Highly purified CNTs: An Exceedingly Efficient Catalyst Support forPEM Fuel Cell.

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Supplementary Data

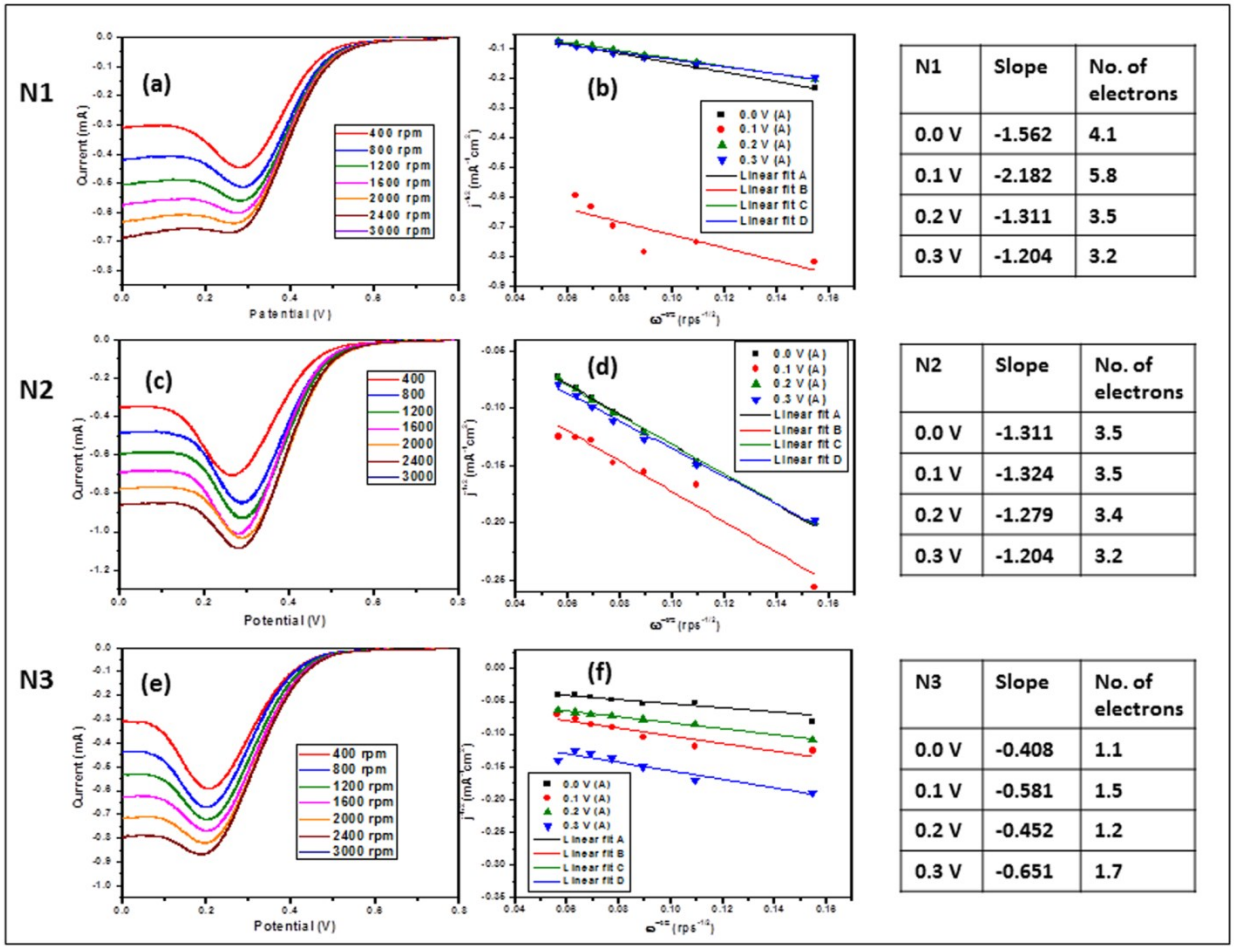
Table S1(a) Miller indices, d-spacing and crystallite size for the given diffraction angle for samples N1, N2 and N3.

Sample Name	Miller indices	2-Theta (in degrees)	FWHM (in degrees)	d-spacing (Å)	Crystallite Size (nm)	Average crystallite size of Pt (nm)
N1	C(002)	25.372	4.11	3.5076	1.980	
	Pt(111)	39.923	1.89	2.2569	4.464	3.952
	Pt(200)	46.376	2.26	1.9565	3.826	
	Pt(220)	67.755	2.68	1.3819	3.568	
N2	C(002)	25.336	3.95	3.512	2.056	
	Pt(111)	39.850	2.92	2.261	2.888	2.680
	Pt(200)	46.372	3.83	1.956	2.251	
	Pt(220)	67.738	3.29	1.382	2.902	
N3	C(002)	25.477	3.39	3.493	2.394	
	Pt(111)	39.968	2.22	2.254	3.795	3.508
	Pt(200)	46.382	3.24	1.956	2.661	
	Pt(220)	67.953	2.35	1.378	4.068	

Table S1(b) Miller indices, d-spacing and crystallite size for the given diffraction angle for samples M1, M2 and M3.

Sample Name	Miller indices	2-Theta (in degrees)	FWHM (in degrees)	d-spacing (Å)	Crystallite Size (nm)	Average crystallite size of Pt (nm)
M1	C(002)	25.047	3.948	3.552	2.060	
	Pt(111)	39.794	1.222	2.263	6.905	5.098
	C(100)	42.672	2.396	2.117	3.558	
	Pt(200)	46.142	2.442	1.966	3.534	
	Pt(220)	67.464	1.789	1.387	5.335	
	Pt(311)	81.370	2.267	1.182	4.619	
M2	C(002)	25.287	4.145	3.520	1.914	
	Pt(111)	39.906	3.133	2.257	2.696	2.553
	C(100)	42.721	4.723	2.115	1.805	
	Pt(200)	46.324	4.538	1.958	1.883	
	Pt(220)	67.568	3.555	1.385	2.687	
	Pt(311)	81.368	3.554	1.181	2.945	
M3	C(002)	24.987	3.723	3.561	2.184	
	Pt(111)	40.385	2.203	2.232	3.840	3.840
	C(100)	42.651	2.295	2.118	3.714	

Figure S1 (a), (c), (e) are the RDE curves for different rotations for samples N1, N2, N3 respectively and (b), (d), (f) are the corresponding KL plots respectively.

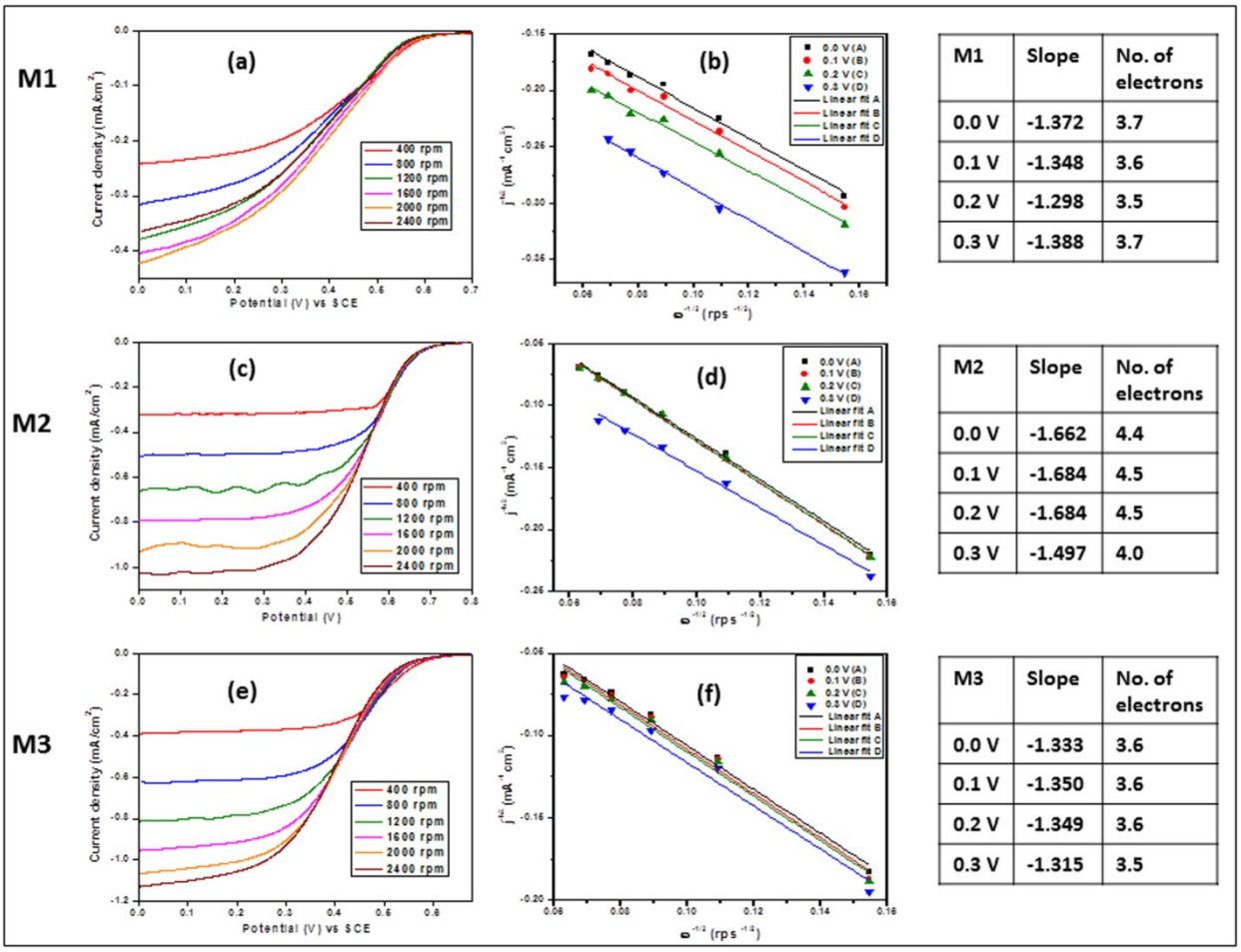


N1	Slope	No. of electrons
0.0 V	-1.562	4.1
0.1 V	-2.182	5.8
0.2 V	-1.311	3.5
0.3 V	-1.204	3.2

N2	Slope	No. of electrons
0.0 V	-1.311	3.5
0.1 V	-1.324	3.5
0.2 V	-1.279	3.4
0.3 V	-1.204	3.2

N3	Slope	No. of electrons
0.0 V	-0.408	1.1
0.1 V	-0.581	1.5
0.2 V	-0.452	1.2
0.3 V	-0.651	1.7

Figure S2 (a), (c), (e) are the RDE curves for different rotations for samples M1, M2, M3 respectively and (b), (d), (f) are the corresponding KL plots respectively.



M1	Slope	No. of electrons
0.0 V	-1.372	3.7
0.1 V	-1.348	3.6
0.2 V	-1.298	3.5
0.3 V	-1.388	3.7

M2	Slope	No. of electrons
0.0 V	-1.662	4.4
0.1 V	-1.684	4.5
0.2 V	-1.684	4.5
0.3 V	-1.497	4.0

M3	Slope	No. of electrons
0.0 V	-1.333	3.6
0.1 V	-1.350	3.6
0.2 V	-1.349	3.6
0.3 V	-1.315	3.5