Electronic Supplementary Material (ESI) for Journal of Materials Chemistry A

Supporting Information
For

Tubular graphitic-C_3N_4: A Prospective material for energy storage and green photocatalyst

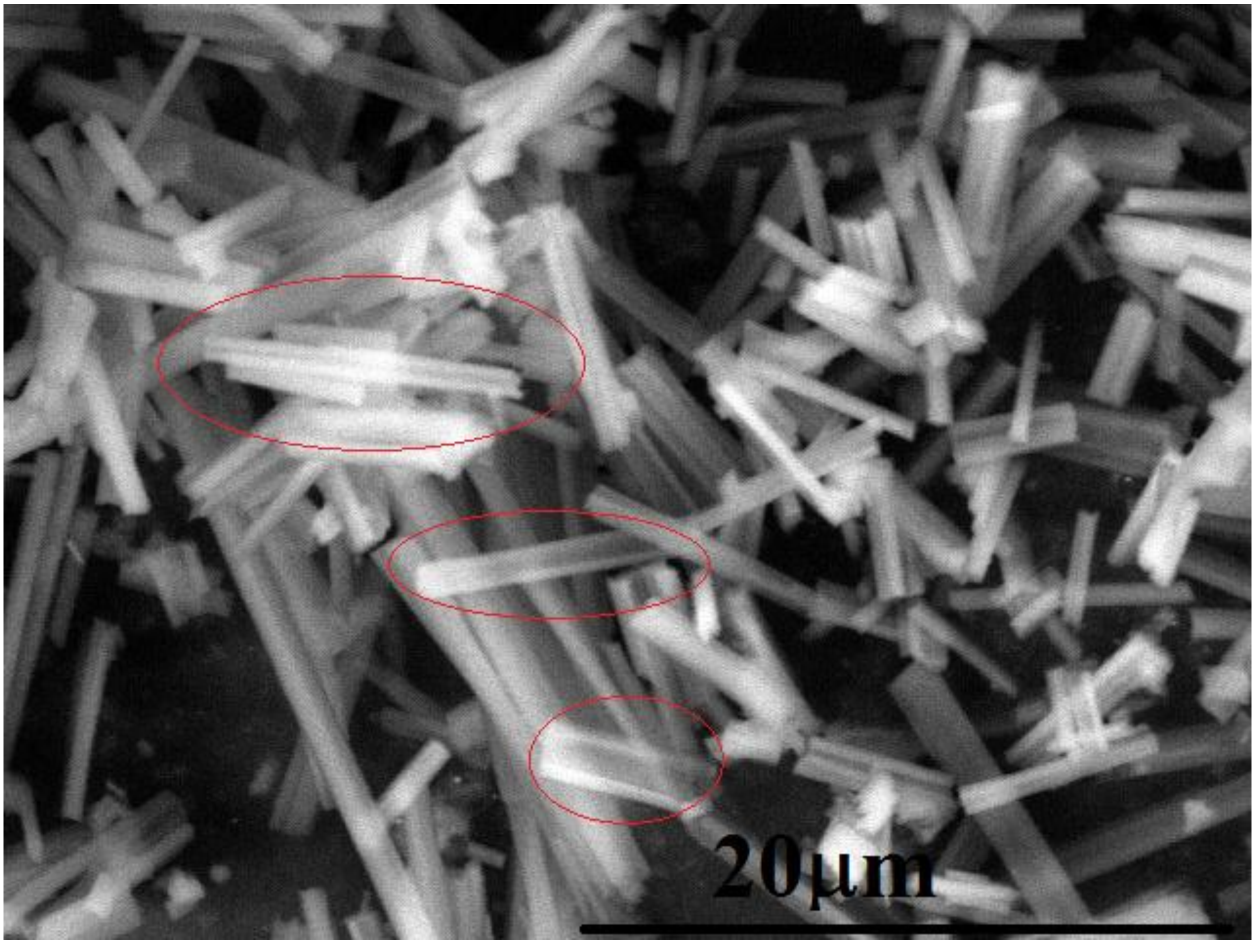

Figure S1. SEM imageof tubular g-C_3N_4.

Figure S2. HRTEM image of tubular g-C_3N_4.

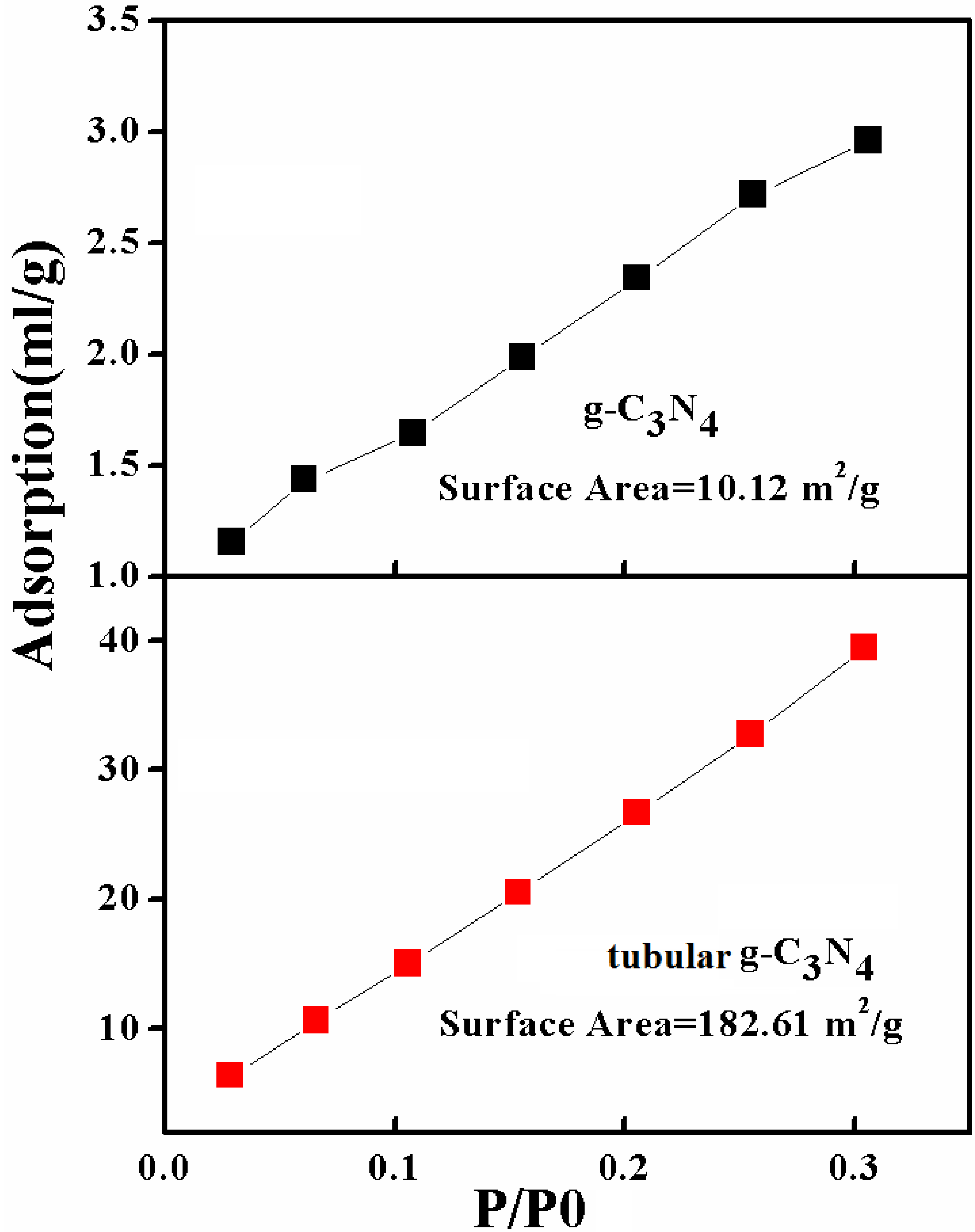

Figure S3. Nitrogen- adsorption curves of g-C_3N_4 and tubular g-C_3N_4 for BET surface area.

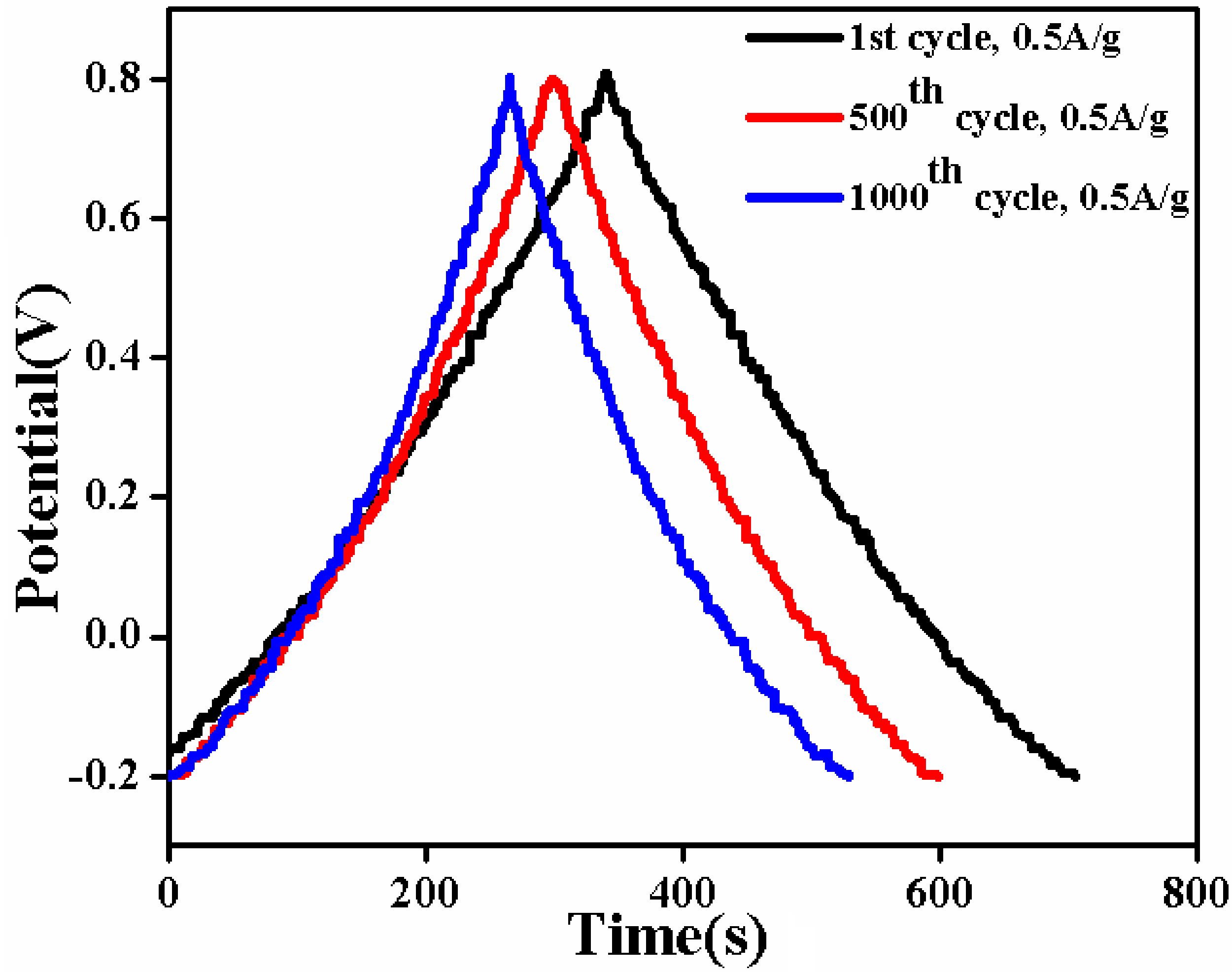

Figure S4. 1^{st}, 500^{th} and 1000^{th} charging - discharging curves of g-C_3N_4 within a potential window of -0.2 –0.8 V for current density 0.5 A/g.

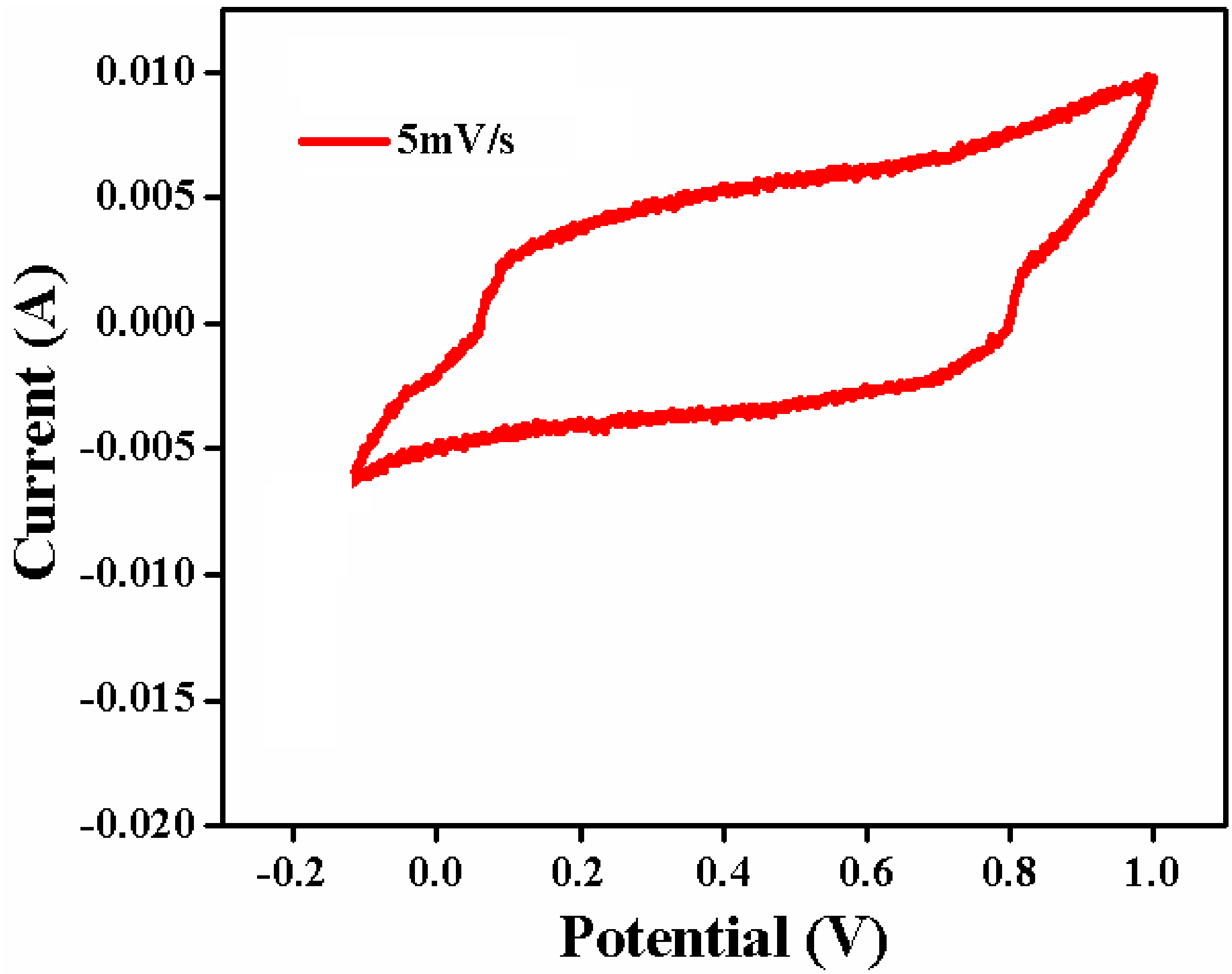

Figure S5. C-V curve of tubular g-C_3N_4 within a potential window of -0.2 –1.0V using a three-electrode cell at a scan rate of 5mV/s.

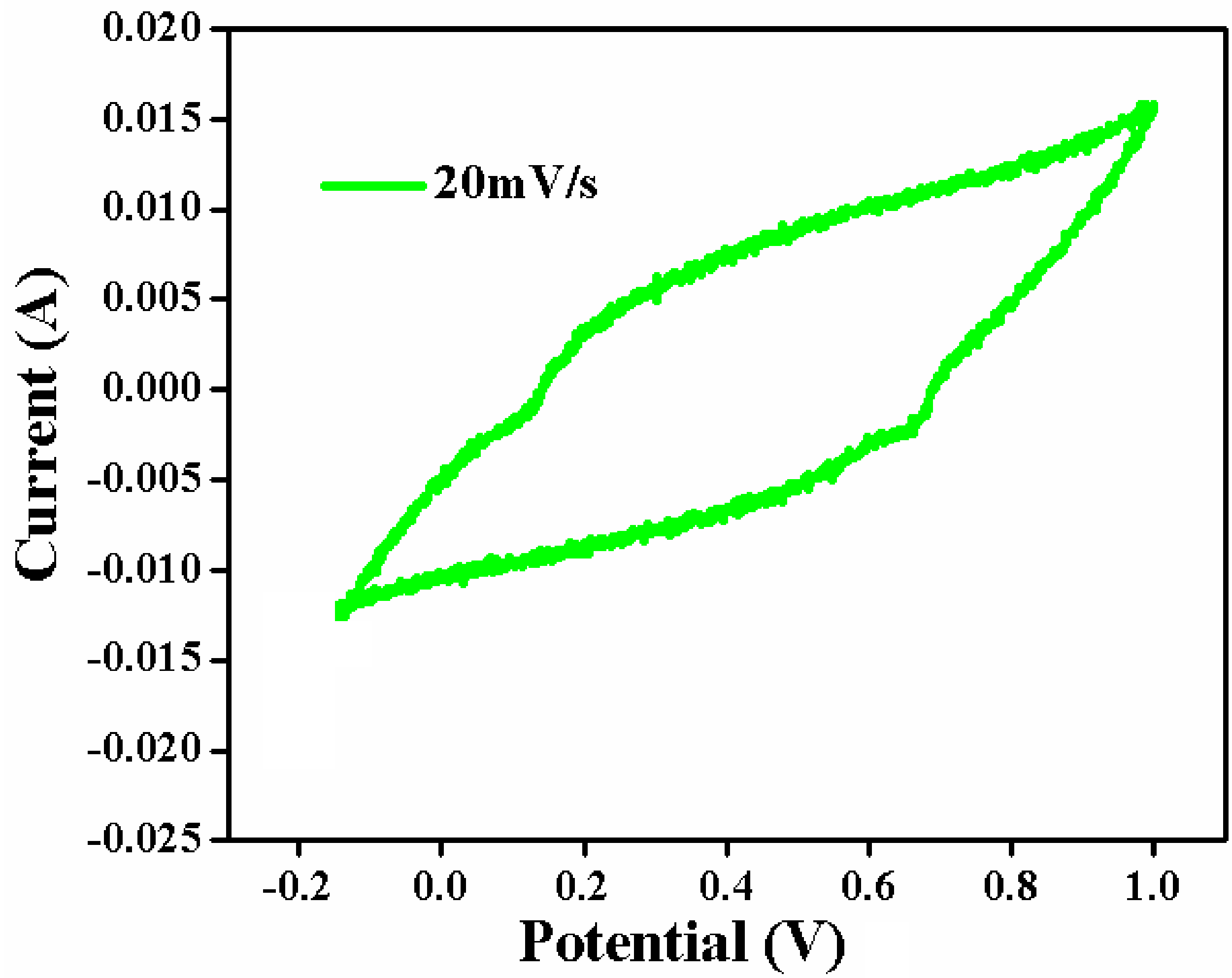

Figure S6. C-V curve of tubular g-C_3N_4 within a potential window of -0.2 –1.0V using a three-electrode cell at a scan rate of 20mV/s.

Table S1. Specific capacitance comparison of the best-performing nitrogen-doped carbon materials in the literature.

Materials	Electrolyte[L^{-1}]	Capacitance [Fg^{-1}]	Current Density (Ag^{-1})	Reference
N-Enriched Nanocarbons	1M H_2SO_4	210	0.1	1
N-enriched carbon	1 M H_2SO_4	201	0.5	2
MWCNTs	4 M H_2SO_4	62	0.2	3
CNTs	6 M KOH	198	0.05	4
N-enriched carbon	1 M H_2SO_4	201	0.5	5
N-enriched carbon	1 M TEABF$_4$	52	1mA /cm^2	6
O-rich carbons	1 MH_2SO_4	198	1	7
N-carbon	5 M H_2SO_4	211	1	8
CNTs/ N-carbon	1 M H_2SO_4	100	0.2	9
N-Doped Graphene	6 M KOH	246	1	10
N-doped carbonnanocage	6 M KOH	248	1	11
N-Doped Carbon	6 M KOH	202	1	12
Porous 3D graphene	1M TEABF$_4$	231	1	13
Acrylonitrile–propylene	1M H_2SO_4	340	0.2	14
Melamine	6 M KOH	280		14
Ethylene diamine–carbon tetrachloride	6 M KOH	318		14
				14
Urea–brown coal	6 M KOH	341		14
Tubular g-C_3N_4	6 M KOH	233	0.2	Our work

Table S2. First order rate constant comparison between different reported results.

Dye	Photocatalysts	k(min^{-1})	Reference	Our Work
MO	Born doped g-C_3N_4	0.004	15	0.0067
	g-C_3N_4 at 600^0C	0.003	15	
	g-C_3N_4 at 580^0C	0.004	15	
	g-C_3N_4	0.005	16	
MB	TiO_2 nanotubes	0.024	17	0.021
	TiO_2	0.0012	18	
	g-C_3N_4nanoplates	0.0016	19	
	g-C_3N_4nanorods	0.002	19	

Supplementary References

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