Treatment of Textile Wastewater Using Advanced Oxidation Processes—A Critical Review

Supplementary Information

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Table S1 Oxidation potential of various oxidizing agents.

Oxidizing agents	Oxidation potential (E_0, V)
F_2	3.06
$HO^•$	2.15-2.8
$SO_4^{•-}$	2.5-3.1
O_3	2.08
H_2O_2	1.78
ClO^-	1.49
Cl_2	1.36
ClO_2	1.27
$HO_2^•$	0.79

Table S2 Textile wastewater treatment using O_3-based AOPs.

Process	Dye	Experimental conditions	Removal	EEO (kWh m^{-3} $order^{-1}$)	References
O_3	Raw textile wastewater	$[O_3]$=2340 mg/L, [TOC]=336 mg/L, [COD]=1476 mg/L, pH=10.7	Color:99%, COD:18%, TOC:17%	43.61	(Alaton and Balcioğlu, 2002)
O_3	Biotreated textile wastewater	$[O_3]$=2340 mg/L, [TOC]=58 mg/L, [COD]=325 mg/L, pH=7.7	COD:54%	8.31	(Alaton and Balcioğlu, 2002)
O_3	Six reactive dyestuffs	$[O_3]$=1.65 mg/L, [DOC]=25/50 mg/L, pH=11.5	TOC:10.4-13.6%	0.23, 0.217	(Arslan et al., 1999)
O_3	Mixture reactive dyes	$[O_3]$=1310 mg/L, [TOC]=46.8 mg/L, pH=7.0	TOC:40.5%	0.633	(Arslan et al., 2002)
O_3	Acetate and polyester fiber dyeing effluent	$[O_3]$=2 g/h, [COD]=930 mg/L, pH=9	Color:90%, COD:92%	69.02	(Azbar et al., 2004)
O_3	Biologically treated textile wastewater	$[O_3]$=58 mg/L, [COD]=450 mg/L, pH=8.3	Color:98-99%		(Baban et al., 2003)
O_3	Real textile wastewater	$[O_3]$=2.91 L/min, [COD]=153 mg/L, pH=3/8	Color:91.5%	2.43, 3.34	(Cardoso et al., 2016)
O_3	Reactive Black 5	$[O_3]$=132 mg/L, [dye]=230 mg/L, pH=2.0	Color:100%, TOC:80%		(Chu et al., 2007)

O_3	Textile effluent (Color)	pH=5/7/9	Color:100%%	38.0, 19.5	(Durr-E-Shahwar et al., 2012)
O_3	Textile effluent (COD)	pH=5/7/9	COD:87-100%	38.0, 33.4	(Durr-E-Shahwar et al., 2012)
O_3	Acid Red 151	$[O_3]$=2.208 g/h, [dye]=200 mg/L, pH=2.5/7/13	Color:98-99.7%, COD:40.7-46.3%		(Erol and Özbelge, 2008)
O_3	Remazol Brilliant Blue R	$[O_3]$=2.208 g/h, [dye]=200 mg/L, pH=2.5/7/13	Color:99.3-99.5%, COD:44.8-67.7%		(Erol and Özbelge, 2008)
O_3	Congo Red	$[O_3]$=0.5 L/min, [dye]=500 mg/L, pH=12	COD:85%, TOC:81%		(Faouzi Elahmadi et al., 2009)
O_3	Acid Red 14	$[O_3]$=19.2 g/h, [dye]=200 mg/L, pH=2-12	Color:98%, COD:45%		(Gao et al., 2012)
O_3	Reactive red 198	$[O_3]$=0.25 g/h, pH=6-10	Color:>80%		(Karami et al., 2016)
O_3	Congo Red	$[O_3]$=2.7 g/h, [dye]=300 mg/L, pH=8.5	Color:>99%		(Khadhraoui et al., 2009)
O_3	Acid Red 88	$[O_3]$=2 g/h, [dye]=0.5 mM, pH=3-11	Color:98.2%, COD:64%		(Muthukumar et al., 2004)
O_3	Reactive Black 19	$[O_3]$=55g/m^3, [dye]=200 mg/L, pH=7	Color:100%, COD:55%, TOC:17%		(Tehrani-Bagha et al., 2010)
O_3	Dye bath effluent	$[O_3]$=11-111 mg/L min, [dye]=2480 mg/L, pH=4.7	Color:60-91%		(Sevimli and Sarikaya, 2005)
O_3	Plant effluent	$[O_3]$=11-111 mg/L min, [dye]=665 mg/L, pH=6.7	Color:74%		(Sevimli and Sarikaya, 2005)
O_3	Reactive Blue 15	[O3]=0.52 L/min, [dye]=1 g/L	COD:51.7%-84.6%		(J. Wu et al., 2008)
O_3	C.I. Reactive Red 2	$[O_3]$=500 mL/min, [dye]=40 mg/L, pH=4/7/10		3.684, 2.111, 1.07	(Wu and Ng, 2008)
O_3	C.I. Reactive Red 2	$[O_3]$=500 mL/mim, [dye]=20/40 mg/L, pH=7		2.19, 3.55	(Wu et al., 2013)
O_3	Textile effluent	$[O_3]$=2 g/h, [COD]=172 mg/L, pH=9	Color:97%, COD:81%	29.27	(Yonar et al., 2005)
O_3/H_2O_2	Six reactive dyestuffs	$[O_3]$=1.65 mg/L, $[H_2O_2]$=1 mM, [DOC]=25 mg/L, pH=7.5	TOC: 11.1%	0.479	(Arslan et al., 1999)
O_3/H_2O_2	Six reactive dyestuffs	$[O_3]$=1.65 mg/L, $[H_2O_2]$=1 mM, DOC=50 mg/L, pH=7.5	TOC: 5.0%	0.721	(Arslan et al., 1999)
O_3/H_2O_2	Reactive Red 198	$[O_3]$=0.25 g/h, $[H_2O_2]$=0.03 mol/L, [dye]=200 mg/L, pH=6-10	Color:100%, COD:55%		(Karami et al., 2016)
O_3/H_2O_2	Congo Red	$[O_3]$=2.7 g/h, $[H_2O_2]$=7.5 mM/L, [dye]=0.3 g/L, pH=8.7	Color:> 90%		(Khadhraoui et al., 2009)
O_3/H_2O_2	C.I. Reactive Red 2	$[O_3]$=500 mL/min, $[H_2O_2]$=1000 mg/L [dye]=40 mg/L, pH=4/7/10	Color: 98-99%	9.225, 4.321, 3.568	(Wu and Ng, 2008)
O_3/Al_2O_3	Acid Red 151	$[O_3]$=2.208 g/h, [dye]=200 mg/L, pH=2.5/7/13	Color:94.9-98.4%, COD:50.5-78.7%		(Erol and Özbelge, 2008)
O_3/Al_2O_3	Remazol Brilliant Blue R	$[O_3]$=2.208 g/h, [dye]=200 mg/L, pH=2.5/7/13	Color:97.5-98.3%, COD:42.5-82.6%		(Erol and Özbelge, 2008)
O_3/PFOA	Acid Red 151	$[O_3]$=2.208 g/h, [dye]=200 mg/L, pH=2.5/7/13	Color: 94.8-98.8%, TOC:53.0-75.7%		(Erol and Özbelge, 2008)
O_3/PFOA	Remazol Brilliant Blue R	$[O_3]$=2.208 g/h, [dye]=200 mg/L, pH=2.5/7/13	Color:97.4-99.4%, TOC:56.6-96.6%		(Erol and Özbelge, 2008)
O_3/Fe^{2+}	Raw textile dye effluent	$[O_3]$=0.05-0.2 g/h, $[Fe^{2+}]$=1-6 g/L, COD=838 mg/L, pH=6.5	Color:50-70%		(Malik et al., 2018)
O_3/Fe^{2+}	C.I. Reactive Red 2	$[O_3]$=50 mg/L, $[Fe^{2+}]$=0.9 mM, [dye]=0.45 mM, pH=7	Color:95%		(X. Zhang et al., 2013)
O_3/Fe^{3+}	C.I. Reactive Red 2	$[O_3]$=500 mL/min, $[Fe^{3+}]$=25 mg/L, [dye]=40 mg/L, pH=4/7/10		2.473, 2.541, 1.332	(Wu and Ng, 2008)
O_3/nZVI	Raw textile dye effluent	$[O_3]$=0.05-0.2 g/h, [nZVI]=1-6 g/L, [COD]=838 mg/L, pH=6.5	Color:50-85%		(Malik et al., 2018)
O_3/Mn^{2+}	C.I. Reactive Red 2	[dye]=100 mg/L, $[O_3]$=0.1 mg/L, $[Mn^{2+}]$=0.1 g/L, pH=2	Color: >95%		(C. H. Wu et al., 2008)
O_3/MnO_2	C.I. Reactive Red 2	[dye]=100 mg/L, $[O_3]$=0.8 mg/L, $[MnO_2]$=0.8 g/L, pH=2	Color: >95%		(C. H. Wu et al., 2008)
O_3/MnO_2	C.I. Reactive Red 2	$[O_3]$=500 mL/min, $[Mn^{2+}]$=0.5 g/L, [dye]=20 mg/L, pH=7		1.68	(Wu et al., 2013)
$O_3/Ca(OH)_2$	Acid Red 18	$[O_3]$=65 mg/L, $[Ca(OH)_2]$=2-3 g/L, [dye]=450 mg/L	Color:100% (Time=6 min), TOC:100% (Time =25 min)		(Quan et al., 2017)
O_3/GAC	Reactive Red 194	$[O_3]$=28 mg/L, [GAC]=10 g/L, [dye]=100 mg/L, pH=6.3	COD:80%, TOC:50%		(Gül et al., 2007)
O_3/GAC	Reactive Yellow 145	$[O_3]$=28 mg/L, [GAC]=10 g/L, [dye]=100 mg/L, pH=5.9	COD:90%, TOC:50%		(Gül et al., 2007)

Table S3 Textile wastewater treatment using photochemical AOPs.

Process	Dye	Conditions	Removal	EEO (kWh m^{-3} $order^{-1}$)	References
UV/H_2O_2	Raw textile wastewater	UV-C:25 W, $[H_2O_2]$=50 mM, [TOC]=336 mg/L, [COD]=1476 mg/L, pH=10.7	COD:2%, TOC:14%	12.08	(Alaton and Balcioğlu, 2002)
UV/H_2O_2	Biotreated textile wastewater	UV-C:25 W, $[H_2O_2]$=50 mM, [TOC]=58 mg/L, [COD]=325 mg/L, pH=7.7	Color:88%, COD:41%	14.22	(Alaton and Balcioğlu, 2002)
UV/H_2O_2	C.I. Acid Orange 7	UV-C:15 W, [dye]=17.5 mg/L, $[H_2O_2]$=166.25/285/525 mg/L	Color: 100%, TOC:95%	1.498, 2.696, 1.133	(Aleboyeh et al., 2008)
UV/H_2O_2	Six reactive dyestuffs	UV-C:18 W, $[H_2O_2]$=25 mM, [DOC]=25/50 mg/L, pH=11.5	TOC: 30.5%/8.5%	2.264, 4.848	(Arslan et al., 1999)
UV/H_2O_2	Mixture of reactive dyes	UV-C:25 W, $[H_2O_2]$=680 mg/L, [TOC]=46.8 mg/L, pH=7.0	TOC: 14.6%	0.633	(Arslan et al., 2002)
UV/H_2O_2	Acetate and polyester fiber dyeing effluent	UV-C:15 W, $[H_2O_2]$=300 mg/L, [COD]=930 mg/L, pH=3	Color: 85%, COD: 90%	16.47	(Azbar et al., 2004)
UV/H_2O_2	C.I. Reactive Blue 181	UV-C:100 mW, [dye]=100 mg/L, $[H_2O_2]$=500 mg/L, pH=3.0	Color: 99% COD: 61%, TOC: 31%	-	(Basturk and Karatas, 2015)
UV/H_2O_2	C.I. Acid Orange 7	UV-C:30 W, $[H_2O_2]$= 500 mg/L, [dye]=19.55/29.40/39.25/48.34 mg/L	-	2.51, 4.56, 5.90, 12.56	(Behnajady and Modirshahla, 2006)
UV/H_2O_2	Acid Black 24	UV-C:14 W, $[H_2O_2]$=5.8-69.8 mM, [TOC]=39.7 mg/L, [dye]=100 mg/L	Color: 100%, TOC: 95%	-	(Chang et al., 2006)
UV/H_2O_2	C.I. Acid Orange 7	UV-C:15 W, $[H_2O_2]$=4.98 $\times 10^{-2}$ M, [dye]=2/5/9/12/15 M, pH=6.0	-	0.5782, 0.8575, 1.3411, 1.7682, 2.1880	(Daneshvar et al., 2005)
UV/H_2O_2	C.I. Acid Orange 8	UV-C:15 W, $[H_2O_2]$=4.98 $\times 10^{-2}$ M, [dye]=2/5/9/12/15 M, pH=6.0	-	0.6187, 1.0473, 1.5610, 1.9948, 2.3343	(Daneshvar et al., 2005)
UV/H_2O_2	C.I. Acid Orange 52	UV-C:15 W, $[H_2O_2]$=4.98 $\times 10^{-2}$ M, [dye]=2/5/9/12/15 M, pH=6.0	-	1.2488, 1.6696, 2.1777, 2.4485, 2.8550	(Daneshvar et al., 2005)
UV/H_2O_2	C.I. Acid Blue 74	UV-C:15 W, $[H_2O_2]$=4.98 $\times 10^{-2}$ M, [dye]=2/5/9/12/15 M, pH=6.0	-	0.4562, 0.5665, 1.1654, 1.5738, 1.9378	(Daneshvar et al., 2005)
UV/H_2O_2	Rhodamine B	UV-C:15 W, $[H_2O_2]$=450 mg/L, [dye]=10 mg/L, pH=6.0	Color: 97.3%	26.6	(Daneshvar et al., 2008)
UV/H_2O_2	Five azo-reactive dyes	UV-C:120 W, $[H_2O_2]$=1 g/L, [dye]=100 mg/L	Color: 100%, TOC: 80%, COD: 70%	-	(Georgiou et al., 2002)
UV/H_2O_2	Reactive Black 5	UV-C:15 W, $[H_2O_2]$=408 mg/L, [dye]=40 mg/L	Color: 100%	2.14	(Ince and Gönenç, 1997)
UV/H_2O_2	C.I. Basic Blue 3	UV-C:30 W, $[H_2O_2]$=1.2 g/L, [dye]=10 mg/L	Color:95.03%	7.67	(Kasiri and Khataee, 2011)
UV/H_2O_2	C.I. Acid Green 25	UV-C:30 W, $[H_2O_2]$=1.2 g/L, [dye]=10 mg/L	Color:98.16%	5.76	(Kasiri and Khataee, 2011)
UV/H_2O_2	C.I. Acid Blue 92	UV-C:30 W, $[H_2O_2]$=2 g/L, [dye]=20 mg/L	Color: 93.51%	19.41	(Kasiri and Khataee, 2012)
UV/H_2O_2	C.I. Acid Black 1	UV-C:30 W, $[H_2O_2]$=2 g/L, [dye]=20 mg/L	Color: 99.5%	10.02	(Kasiri and Khataee, 2012)
UV/H_2O_2	Reactive Blue	UV-C:16 W, $[H_2O_2]$=20 mmol, [dye]=500 ppm, time=30 min	Color: 99.64%	5.334	(Manikandan et al., 2017)
UV/H_2O_2	Direct Red	UV-C:30 W, $[H_2O_2]$=50 mmol, [dye]= 500 ppm	Color: 91.60%	10.667	(Manikandan et al., 2017)

UV/H_2O_2	Acid Violet	UV-C:30 W, $[H_2O_2]$=50 mmol, [dye]= 500 ppm	Color: 75.87%	16.005	(Manikandan et al., 2017)
UV/H_2O_2	C.I. Acid Red 88	UV-C:30 W, $[H_2O_2]$= 850 mg/L, [dye]=20 mg/L, pH=2	Color: 96.76%	6.48	(Modirshahla et al., 2012)
UV/H_2O_2	C.I. Acid Red 88	UV-C:30 W, $[H_2O_2]$= 850 mg/L, [dye]=20 mg/L, pH=10		20.64	(Modirshahla et al., 2012)
UV/H_2O_2	Brilliant Green	UV-C:15 W, $[H_2O_2]$=4.0 mM, [dye]= 0.05 mM, pH=6.5,		7.8	(Rehman et al., 2018)
UV/H_2O_2	Reactive red 241	UV-C:8 W, $[H_2O_2]$=2 mL/L, pH=4/7/10	Color:97.8-99.4%, COD:53.5-60.6%		(Patel et al., 2013)
UV/H_2O_2	C.I. Reactive Red 2	UV-C:8 W, $[H_2O_2]$=1000 mg/L, [dye]=40 mg/L, pH=7	Color:89%	2.26	(Wu et al., 2013)
UV/H_2O_2	Real textile wastewater (Color)	UV-C:13W, $[H_2O_2]$=100-300 mg/L, [COD]=413 mg/L	-	1.73, 3.25	(Yen, 2016)
UV/H_2O_2	Real textile wastewater (DOC)	UV-C:13W, $[H_2O_2]$=100-300 mg/L, [COD]=413 mg/L	-	3.9, 7.15	(Yen, 2016)
UV/H_2O_2	Textile effluent	UV:15 W, $[H_2O_2]$=50 mg/L, [COD]=172 mg/L, pH=3	Color:96%, COD:91%	5.17	(Yonar et al., 2005)
UV/PS	Brilliant Green	pH=5.7, UVC:15 W, [PS]=4.0 mM, [dye]= 0.05 mM		5.4	(Rehman et al., 2018)
UV/PS	C.I. Basic Yellow 2	UV-C:29.7 W/m^2, [PS]=4.0 mM, [dye]=5 mM		4.23	(Salari et al., 2009)
UV/PS	C.I. Basic Yellow 2	UV-C:29.7 W/m^2, [PS]=10 mM, [dye]=20 ppm		5.288	(Salari et al., 2008)
UV/PMS	Mixture azo dyes	UV-C:40 W, [PMS]=40 mM, [dye]=100 mg/L	Color:95%	2.9	(Olmez-Hanci et al., 2011)
UV/PMS	Brilliant Green	UVC:15 W, [PMS]=4.0 mM, [dye]= 0.05 mM		6.8	(Rehman et al., 2018)
UV/O_3	Acetate and polyester fiber dyeing effluent	UV-C:15 W, $[O_3]$=2 g/h, COD=930 mg/L, pH=9	Color: 93%, COD: 94%	83.40	(Azbar et al., 2004)
UV/O_3	C.I. Reactive Red 2	UV-A:8 W, $[O_3]$=500 mL/min, [dye]=20 mg/L, pH=7	Color:75%	3.32	(Wu et al., 2013)
UV/O_3	C.I. Reactive Red 2	UVC: 8W, $[O_3]$=500 mL/min, [dye]=40 mg/L, pH=4/7/10		6.420, 4.223, 1.865	(Wu and Ng, 2008)
UV/O_3	Textile effluent	UV:15 W, $[O_3]$=2 g/h, [COD]=172 mg/L, pH=9	Color:98%, COD:95%	34.48	(Yonar et al., 2005)
$UV/O_3/Fe^{3+}$	C.I. Reactive Red 2 (RR2)	UV-C:8W, $[O_3]$=500 mL/min, $[Fe^{3+}]$=25 mg/L, [dye]=40 mg/L, pH=4/7/10		8.533, 4.240, 2.909	(Wu and Ng, 2008)
$UV/H_2O_2/O_3$	C.I. Reactive Red 2	UV-C:8 W, $[H_2O_2]$=1000 mg/L, $[O_3]$=500 mL/min, [dye]=40 mg/L, pH=7		3.46	(Wu et al., 2013)
$UV/H_2O_2/O_3$	Acetate and polyester fiber dyeing effluent	UV-C:15 W, $[H_2O_2]$=200 mg/L, $[O_3]$=2 g/h, [COD]=930 mg/L, pH=3	Color: 96%, COD: 99%	85.49	(Azbar et al., 2004)
$UV/H_2O_2/O_3$	C.I. Reactive Red 2	UV-C: 8W, $[O_3]$=500 mL/min, $[H_2O_2]$=1000 mg/L, [dye]=40 mg/L, pH=4/7/10		2.256, 2.306, 3.141	(Wu and Ng, 2008)
$UV/H_2O_2/O_3$	Textile effluent	UV:15 W, $[H_2O_2]$=25 mg/L, $[O_3]$=2 g/h, [COD]=172 mg/L, pH=3	Color:99%, COD:97%	40.38	(Yonar et al., 2005)

Table S4 Textile wastewater treatment using photocatalytic AOPs.

Process	Dye	Experimental conditions	Removal efficiency	EEO (kWh m^{-3} $order^{-1}$)	References
UV/TiO_2	Remazol Red F-3B	UV:24 W,$[TiO_2]$=2 g/L, [dye]=150 mg/L, pH=7	Color:97.17%, TOC:83.05%		(Akyol and Bayramoglu, 2008)
UV/TiO_2	Procion Yellow H-EXL	UV:100 W, $[TiO_2]$=1 g/L, pH=5	Color:100%, COD:89%		(Barakat, 2010)
UV/TiO_2	C.I. Acid Red 27	UV-C:15 W, $[TiO_2]$=400 mg/L, [dye]=20 mg/L	-	12.59	(Behnajady et al., 2011)
UV/TiO_2	Methyl Orange	UV-C:15 W, $[TiO_2]$=400 mg/L, [dye]=10 mg/L	-	34.8	(Behnajady et al., 2011)
UV/TiO_2	Malachite Green	UV-C:15 W, $[TiO_2]$=400 mg/L, [dye]=5 mg/L	-	9.23	(Behnajady et al., 2011)

UV/TiO_2	4-Nitrophenol	UV-C:15 W, [TiO_2]=400 mg/L, [dye]=20 mg/L	-	72.27	(Behnajady et al., 2011)
UV/TiO_2	Acid Orange 7	UV-C:6 W, [TiO_2]=1 g/L, [dye]=40 mg/L, pH=6			(Chen et al., 2005)
UV/TiO_2	C.I. Basic Red 46	UV-C: 30 W, TiO_2:Degussa P25, [dye]=2.5-20 mg/L, pH = 7.4		391.84, 553.85, 980.43, 1019.47, 1404.88	(Khataee, 2009)
UV/TiO_2	C.I. Acid Orange 10	UVC: 21.9 W/m^2, TiO_2:Degussa P25, [dye]=30 mg/L, pH = 6.4	TOC:97.96%	70.67	(Khataee et al., 2009)
UV/TiO_2	C.I. Acid Orange 12	pH = 6.1, [dye]=30 mg/L, UV-C: 21.9 W/m^2, TiO_2:Degussa P25	TOC:96.89%	85.65	(Khataee et al., 2009)
UV/TiO_2	C.I. Acid Orange 8	pH = 6.9, [dye]=30 mg/L, UV-C:21.9 W/m^2, TiO_2:Degussa P25	TOC:94.47%	98.04	(Khataee et al., 2009)
UV/TiO_2	Reactive Orange 16	UV-C:125 W, [dye]=50 mg/L, TiO_2 coated on glass Raschig rings/[TiO_2]=1 g/L suspension	-	91, 52	(Lizama et al., 2001)
UV/TiO_2	Reactive Red 2	UV-C:125 W, [dye]=50 mg/L, TiO_2 coated on glass Raschig rings/[TiO_2]=1 g/L suspension	-	145, 69	(Lizama et al., 2001)
UV/TiO_2	Reactive Yellow 2	UV-C:125 W, [dye]=50 mg/L, TiO_2 coated on glass Raschig rings/[TiO_2]=1 g/L suspension	-	85, 41	(Lizama et al., 2001)
UV/TiO_2	Reactive Blue 19	UV-C:125 W, [dye]=50 mg/L, TiO_2 coated on glass Raschig rings/[TiO_2]=1 g/L suspension	-	139, 104	(Lizama et al., 2001)
UV/TiO_2	Reactive Blue 19	UV-C: 125 W, [TiO_2]=0.5 g/L, [dye]=50 mg/L, TOC:32 ppm, pH=11	TOC:46%	7.6	(Lizama et al., 2002)
UV/TiO_2	Reactive red 241	UV-C:8 W, [TiO_2]=0.05 g/L, pH=4	Color:54.8%, COD: 24.6%		(Patel et al., 2013)
UV/TiO_2	Reactive red 241	UV-C:8 W, [TiO_2]=0.05 g/L, pH=7	Color:26.5%, COD:11.6%		(Patel et al., 2013)
UV/TiO_2	Reactive red 241	UV-C:8 W, [TiO_2]=0.05 g/L, pH=10	Color:29.4%, COD:12.2%		(Patel et al., 2013)
UV/TiO_2	Reactive Red 45	UV:125 W, [TiO_2]=0.5 g/L, [dye]=80 mg/L, pH=5	Color:59%, TOC:23%		(Peternel et al., 2007)
UV/TiO_2	Acid Orange 7	UV-C:43 W, [TiO_2]=0.5 g/L, [dye]=5×10^{-5} M, pH=6.1		273.93	(Sadik, 2007)
UV/TiO_2	C.I. Reactive Red 2	UV-A:8 W, [TiO_2]=0.5 g/L, [dye]=20 mg/L, pH=7	Color:64%	26.48	(Wu et al., 2013)
UV/TiO_2	Methylene Blue	UV: 425 nm/250 W, [TiO_2]=1 g/L, [dye]=20 mg/L	Color:98%	107.31	(Q. Zhang et al., 2013)
UV-vis/HT/Fe/Fe	Biologically treated textile mill effluent	UV-vis, [HT/Fe/TiO_2]=2 mg/L, [dye]=50 mg/L, pH=10	Color:96%		(Arcanjo et al., 2018)
UV/TiO_2	Real textile wastewater	UV-C: 315 nm/100 W, TiO_2 nanotubes, COD=153 mg/L, pH=3/8	Color:93.6%	8.36, 12.41	(Cardoso et al., 2016)
UV-LED/TiO_2	Reactive Black 5	UVA-LED:0.0129 kW, [TiO_2]=1 g/L, [dye]=50 mg/L, flowrate=0.8 mL/min	Color:89%	220	(Ferreira et al., 2016)
UV-LED/TiO_2	Malachite Green	UVA-LED: 10-12 mW, TiO_2 coated quartz tube, [dye]=5 mg/L	Color:99%	789.47	(Natarajan et al., 2011)
UV-LED/TiO_2	Methylene Blue	UVA-LED: 10-12 mW, TiO_2 coated quartz tube, [dye]=5 mg/L	Color:61%	3000	(Natarajan et al., 2011)
UV-LED/TiO_2	Rhodamine B	UVA-LED: 10-12 mW, TiO_2 coated quartz tube, [dye]=5 mg/L	Color:62%	1500	(Natarajan et al., 2011)
UV/ZnO	Eosin Y	UV-C:16 W, [ZnO]=1 g/L, [dye]=50 mg/L, pH=6.9	Color:39%, COD:8.1%		(Chakrabarti and Dutta, 2004)
UV/ZnO	Methylene Blue	UV-C:16 W, [ZnO]=1 g/L, [dye]=50 mg/L, pH=6.9	Color:58%, COD:24%		(Chakrabarti and Dutta, 2004)
UV/ZnO	C.I. Acid Orange 7	UV-C:30 W, [ZnO]=160 mg/L, [dye]=20 mg/L, neutral pH	Color:100%	384	(Daneshvar et al., 2007)
UV/ZnO	Reactive Blue 19 (RB 19)	pH=11, UVC: 125 W, [ZnO]=0.8 g/L, [dye]=50 mg/L, TOC:32 ppm, time=1 h	TOC:60%	22.4	(Lizama et al., 2002)
UV/ZnO	Reactive Red 45	UV:125 W, [ZnO]=2.5 g/L, [dye]=80 mg/L, pH=5	Color:58.3%, TOC:22.4%		(Peternel et al., 2007)
UV/ZnO	C.I. Reactive Red 2	UV-A:8 W, [ZnO]=0.5 g/L, [dye]=20 mg/L, pH=7	Color:51%	39.38	(Wu et al., 2013)
UV/TiO_2/ZnO	C.I. Reactive Red 2	UV-A:8 W, [TiO_2/ZnO]=0.5 g/L, [dye]=20 mg/L, pH=7	Color:90%	12.69	(Wu et al., 2013)
UV/TiO_2/SiO_2	Reactive Black 5	UV:365 nm/25 W, [TiO_2]=[SiO_2]=2024 mg/L, pH=5.8			(Aguedach et al., 2008)
UV/$SrTiO_3$/CeO_2	Reactive Black 5	UV:200 W, [$SrTiO_3$/CeO_2]=0.02 g/L, [dye]=100 mg/L, pH=12	Color:100%, COD:57%		(Song et al., 2007a)

UV/$SrTiO_3$/CeO_2	C.I. Direct Red 23	UV:250 W, [$SrTiO_3$/CeO_2]=1.5 g/L, [dye]=100 mg/L, pH=12	Color:97%, COD:69%		(Song et al., 2008)
UV/ZnO/SnO_2/air	Methylene Blue	UV:8 W, [ZnO]=[SnO_2]=0.5 g/L, Air:400 mL/min, [dye]=10 mg/L, pH=12	Color:96%		(Chiang and Lin, 2013)
UV/ZnO/air	Acid Violet 7	UV:8 W, [ZnO]=2 g/L, [air]=8.1 mL/s, [dye]=5×10^{-4} M, pH=9	Color:94.4%		(Krishnakumar and Swaminathan, 2011)
UV/TiO_2/H_2O_2	Acid Orange 7	UV-C:43 W, [TiO_2]=0.5 g/L, [H_2O_2]=(8.82-71) $\times10^{-3}$ M, [dye]=5×10^{-5} M		117.84, 68.48, 49.49, 40.45	(Sadik, 2007)
UV/TiO_2/IO_4^-	Acid Orange 7	UV-C:43 W, [TiO_2]=0.5 g/L, [IO_4^-]=(4.67-100) $\times10^{-5}$ M, [dye]=5×10^{-5} M		102.39, 35.67, 11.97, 8.36	(Sadik, 2007)
UV/TiO_2/H_2O_2	Methylene Blue	UV: 425 nm/250 W, [TiO_2]=1 g/L, [dye]=20 mg/L, [H_2O_2]=20/40/80/100 mg/L	Color:98%	52.32, 48.40, 40.79, 38.09	(Q. Zhang et al., 2013)
UV/ZnO/H_2O_2	C.I. Acid Orange 7	UV-C:30 W, [ZnO]=160 mg/L, [H2O2]=10 mM, [dye]=20 mg/L	Color:100%	172	(Daneshvar et al., 2007)
UV/WO_3	Acid Orange 7	UV-C:125 W, [WO_3]=1 g.L, [dye]=5-50 mg/L, pH=3		213.33, 424.78, 2000, 2823.53, 4800, 8000	(Mohagheghian et al., 2015)

Table S5 Textile wastewater treatment using Fenton-based AOPs.

Process	Dye	Experimental conditions	Removal efficiency	EEO (kWh m^{-3} $order^{-1}$)	References
Fenton	Acetate and polyester fiber dyeing effluent	[Fe^{2+}]=500 mg/L, [H_2O_2]=300 mg/L, [COD]=930 mg/L, pH=5	Color: 94%, COD: 96%	3.01	(Azbar et al., 2004)
Fenton	Real textile wastewater	[Fe^{2+}]=400 mg/L, [H_2O_2]=550 mg/L, [COD]=660-2660 mg/L, pH=3.0±0.2	Color:100%, COD:>90%		(Badawy and Ali, 2006)
Fenton	Real textile wastewater	[Fe^{2+}]= mM, [H_2O_2]= mM, [COD]=1610 mg/L, pH=11.5	Color:99.6%, COD:81.4%,	0.0137	(Buthiyappan and Abdul Raman, 2019)
Fenton	Textile effluent (Color)	[Fe^{2+}]=50 mg/L, [H_2O_2]=1 mL/L	Color:45%, 21.8%	0.7, 0.66	(Durr-E-Shahwar et al., 2012)
Fenton	Textile effluent (COD)	[Fe^{2+}]=50 mg/L, [H_2O_2]=1 mL/L	Color:45%, 21.8%	0.8, 0.98	(Durr-E-Shahwar et al., 2012)
Fenton	Direct Blue 71	[Fe^{2+}]=3 mg/L, [H_2O_2]=125 mg/L, [COD]=139.9 mg/L, pH=3.0	Color: 94%, COD: 50.7%		(Ertugay and Acar, 2017)
Fenton	Real textile effluent	[COD]=1132.6 mg/L, [Fe^{2+}]:[H_2O_2]=1:25, pH=3	Color:>92%		(Hayat et al., 2015)
Fenton	Direct Red 80	[Fe^{2+}]=30 mg/L, [H_2O_2]=330 mg/L, [dye]=150 mg/L, pH=3.5	Color: 99.77%		(Jogani et al., 2017)
Fenton	Direct Yellow 50	[Fe^{2+}]=1 mM, [H_2O_2]=10 mM, [dye]=0.02 mM, pH=3		17.59	(Mahmoud and Ismail, 2011)
Photo-Fenton	Six reactive dyestuffs	UV-C:18 W, [H_2O_2]=25 mM, [Fe^{2+}]=0.5 mM, [DOC]=25 mg/L, pH=11.5		0.56	(Arslan et al., 2000)
Photo-Fenton	Real textile wastewater	UV-C:20 W, [COD]=1610 mg/L, [H_2O_2]:[COD]=8.87, [H_2O_2]:[Fe^{2+}]=4.82, pH=5.36	Color:99.9%, COD:91.2%, TOC:78.5%	0.0119	(Buthiyappan and Abdul Raman, 2019)
Photo-Fenton	Textile effluent (Color)	UV-C:108 W, [Fe^{2+}]=50 mg/L, [H_2O_2]=1 mL/L	Color:56%, 39%	43.0, 40.0	(Durr-E-Shahwar et al., 2012)
Photo-Fenton	Textile effluent (COD)	UV-C:108 W, [Fe^{2+}]=50 mg/L, [H_2O_2]=1 mL/L	Color:56%, 39%	46.0, 59.5	(Durr-E-Shahwar et al., 2012)
Photo-Fenton	Direct Yellow 50	UV-C:4 W, [Fe^{2+}]=1 mM, [H_2O_2]=10 mM, [dye]=0.02 mM, pH=3		7.66	(Mahmoud and Ismail, 2011)
Photo-Fenton	C.I. Reactive Red 2	UV-C:8 W, [Fe^{3+}]=25 mg/L, [H_2O_2]=1000 mg/L, [dye]=20 mg/L, pH=7	Color:92%	2.01	(Wu et al., 2013)
Electro-Fenton	Dye bath effluents	Anode: Ti/$Ru_{0.15}Ti_{0.85}O_2$ (DSA), [dye]=231 mg/L, pH=3, I=100 mA		7.4	(Nakamura et al., 2019)
Electro-Fenton	Reactive Blue 4	Anode: Ti/$Ru_{0.15}Ti_{0.85}O_2$ (DSA), [dye]=231 mg/L, pH=3, I=100/200 mA		0.5, 0.7	(Nakamura et al., 2019)
Electro-Fenton	Acid Orange 7	Anode:carbon felt, Cathode:carbon felt, [dye]=0.1 mM, [Fe^{3+}]=0.1 mM, I=0.3 A, pH=3	TOC:92%		(Özcan et al., 2009)

Electro-Fenton	Orange II	Anode:graphite cloth, Cathode:graphite cloth, [dye]=50 mg/L, $[Fe^{2+}]$=0.2 mM, I=300 mA/cm^2, pH=3	Color:100%, TOC:63%		(Peralta-Hernández et al., 2008)
Electro-Fenton	Acid Orange 7	ΔEcell=1.8 V, I=0.200 A, Cathode: FC, Anode:304 Stainless Steel Mes, Catholyte:1.5 L of 70 mg/LNA7+0.05M Na_2SO_4+1mM $FeSO_4$, pH=2; Anolyte:1.5 L of NA7+0.8M H_2SO_4+5mM H_2O_2		0.379	(Ramírez-Pereda et al., 2019)
Electro-Fenton	Acid Yellow 36	Anode:boron doped diamond, Cathode:carbon-PTFE, $[Fe^{2+}]$=0.5 mM, I=3 A, [dye]=108 mg/L, pH=3	Color:100%, TOC:71%		(Ruiz et al., 2011)
Electro-Fenton	Methyl Orange	Anode:Pt sheet, Cathode:graphite felt, I=50 A/m^2, pH=3/7	-	2.25, 4.5	(Yu et al., 2015)
Electro-Fenton	Methyl Orange	Anode:Pt sheet, Cathode:carbon/graphite-PTFE, I=50 A/m^2, pH=3/7	Color:95.7%, 85.3%	0.75, 1.26	(Yu et al., 2015)
Photo-Fenton (Solar)	Textile effluent (Color)	Sunlight, $[Fe^{2+}]$=50 mg/L, $[H_2O_2]$=1 ml/L	Color:61%, 52%	0.3, 0.3	(Durr-E-Shahwar et al., 2012)
Photo-Fenton (Solar)	Textile effluent (COD)	Sunlight, $[Fe^{2+}]$=50 mg/L, $[H_2O_2]$=1 ml/L	COD:66%, 84%	0.4, 0.5	(Durr-E-Shahwar et al., 2012)
Ozone-Photo-Fenton	C.I. Reactive Red 2	UV-C:8 W, $[O_3]$=500 mL/min, $[Fe^{3+}]$=25 mg/L, $[H_2O_2]$=1000 mg/L, [dye]=20 mg/L, pH=7	Color:99%	3.20	(Wu et al., 2013)
Ozone-Photo-Fenton	C.I. Reactive Red 2	$[O_3]$=500 mL/min, $[H_2O_2]$=1000 mg/L, $[Fe^{3+}]$=25 mg/L, [dye]=40 mg/L, pH=4/7/10		0.979, 2.133, 2.972	(Wu and Ng, 2008)
Photo-Electro-Fenton	Reactive Blue 4	UV-A:12 W, Anode: $Ti/Ru_{0.15}Ti_{0.85}O_2$ (DSA), [dye]=231 mg/L, pH=3, I=100/200 mA		0.5, 0.7	(Nakamura et al., 2019)
Photo-Electro-Fenton	C.I. Acid Blue 5	UV-C:15 W, I=0.3 A, [FR]=10 L/h, $[Fe^{3+}]$=0.2 mM, $[H_2O_2]$= ml/L, [dye]=10 mg/L, pH=3		1.25	(Khataee et al., 2014)

Table S6 Textile wastewater treatment using electrochemical AOPs.

Process	Dye	Experimental condition	Removal efficiency	EEO (kWh m^{-3} $order^{-1}$)	Ref
Electrochemical	Real textile effluents	Anode:BDD, COD:160 mg/L, I=40 mA/cm^2	Color:100%, COD:99%		(Abdessamad et al., 2013)
Electrochemical	Real textile effluents	Anode:Ti-Pt/β-PbO_2, COD:729.0 mg/L, I=15 mA/cm^2	Color:100%, COD:50%		(Aquino et al., 2011)
Electrochemical	Real textile effluents	Anode:BDD, COD:729.0 mg/L, I=5 mA/cm^2	Color:100%, COD:100%		(Aquino et al., 2011)
Electrochemical	Real textile effluents	Anode:Ti-Pt/β-PbO_2, COD:550.0 mg/L, I=75 mA/cm^2	Color:100%, COD:86%		(Aquino et al., 2014)
Electrochemical	Real textile effluents	Anode:$Ti/Ti_{0.7}Ru_{0.3}O_2$ (DSA), COD:550.0 mg/L, I=75 mA/cm^2	Color:100%, COD:55%		(Aquino et al., 2014)
Electrochemical	Rhodamine B	Anode:Ti/RuO_2-IrO_2 (DSA), electrolyte=0.1 mol/L Na_2SO_4+0.05 mol/L NaCl, [dye]=50 mg/L, T=25 °C, I=20/30/40 mA/cm^2	Color:100%	8.229, 7.680, 9.397	(Baddouh et al., 2018)
Electrochemical	Rhodamine B	Anode:Ti/RuO_2-IrO_2 DSA, electrolyte=0.1 mol/L Na_2SO_4+0.05 mol/L NaCl, [dye]=50 mg/L, I=40 mA/cm^2, T=25/30/35 °C	Color:100%	8.749, 13.584, 7.453	(Baddouh et al., 2018)
Electrochemical	Rhodamine B	Anode:SnO_2, Electrolyte=0.1 mol/L Na_2SO_4+0.05 mol/L NaCl, [dye]=50 mg/L, T=25 °C, I=20/30/40 mA/cm^2	Color:100%	23.467, 15.890, 16.000	(Baddouh et al., 2018)
Electrochemical	Rhodamine B	Anode:SnO_2, electrolyte=0.1 mol/L Na_2SO_4+0.05 mol/L NaCl, [dye]=50 mg/L, I=40 mA/cm^2, T=25/30/35 °C	Color:100%	13.737, 15.059, 12.16	(Baddouh et al., 2018)
Electrochemical	Real textile effluents	Electrode:Ti/TiOx-RuOx, COD:5800 mg/L, I=5 mA/cm^2	Color:100%, COD:98%		(Basha et al., 2012)
Electrochemical	Real textile effluents	Anode: Ti/TiOx-RuOx, COD:560.0 mg/L, I=5 mA/cm^2	Color:100%, COD:95%		(Basha et al., 2012)

Electrochemical	Alphazurine	Anode:BDD, Cathode:zirconium, [dye]=500 mg/L, I=30 mA/cm^2	Color:100%, COD:95%		(Bensalah et al., 2009)
Electrochemical	Real textile effluents	Anode:Ti/Ta/Ir/Pt alloy, Electrolyte:Raw effluent, COD:404 mg/L, I=26.5 mA/cm^2	Color:60% (180 min)		(Chatzisymeon et al., 2006)
Electrochemical	Real textile effluents	Anode:Ti/Ta/Ir/Pt alloy, Electrolyte:Raw effluent+0.5% NaCl, COD:404 mg/L, I=26.5 mA/cm^2	Color:>95% (10-15 min)		(Chatzisymeon et al., 2006)
Electrochemical	Congo Red	Anode:BDD, Cathode:stainless steel, [dye]=500 mg/L, I=30 mA/cm^2, pH=7	TOC:100%, COD:100%		(Faouzi Elahmadi et al., 2009)
Electrochemical	Reactive Violet 2	Anode:graphite rods, Cathode:stainless steel, [dye]=100 mg/L, I=79 mA/cm^2, pH=7		14.25	(Hamad et al., 2018)
Electrochemical	Acid Brown 14	Anode:graphite rods, Cathode:stainless steel, [dye]=100 mg/L, I=79 mA/cm^2, pH=6		11.2	(Hamad et al., 2018)
Electrochemical	Real textile effluents	Anode:Ti/β-PbO_2, COD:250 mg/L, I=12 mA/cm^2	Color:60%, COD:78%		(Ling et al., 2016)
Electrochemical	Real textile effluent	Electrode: $Ti/Ru_{0.3}Ti_{0.7}O_2$ DSA, TOC:225 mg, UV-vis band: 490/620/660 nm, I=40 mA/cm^2	Color: 9.9%/7.3%/7.4%	1286, 1769, 1744	(Malpass et al., 2007)
Electrochemical	Real textile effluent	Electrode: $Ti/Ru_{0.3}Ti_{0.7}O_2$ DSA, TOC:225 mg, UV-vis band: 490/620/660 nm, I=60 mA/cm^2	Color: 22.5%/22.8%/21.3%	971, 947, 1050	(Malpass et al., 2007)
Electrochemical	Real textile effluent	Electrode: $Ti/Ru_{0.1}Sn_{0.9}O_2$ DSA, Electrolyte: effluent+0.1 mol/L NaCl, TOC:225 mg, UV-vis band: 490/620/660 nm, I=40 mA/cm^2	Color: 90%/95%/96%	37,29,27	(Malpass et al., 2008)
Electrochemical	Real textile effluent	Electrode: $Ti/Ru_{0.2}Sn_{0.8}O_2$ DSA, Electrolyte: effluent+0.1 mol/L NaCl, TOC:225 mg, UV-vis band: 490/620/660 nm, I=40 mA/cm^2	Color: 91%/93%/94%	34,30,28	(Malpass et al., 2008)
Electrochemical	Real textile effluent	Electrode: $Ti/Ru_{0.3}Sn_{0.7}O_2$ DSA, Electrolyte: effluent+0.1 mol/L NaCl, TOC:225 mg, UV-vis band: 490/620/660 nm, I=60 mA/cm^2	Color: 91%/85%/84%	34,42,43	(Malpass et al., 2008)
Electrochemical	Real textile effluent	Electrode: $Ti/Ir_{0.3}Ti_{0.7}O_2$ DSA, Electrolyte: effluent+0.1 mol/L NaCl, TOC:225 mg, UV-vis band: 490/620/660 nm, I=40 mA/cm^2	Color: 79%/85%/87%	58,48,45	(Malpass et al., 2008)
Electrochemical	Real textile effluent	Electrode: $Ti/Ru_{0.3}Ti_{0.7}O_2$ DSA, Electrolyte: effluent+0.1 mol/L NaCl, TOC:225 mg, UV-vis band: 490/620/660 nm, I=40 mA/cm^2	Color: 95%/96%/96%	28,26,26	(Malpass et al., 2008)
Electrochemical	Real textile effluents	Anode:BDD, Cathode:Ti plate, Electrolyte: effluent+Na_2SO_4, COD:650.0 mg/L, I=40 mA/cm^2	Color:100%, COD:100%		(Martínez-Huitle et al., 2012)
Electrochemical	Dye bath effluents	Anode: $Ti/Ru_{0.15}Ti_{0.85}O_2$ DSA, [dye]=231 mg/L, pH=3, I=100 mA		54.8	(Nakamura et al., 2019)
Electrochemical	Reactive Blue 4	Anode: $Ti/Ru_{0.15}Ti_{0.85}O_2$ (DSA), [dye]=231 mg/L, pH=3, I=100/200 mA		7.4, 16.5	(Nakamura et al., 2019)
Electrochemical	Procion Yellow Hexl	Anode:Ti/SnO_2-Sb-Pt, Cathode: stainless steel, I=125 mA/cm^2, [dye]=1.5 g/L, pH=7	COD:41.09%, TOC:37.30%	220	(Orts et al., 2018)
Electrochemical	Procion Crimson Hexl	Anode:Ti/SnO_2-Sb-Pt, Cathode: stainless steel, I=125 mA/cm^2, [dye]=1.5 g/L, pH=7	COD:44.23%, TOC:19.72%	740	(Orts et al., 2018)
Electrochemical	Procion Navy Hexl	Anode:Ti/SnO_2-Sb-Pt, Cathode: stainless steel, I=125 mA/cm^2, [dye]=1.5 g/L, pH=7	COD:59.35%, TOC:41.33%	640	(Orts et al., 2018)
Electrochemical	Alizarin Red	Anode:Pt grid, Cathode:GDE, [dye]=120 mg/L, [Fe^{2+}]=1 mM, [air]=20 mL/s, pH=3	TOC:93%		(Panizza and Cerisola, 2009)
Electrochemical	Methylene	Anode:Ti/Pt, Cathode:Ti plates, [dye]=100 mg/L, I=40 mA/cm^2	Color:100%, TOC:50%		(Tavares et al., 2012)

Electrochemical	Methylene	Anode:Ti/$Ru_{0.3}$/$Ti_{0.7}O_2$, Cathode:Ti plates, [dye]=100 mg/L, I=40 mA/cm^2	Color:100%, TOC:35%		(Tavares et al., 2012)
Electrochemical	Real textile effluents	Anode:BDD, COD:470 mg/L, I=8 mA/cm^2	Color:100%, COD:80%		(Tsantaki et al., 2012)
Electrochemical	Real textile effluents	Anode:Ti/Pt, DOC:124 mg/L, I=177 mA/cm^2	Color:96%		(Sala and Gutiérrez-Bouzán, 2014)
Electrochemical	Real textile effluents	Anode:BDD, COD:1000 mg/L, I=60 mA/cm^2	Color:100%, COD:100%		(Solano et al., 2013)
Electrochemical	C.I. Acid Blue 92	Anode:BDD, Cathode:carbon nanotubes-polytetrafluoroethylene, [dye]=20 mg/L, I=0.1 A, pH=6, flow rate=10 L/h	Color:37.65%	55.95	(Vahid and Khataee, 2013)
Electrochemical	Wastewater from total dyeing and finishing stages	Anode:Ti/Pt, Cathode:stainless steel, [dye]=1250 mg/L, pH=5	Color:100%		(Vlyssides et al., 2000)
Electrochemical	Wastewater from dyeing stages	Anode:Ti/Pt, Cathode:stainless steel, [dye]=3325 mg/L, pH=5	Color:100%		(Vlyssides et al., 2000)
Electrochemical	Real textile effluents	Anode:Ti/Pt, COD:1354 mg/L, I=80 mA/cm^2	Color:100%, COD:50%		(Wang et al., 2009)

Table S7 Textile wastewater treatment using US-based AOPs.

Process	Dye	Experimental condition	Removal efficiency	EEO (kWh m^{-3} $order^{-1}$)	Ref
US	Malachite Green	US:35 kHz, PD=0.049 W/mL, MA=150 rpm, T=294±0.5 K, [dye]=4.89/6.82/9.87 mg/L	-	633.79, 870.40, 1231.70	(Behnajady and Vahid, 2016)
US	Malachite Green	US:35 kHz, PD=0.049 W/mL, MA=150 rpm, [dye]=5 mg/L, T=297/302/307 K	-	572.63, 438.12, 373.03	(Behnajady and Vahid, 2016)
US	Malachite Green	US:35 kHz, MA=150 rpm, T=294±0.5 K, [dye]=5 mg/L, PD=0.07/0.098/0.163 W/mL	-	818.05, 952.99, 1157.45	(Behnajady and Vahid, 2016)
US	Malachite Green	US:35 kHz, PD=0.049 W/mL, T=294±0.5 K, [dye]=5 mg/L, MA=75/400 rpm	-	777.14, 466.28	(Behnajady and Vahid, 2016)
US	C.I. Reactive Orange 107	US:850 kHz, P_E = 136 W, V= 500 mL, [dye]=50/100/200 mg/L	Color: 99%	1770, 2089, 2222	(Dede et al., 2019)
US	Reactive azo dye	US:520 kHz, [dye]=19.95 mg/L	-	10964.69	(Mahamuni and Adewuyi, 2010)
US/O_3	C.I. Reactive 5	US:520 kHz, [O_3]=3.36 g/L, [dye]=363 mg/L, pH=7	TOC:76%		(Ince and Tezcanlí, 2001)
US/O_3	Azobenzene dye	US:500 kHz, O_3=50 mL/min, [dye]=10 uM, pH=6.5	TOC:80%		(Destaillats et al., 2000)
US/O_3	Methyle Orange	US:500 kHz, O_3=50 mL/min, [dye]=10 uM, pH=6.5	TOC:80%		(Destaillats et al., 2000)
US/O_3	Reactive Yellow 84	US:20 kHz, [O_3]=4.6 g/h, [dye]=500 mg/L, pH=4.5	TOC:56%		(He et al., 2007)
US/O_3	Reactive azo dye	US:520 kHz, [O_3]=40 mg/L, [dye]=19.95 mg/L	-	1215.02	(Mahamuni and Adewuyi, 2010)
US/O_3	C.I. Direct Red 23	US:20 kHz, [O_3]=3.2 g/h, [dye]=100 mg/L, pH=8	Color:100%		(Song et al., 2007b)
US/UV	Acid Orange 7	US:20 kHz, UV:632 nm/100 mW/mm^2, [dye]=50 mg/L	Color:65%		(Ma et al., 2006)
US/UV	Reactive azo dye	US:520 kHz, UV-C:18 W, [dye]=19.95 mg/L	-	3698.09	(Mahamuni and Adewuyi, 2010)
US/UV/ZnO	C.I. Reactive Red 198	US:40 kHz, UV:15 W, [ZnO]=1 g/L, [dye]=20 mg/L, pH=7	TOC:75%		(Wu, 2008)
US/UV/O_3	Reactive azo dye	US:520 kHz, UV-C:18 W, [O_3]=40 mg/L, [dye]=19.95 mg/L	-	989.9	(Mahamuni and Adewuyi, 2010)
US/UV/O_3	Acid Orange 7	US:520 kHz, UV:18 W, [O_3]=40 g/m^3, [dye]=50 uM, pH=5.5	TOC:45%		(Tezcanli-Güyer and Ince, 2004)
US/UV/TiO_2	C.I. Acid Orange 52	US:200 kHz, UV:20 W, [TiO_2]=0.6 g/L, [dye]=25 mg/L	Color:100%, TOC:35%		(Maezawa et al., 2007)
US/Fe^0	Acid Orange 7	US:20 kHz, UV:300 W, [Fe^0]=2 g/L, [dye]=20 mg/L, pH=2.5	Color:96%		(Wang et al., 2014)
US/Fe^0/GAC	Acid Orange 7	US:40 kHz, [Fe^0]=12 g, [GAC]=2.3 g, [dye]=1000 mg/L, pH=4	Color:80%, TOC:57%		(Liu et al., 2007)

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