^6）Orthogonal experimental result

Factors	A	B	C	D	E	F	Effluent P-concentration
Units	(°C)	(mg L^{-1})	(mg L^{-1})	(°C)	/	(min)	(mg L^{-1})
1	500	1	0.5	20	2	10	0.477
2	500	2	1	30	4	30	0.091
3	500	4	5	40	7	60	0.173
4	500	6	10	50	9	180	0.108
5	500	8	50	60	11	600	17.036
6	600	1	1	40	9	600	0.076
7	600	2	5	50	11	10	4.810
8	600	4	10	60	2	30	2.365
9	600	6	50	20	4	60	23.991
10	600	8	0.5	30	7	180	0.037
11	700	1	5	60	4	180	0.736
12	700	2	10	20	7	600	4.647
13	700	4	50	30	9	10	41.344
14	700	6	0.5	40	11	30	0.446
15	700	8	1	50	2	60	0.267
16	800	1	10	30	11	60	9.513
17	800	2	50	40	2	180	34.254

18	800	4	0.5	50	4	600	0.030
19	800	6	1	60	7	10	0.081
20	800	8	5	20	9	30	1.216
21	900	1	50	50	7	30	42.086
22	900	2	0.5	60	9	60	0.465
23	900	4	1	20	11	180	1.408
24	900	6	5	30	2	600	0.661
25	900	8	10	40	4	10	4.870

Table S2 Intuitive analysis result

Factors	A	B	C	D	E	F
W_{1j}	17.885	52.888	0.989	30.330	37.363	46.711
W_{2j}	31.278	43.802	0.515	50.984	24.848	46.205
W_{3j}	47.440	43.912	6.935	34.948	47.024	33.943
W_{4j}	45.093	24.625	16.633	47.301	42.743	35.135
W_{5j}	49.491	18.555	158.710	20.218	31.804	21.789
$\overline{X_{1j}}$	3.577	10.578	0.198	6.066	7.473	9.342
$\overline{X_{2j}}$	6.256	8.760	0.103	10.197	4.970	9.241
$\overline{X_{3j}}$	9.488	8.782	1.387	6.990	9.405	6.789
$\overline{X_{4j}}$	9.019	4.925	3.327	9.460	8.549	7.027
$\overline{X_{5j}}$	9.898	3.711	31.742	4.044	6.361	4.358
Excellent level	A1	B5	C2	D5	E2	F5
Optimal combination	A_1-B_5-C_2-D_5-E_2-F_5					

Table S3 Variance analysis result

Levels	SS_j	f_j	MS_j	Significant difference
A	144.197	4	36.049	
B	137.662	4	34.416	
C	3680.881	4	920.220	C>A>B>D>F>E
D	122.957	4	30.739	
E	39.956	4	9.989	
F	101.666	4	25.416	

Note: MS_j=SS_j/f_j

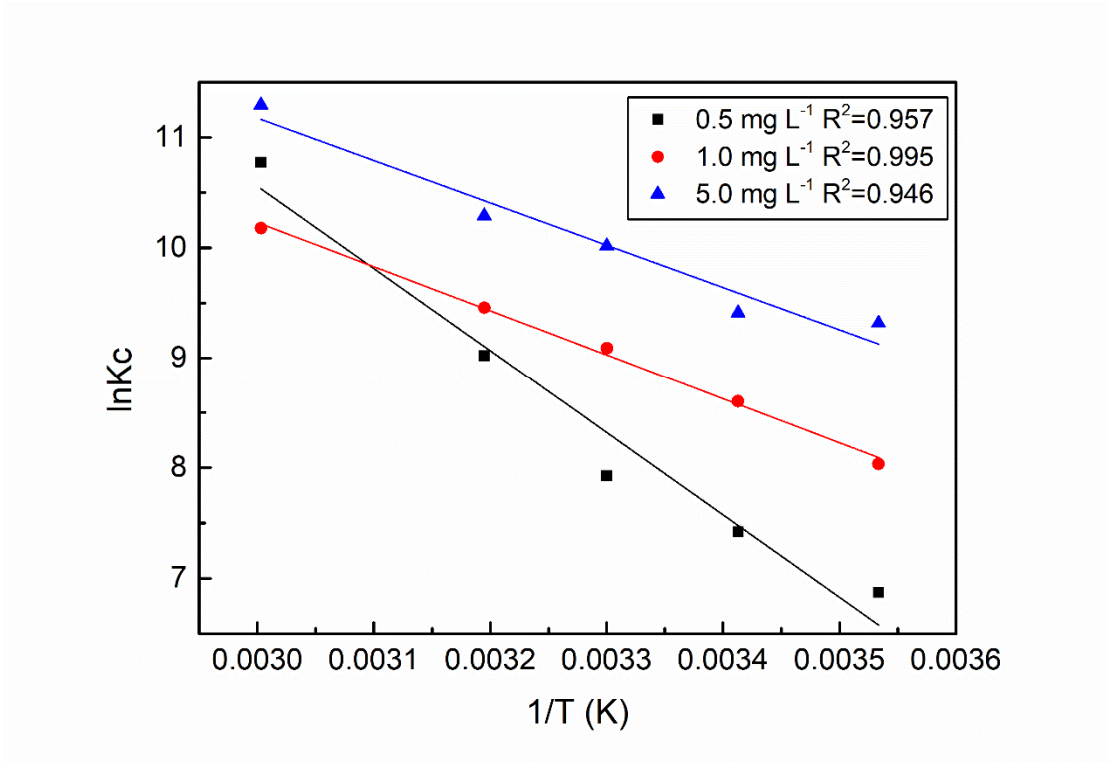

Fig. S1 Linearized Arrhenius under different P concentration