Supporting Information of

A Mini-Review on the Use of Chelating or Reducing Agents to Improve Fe(II)-Fe(III) Cycles in Persulfate/Fe(II) Systems

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Table S1 Correlation between target pollutant removal efficiency (%) and molar ratio of Chelate/Fe.

	Chelate/Fe (molar ratio)	Removal efficiency (%)
EDTA/Fe(III)[43]	0.5	88.82
	1	94.20
	2	91.00
	4	79.07
CA/Fe(II)[48]	0.1	82.25
	0.2	99.91
	0.5	99.91
	1	99.91
	2	99.91
GA/Fe(III)[28]	0	7.15
	0.1	14.57
	0.5	39.91
	1	63.98
	2	55.29
	10	12.94
CA/Fe(II)[47]	0.1	65.34
	0.2	78.38
	0.5	90.88
	1	87.62
	2	60.63
CA/Fe(II)[44]	0	80.00
	0.5	61.30
	1	49.78
	1.5	57.39
EDTA/Fe(II)[44]	0	80.00
	0.5	87.54
	1	47.54
	1.5	37.97
OA/Fe(II)[44]	0	80.25
	0.5	49.82
	1	30.43
	1.5	23.56
Citrate/Fe(II)[61]	0	43.31
	1	68.11
	2	73.70
	5	53.85
HPCD/Fe(II)[46]	0	38.49
	0.2	43.83
	1	35.36

	5	27.72
EDTA/Fe(II)[46]	0	37.84
	0.2	57.69
	1	53.61
	5	46.58
CA/Fe(II)[46]	0	39.44
	0.2	57.78
	1	70.00
	5	0.00
Citrate/Fe(II)[62]	0	65.96
	0.5	70.84
	1	79.96
	2	67.07
	5	57.07
Citrate/Fe(II)[57]	0	28.06
	0.2	69.62
	1	57.15
	2	38.71

Table S2 Correlation between target pollutant removal efficiency (%) and molar ratio of reductant/Fe.

Reference	Reductant/Fe (molar ratio)	Removal efficiency (%)
HA[65]	0	52.29
	0.5	57.31
	1	57.72
	2	58.29
	4	65.42
	8	65.66
HA[68]	0	5.09
	4.63	62.02
	9.62	53.50
	18.52	71.68
	27.78	79.23
	37.04	83.12
	55.56	80.87
	92.59	76.38
HA[56]	0	97.13
	1	99.17
	2	2.61
HA[31]	0	28.94
	0.5	49.98
	2.5	89.22
	5	98.20
	10	98.91
	25	90.17
HA[67]	0	18.63
	5	34.04
	20	59.13
	40	73.29
	60	70.81
	100	69.07
HA[62]	0	65.87
	0.5	78.67
	1	79.73
	2	89.87
	5	86.93
Thiosulfate[50]	0	57
	0.67	81
	1	86
	1.33	84

	2	89
	4	92
amorphous boron (A-Boron)[66]	0.25	22.5
	0.5	25
	2.5	21
	5	18
	10	16.5
	20	15
HA[66]	5	27.5
	12.5	30
	25	35
	50	33.5
	100	30

Table S3 Correlation between target pollutant removal efficiency (%) and initial solution pH in the cases with the presence of varied chelating agents and reducing agent.

Reference	pH	Removal rate(%)
EDTA[43]	3	55.64
	7	69.09
	10	94.91
GA[28]	3	71.25
	4	80.11
	5	79.9
	6	78.14
	7	74.53
	8	68.22
	9	51.17
HA[68]	2	29.32
	2.5	64.10
	3	83.73
	4	82.48
	5	80.99
	5.5	78.01
	5.8	59.88
	6	25.09
	6.5	13.17
	7	7.95
HA[56]	3	98.54
	7	97.37
	10	23.61
CA[58]	3	89.25
	5	82.09
	6.24	78.21

	9	63.88
	11	25.07
HA[67]	2	31.25
	2.5	48.25
	3	73.50
	4	73.75
	5	67.00
	6	66.00
	7	34.00
	8	25.00
	9	20.00
OA[55]	3	33
	5	26
	7	19
	9	15
TA[55]	3	63
	5	58
	7	55
	9	54
CA[55]	3	69
	5	57
	7	55
	9	51
EDDS[55]	3	59
	5	64
	7	28
	9	26

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