Supporting Information

Design of environmental-friendly carbon-based catalysts for efficient advanced oxidation processes

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Supplementary Figures and Tables

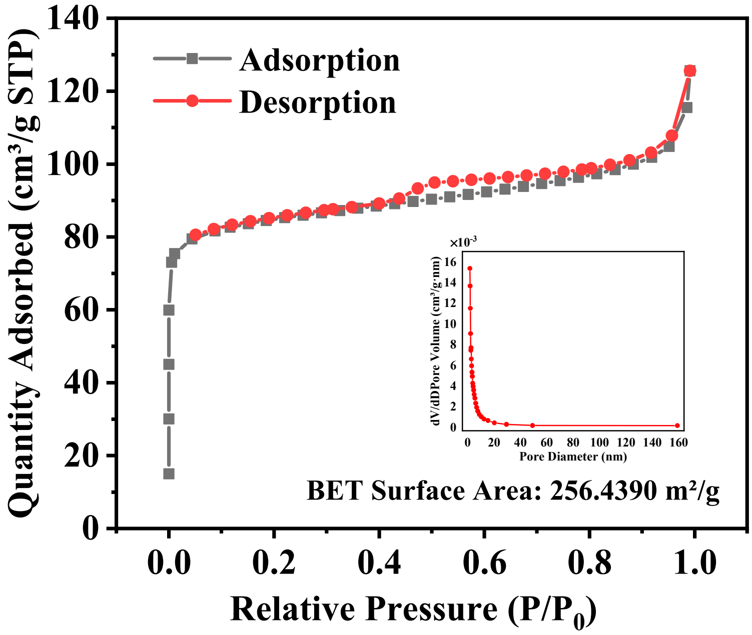

Figure S1. N_2 adsorption-desorption isotherm plot of Co-C/SiO_2.

Table S1. BET comparison between Co-C/SiO_2 and other catalysts.

	BET specific surface area (m²/g)	**Pore volume (cm³/g)**	**Pore size (nm)**	**k (min^{-1})**	**k-value ($\times 10^{-3} min^{-1}$)**	**Ref.**
Fe_3O_4@SiO_2@mSiO_2-Pd(0)	202.98	0.2419	20	/	/	[1]
NPC-800	676.9	0.86	/	0.0427	21.4	[2]
MNBC800	150.7	0.081	/	0.104	5.2	[3]
POP-1	33.39	/	15	/	/	[4]
Co-C/SiO_2	256.44	0.1942	3.0297	0.2271	28.4	This work

Table S2. Comparison of the binding energy and content of each element of Co-C/SiO_2 before and after the reaction.

		Binding Energy	Atomic (%)		Binding Energy	Atomic (%)
C 1s	Before reaction	284.4	91.1	After reaction	284.4	87.6
N 1s		399.11	1.65		399.29	2.06
O 1s		533.71	5.94		532.39	8.87
Si 2p		102.94	1.01		102.57	0.71
Co 2p1		802.67	0.3		795.49	0.54
Co 2p3		776.01	0		780.01	0.21

Table S3. Comparison between Co-C/SiO_2 and other Fenton-like catalysts for $^1O_2$ yield.

Catalyst	Trapping reagent	$^1O_2$ yield	Ref.
S-OMC-600	DPBF	4177.78 μmol/(g•L)	[5]
Ru_n/NC-850	DPBF	k-$^1O_2$ = 0.2954 min^{-1}	[6]
BvBN/Co	DPA	67.7 μM	[7]
Co-C/SiO_2	DPA	31.3 μM	This work

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