

Supplementary Materials

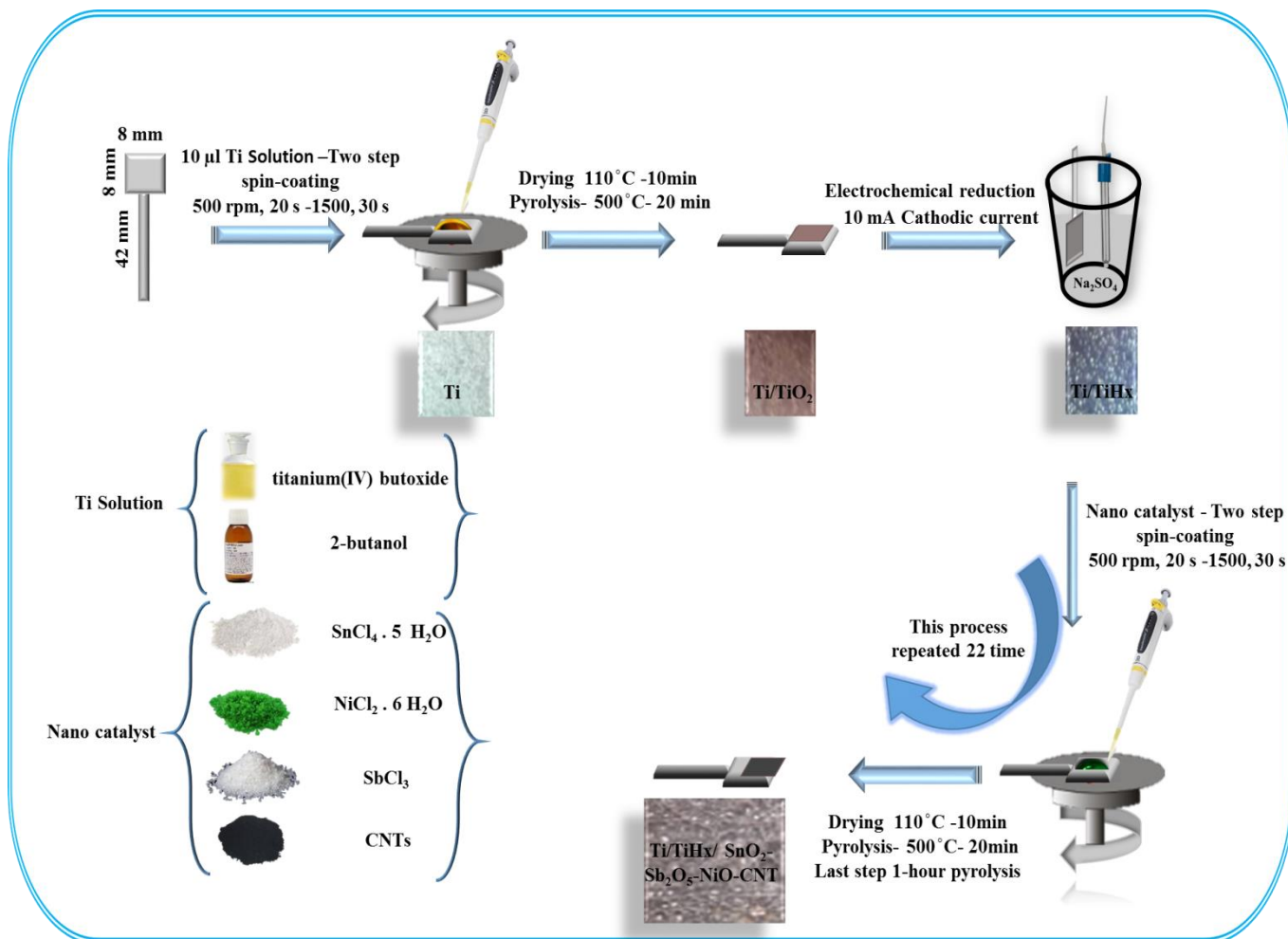


Fig. S1. Schematical illustration of fabrication of Ti/TiHx/SnO₂-Sb₂O₅-NiO-CNT electrode.

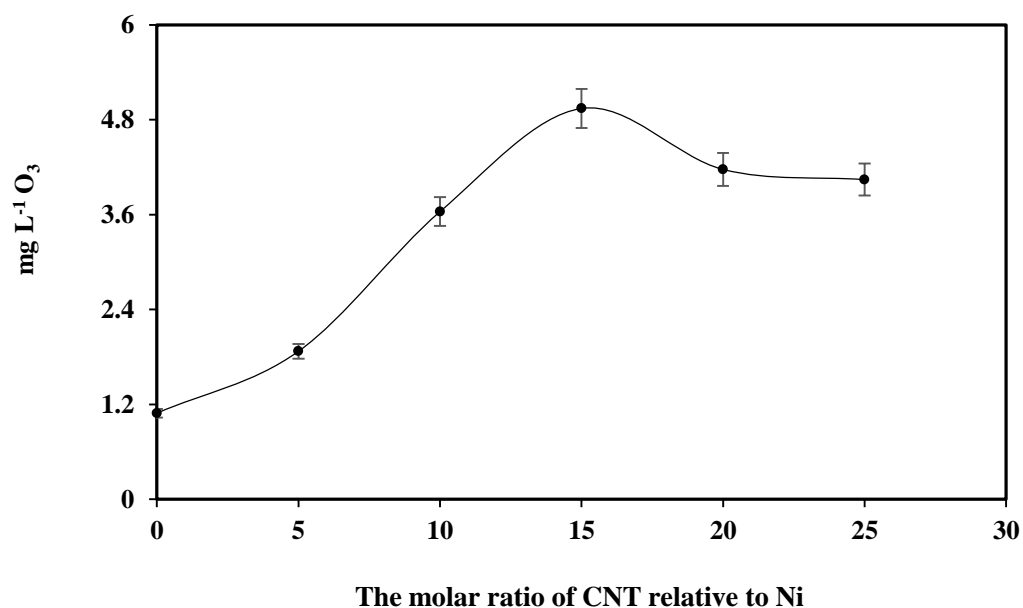


Fig. S2. The optimization of CNT molar ratio in composite mixture.

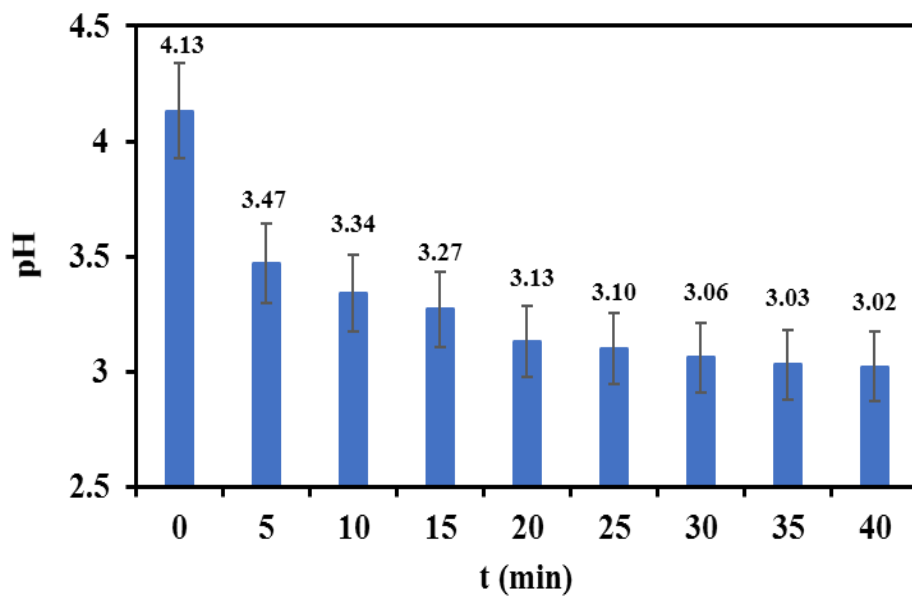


Fig. S3. pH change in the solution of RR 195 after electrolysis at Ti/TiHx/SnO₂-Sb₂O₅-NiO-CNT electrode for 0, 5, 10, 15, 20, 25, 30, 35 and 40 min (constant current density 20 mA·cm⁻², repeated 3 times).

Table S1. Examples of Electrochemical Degradation of Textile Dyes Base on Ti Anode Modified with SnO₂

Anode material	Current Or Voltage	Electrolytes	Degraded dye	Initial Concentration	Degradation efficiency (%)	Degradation Time (min)	Main oxidant produced	Ref.
Ti/SnO ₂	7.5 mA/cm ²	H ₂ SO ₄ (0.1 M)	C.I. Acid red 33	N.A.	93	16	Kind of active oxygen	[45]
Ti/Sn _(1-x) Ir _x O ₂	25.5 mA/cm ²	NaCl 0.05 mol·L ⁻¹	C.I. Acid red 29	4×10 ⁻⁵ mol·L ⁻¹	100	360	Kind of active chlorine	[46]
Ti/IrO ₂ -RuO ₂ -SnO ₂	20 V	NaCl 1.5 g·L ⁻¹	C.I. Reactive Orange 5 C.I. Reactive Red 3BS C.I. Direct Red 4BS C.I. Direct Green BE C.I. Direct Black 19 C.I. Reactive Blue 19 C.I. Disperse Red 3B	0 mg·L ⁻¹	99.9 90 100 94.7 98.7 99.3 32.4	160 100 30 30 30 20 230	Kind of active chlorine	[47]
Ti/IrO ₂ -SnO ₂ -Sb ₂ O ₃	9.37 mA/cm ²	NaCl 0.25 mol·L ⁻¹	C.I. Acid Blue 74	0.536 mmol·L ⁻¹	92	15	Kind of active chlorine	[7]
Ti/Ta ₂ O ₅ -SnO ₂	20 mA	Na ₂ SO ₄ (0.1 M)	C.I. Basic Violet 10	0.025 mmol·L ⁻¹	100	180	Kind of active oxygen	[48]
Ti/SnO ₂ -PbO ₂	15 mA/cm ²	Na ₂ SO ₄ (0.01 M)	C.I. Acid Orange 52	150 mg·L ⁻¹	100	90	Kind of active oxygen	[49]
Ti/Sb-SnO ₂	10.5 mA/cm ²	NaCl 1.5 g·L ⁻¹	C.I. Reactive Orange 7	100 mg·L ⁻¹	99.97	20	Kind of active chlorine	[50]
Ti/Sb-SnO ₂ -CNT	50 mA/cm ²	Na ₂ SO ₄ (0.1 M)	C.I. Acid Red 73	1 g·L ⁻¹	96	180	Kind of active oxygen	[51]
Ti/SnO ₂ -Sb ₂ O ₃ -PbO ₂ -Bi-CNT	30 mA/cm ²	Na ₂ SO ₄ (0.1 M)	C.I. Acid Orange 52	100 mg·L ⁻¹	84.5	120	Kind of active oxygen	[52]
Ti/SnO ₂ -Sb-Ni	2.7 V	H ₂ SO ₄ (0.5 M)	C.I. Violet 10	8 mg·L ⁻¹	99.5	30	Ozone	[53]
Ti/SnO ₂ -Sb-Ni	2.7 V	HClO ₄ (1 M)	C.I. Reactive Blue 50	1,000 mg·L ⁻¹	100	8	Ozone	[54]
Ti/SnO ₂ -Sb-Ni	37.5 mA/cm ²	HClO ₄ (1.25 M)	C.I. Reactive Red 198	0.05 mmol·L ⁻¹	100	10	Ozone	[8]

Table S2. Textile Azo Dye (C.I. Reactive red 195) Characterization

Commercial name	Novafix 3BS
Color index	C.I. Reactive red 195 (RR 195)
Company name	ITN Industrial corp. Ltd (China)
Chromophore	Monoazo
Chemical structure	
Molecular formula	$C_{31}H_{19}ClN_7Na_5O_{19}S_6$
Molecular mass (g/mol)	1,136.32
λ_{max} (nm)	542

Table S3. Reported Data Base on SnO₂ Anode for Electrochemical Ozone Generation

Anode material	Current density (mA cm²)	Electrolytes	Temp. (°C)	Efficiency of ozone generation (%)	Ref.
SnO ₂	1,200	H ₂ SO ₄ (5 M)	0	4	[14]
Ti/SnO ₂	7.6	NaCl (2.5 g·L ⁻¹)	R.T.	-	[45]
Ti/SnO ₂ -Sb	-	HClO ₄ (0.1 M)	R.T.	15	[10]
Ti/SnO ₂ -Sb	100	H ₂ SO ₄ (1 M)	25	-	[55]
Ti/SnO ₂ -Sb-Ni	-	H ₂ SO ₄ (0.1 M)	R.T.	36	[4]
Ti/SnO ₂ -Sb-Ni	37.5	HClO ₄ (1.25 M)	R.T.	28	[8]
Ti/SnO ₂ -Sb-Ni	-	HClO ₄ (1 M)	R.T.	53.7	[9]
Ti/SnO ₂ -Sb-Ni	-	H ₂ SO ₄ (0.5 M)	R.T.	50	[15]
Ti/TiHx/SnO ₂ -Sb	200	H ₂ SO ₄ (0.5 M)	R.T.	-	[61]
Ti/TiHx/SnO ₂ -Sb	200	H ₂ SO ₄ (0.5 M)	R.T.	-	[60]
Ti/TiHx/SnO ₂ -Sb ₂ O ₅ -NiO-CNT	20	HClO ₄ (0.1 M)	R.T.	36.5	This work