Gain Insights the Specific Capacitance of CNT-Based Supercapacitor Electrodes with Artificial Intelligence

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Table S1. Dataset of the input and output data to the ML models.

ECF	EC (M)	EIC	SSA (m^2/g)	PS (nm)	Id/Ig	N (at. %)	O (at. %)	VW (V)	Capacitance (F/g)
TEABF4/PC	1	0	20	22.14	1.02	0	0	3.5	35
TEABF4/PC	1	0	73	10.08	0.88	0	0	3.5	36
TEABF4/PC	1	0	111	6.99	0.9	0	0	3.5	36
TEABF4/PC	1	0	156	7.74	0.85	0	0	3.5	37
TEABF4/PC	1	0	229	7.61	0.86	0	0	3.5	37
TEABF4/PC	1	0	247	5.92	0.83	0	0	3.5	40
LiClO4/EC/PC	1	0	146.12	0	0	0	0	2.6	21.8
LiClO4/EC/PC	1	0	159.74	0	0	0	0	2.6	60.4
NEt4BF4/PC	1	0	156	15	0	0	0	2.7	35
H2SO4	0.5	7	538.9	0	1.05	0	0	1	326.5
H2SO4	0.5	7	415	0	1.05	0	0	1	192.01
H2SO4	0.5	7	389	0	1.05	0	0	1	69
H2SO4	0.5	7	354	0	1.05	0	0	1	51
H2SO4	0.5	7	341	0	1.05	0	0	1	45
KOH	6	6	2158	1.9	0.98	0	0	0.9	200
KOH	6	6	2158	1.9	0.98	0	0	0.9	200
LiPF 6	1	0	810	0	1.22	0	0	2.8	30
LiPF 6	1	0	1340	0	1.08	0	0	2.8	45
H2SO4	1	7	3160	0.8	1.1	0	0	2	295
H2SO4	1	7	3110	0.7	1.1	0	0	2	280

H2SO4	1	7	2930	0.75	1.1	0	0	2	305
Et4NBF4	1	0	830	0.8	1.2	0	0	2.5	170
KOH	6	6	1080	0.7	1.25	0	0	0.6	125
KOH	6	6	1429	1.6	1.075	0	0	0.6	200
TEABF4	1	0	0	0	1.08	4.85	7.52	3	110
TEABF4	1	0	0	0	1.08	4.85	7.52	3	82.7
LiPF6	1	0	233	15.45	0.98	5.24	8	2	33
LiPF6	1	0	176	15.91	0.98	0	0	2	15
H2SO4	0.5	7	33.1	20	0	0	0	1	252.4
H2SO4	0.5	7	17.6	0	0	0	0	1	39.7
KOH	6	6	0	0	0.33	0	0	0.8	104
H2SO4	1	7	379.9	5.4	1.15	1.53	3.1	1	227
H2SO4	1	7	2005.9	0.55	1.12	0.1	6.27	1	319
EMIMBF4		0	2005.9	0.55	1.12	0.1	6.27	3.5	140
KOH	6	6	263	4.7	1.03	0	0	0.9	162.3
H2SO4	1	7	272	10	0.88	0	0	0.8	20
H2SO4	1	7	200	9	0.88	1.8	0	0.8	50
H2SO4	1	7	172	10.47	0.88	2.5	0	0.8	56
Na2SO4	0.5	3	325.48	5.32	1.02	0	4.43	1.8	29
Na2SO4	0.5	3	489.39	6.23	1.02	0	0	1.8	78
Na2SO4	0.5	3	1889.12	3.78	1.02	6.71	7.89	1.8	105.4
H2SO4	1	7	0	0	0	0	0	1	187
KOH	6	6	123.78	0.82	0.85	0	2.71	1	145
KOH	6	6	311.05	0	0.85	0	0	1	170
KOH	6	6	128.54	0	0.85	0	0	1	143
H2SO4	1	7	705.9	9.92	0.95	19.8	11.1	1	411.8
H2SO4	1	7	212.4	4.71	0.95	15.8	4	1	272
KOH	6	6	312	3.33	0.78	1.2	5.6	0.9	125
KOH	6	6	1588	2.54	0.84	5.3	9.3	0.9	240.4
KOH	6	6	2665	2.19	0.81	1.1	10.9	0.9	279.1
KOH	6	6	2856	1.75	0.83	2.2	11.1	0.9	386.2
KOH	6	6	3253	2.11	0.86	0.9	7.1	0.9	365.9
KOH	6	6	811.5	0	0.9	0	0	1	212.7
KOH	6	6	376.3	2.181	0	0	0	1	240
KOH	6	6	1563	2.242	0	0	0	1	245
KOH	6	6	986.7	1.791	0	0	0	1	314
KOH	6	6	1221	2.176	0	0	0	1	290
H2SO4	3	7	44	19.09	1.02	0	0	0.9	0
H2SO4	3	7	498	2.41	1.02	0	0	0.9	0
H2SO4	3	7	549	2.33	1.02	0	0	0.9	0
H2SO4	3	7	609	2.04	1.02	0	0	0.9	0
H2SO4	3	7	818	1.66	1.02	0	0	0.9	0
H2SO4	3	7	998	3.97	1.02	0	0	0.9	0

H2SO4	3	7	1059	3.09	1.02	0	0	0.9	0
H2SO4	3	7	1042	2.49	1.02	0	0	0.9	0
H2SO4	3	7	1014	2.21	1.02	0	0	0.9	0
H2SO4	3	7	1020	1.76	1.02	0	0	0.9	131.8
H2SO4	3	7	1240	2.55	1.02	0	0	0.9	177.3
H2SO4	3	7	1598	2.03	1.02	0	0	0.9	210.7
H2SO4	3	7	1705	1.92	1.02	0	0	0.9	237
H2SO4	0	7	830	0	1.18	0	0	1	252
KOH	6	6	950	1.2	0.09	0	5.35	1	98
KOH	6	6	805	1.2	0.09	0	5.3	1	91
H2SO4	1	7	690	0.7	0	10.8	6.9	1	213
H2SO4	1	7	814	0.6	0	11.6	10.1	1	427
H2SO4	1	7	294	1.2	0	0	6.1	1	25
TEA BF4/AN	1	0	690	0.7	0	10.8	6.9	2.5	110
TEA BF4/AN	1	0	814	0.6	0	11.6	10.1	2.5	94
TEA BF4/AN	1	0	294	1.2	0	0	6.1	2.5	22
EMIMBF4	0	0	1921.7	3.06	1.905	0.93	6.4	4	307.9
EMIMBF4	0	0	2855.7	2.21	1.74	0.51	5.07	4	344.1
H2SO4	1	7	282	18.15	1.1	0	0	0.9	85.8
H2SO4	1	7	999.7	3.17	1.72	10.19	4.335	0.9	166.7
H2SO4	1	7	898.6	2.53	0	0	0	0.9	155.7
H2SO4	1	7	642.5	2.22	1.53	10.97	4.735	0.9	192.1
H2SO4	1	7	884.6	2.57	1.53	10.08	3.52	0.9	222.6
H2SO4	1	7	928.2	2.74	1.53	10.45	2.492	0.9	293.4
KOH	6	6	330.2	3	0	0	6.47	1	177.4
KOH	6	6	449.3	3.39	0	0	5.42	1	249.4
KOH	6	6	524.9	3.75	0	0	3.83	1	356.1
KOH	6	6	620.1	3.94	0	0	2.52	1	381.2
KOH	6	6	569.3	3.73	0	0	2.1	1	323.7
KOH	6	6	681.3	5.34	0	0	0	1	215.8
H2SO4	1	7	8.5	16.4	2.69	15.8	3.2	1	58
H2SO4	1	7	613.8	3.09	2.38	9	6.3	1	216
KOH	6	6	296	1	0	0	0	0.8	4
KOH	6	6	380	1	0	0	2.4	0.8	30
LiPF6/EC/DMC	1	0	394	0	0	0	5.5	3	87.6
LiPF6/EC/DMC	1	0	394	0	0	0	9.8	3	107.4
LiPF6/EC/DMC	1	0	394	0	0	1	13.5	3	0
LiPF6/EC/DMC	1	0	394	0	0	5.4	13.1	3	151
LiPF6	0.1	0	214.3	23.89	1.2	0	0.3	3	32
LiPF6	0.1	0	627.8	8.67	1.47	0	5.5	3	0
LiPF6	0.1	0	661.5	9.55	1.47	0	5.5	3	0
LiPF6	0.1	0	1123.2	8.48	1.47	0	5.5	3	160
KOH	6	6	27.8	3	1.13	0	0	0.9	96

KOH	6	6	27.8	3	1.13	0	0	0.9	56.47
KOH	6	6	13.72	3	1.15	2.79	10.57	0.9	64
H2SO4	1	7	75	0	0	0	0	0.85	295.4
H2SO4	1	7	75	0	0	0	0	0.85	210
H2SO4	1	7	75	0	0	0	0	0.85	150
H2SO4	1	7	75	0	0	0	0	0.85	109.6
KOH	6	6	97	0	0.99	3.39	0	0.8	171.1
KOH	6	6	54	0	0.99	3.39	0	0.8	107.7
KOH	6	6	76	0	0.99	3.39	0	0.8	145.4
KOH	6	6	49	0	0.99	3.39	0	0.8	94.6
KOH	6	6	74	0	0.99	3.39	0	0.8	146.7
Na2SO4	0.5	3	290	0	0.123	0	0	0.8	143.2
Na2SO4	0.5	3	290	0	0.136	0	0	0.8	123.4
H2SO4	1	7	290	0	0	9.29	5.49	0.8	54
KOH	1	6	290	0	0	9.29	5.49	0.8	36.25
KOH	2	6	0.9869	0	1.165	0	0	0.9	149
NaOH	2	0	0.9869	0	1.165	0	0	0.9	144.5
LiOH	2	0	0.9869	0	1.165	0	0	0.9	142
KOH	2	6	0	0	1.165	0	0	0.9	121
KOH	2	6	0	0	1.165	0	0	0.9	141
Li2SO4	1	0	278	0	0	0	0	0.9	212
Li2SO4	1	0	314	0	0	0	0	0.9	258
Li2SO4	1	0	291	0	0	0	0	0.9	231
H2SO4	1	7	325	0	1.16	0	0	0.85	357
H2SO4	1	7	325	0	1.16	0	0	0.85	212
H2SO4	1	7	325	0	1.16	0	0	0.85	192
H2SO4	1	7	325	0	1.16	0	0	0.85	179
H2SO4	1	7	325	0	1.16	0	0	0.85	176
H2SO4	1	7	353	0	1.1	0	0	0.85	242
H2SO4	1	7	353	0	1.1	0	0	0.85	141
H2SO4	1	7	353	0	1.1	0	0	0.85	126
H2SO4	1	7	353	0	1.1	0	0	0.85	112
H2SO4	1	7	353	0	1.1	0	0	0.85	100
KOH	6	6	0	0	1.05	0	0	1	215
KOH	6	6	0	0	1.05	0	0	1	181
KOH	6	6	0	0	1.05	0	0	1	179
KOH	6	6	0	0	1.05	0	0	1	172
Na2SO4	1	3	371	0	0	0	0	1	69
KOH	1	6	428	0	0.41	0	0	1	81.14
KOH	1	6	428	0	0.41	0	0	1	49
KOH	1	6	428	0	0.41	0	0	1	25
KOH	1	6	428	0	0.41	0	0	1	13.25
KOH	6	6	105	0	0	0	0	0.5	1327

KOH	6	6	105	0	0	0	0	0.5	1100
KOH	6	6	105	0	0	0	0	0.5	1000
KOH	6	6	105	0	0	0	0	0.5	943
H2SO4	1	7	568	0	0.79	0	0	1.2	1544
H2SO4	1	7	568	0	0.79	0	0	1.2	1274
H2SO4	1	7	568	0	0.79	0	0	1.2	1102
H2SO4	1	7	568	0	0.79	0	0	1.2	980
H2SO4	1	7	568	0	0.79	0	0	1.2	964
KOH	6	6	215	0	0	0	0	0.9	379
KOH	6	6	280	0	0	0	0	0.9	306
KOH	6	6	198	0	1.01	0	0	0.9	185
H2SO4	1	7	390	0	0	0	0	1.2	620
H2SO4	1	7	365	0	0	0	0	1.2	600
H2SO4	1	7	295	0	0	0	0	1.2	490
H2SO4	1	7	0	0	0	0	0	1	187
H2SO4	1	7	0	0	0	0	0	1	136.51
KOH	6	6	0	0	1.04	0	0	1	702
KOH	6	6	0	0	1.04	0	0	1	260
Na2SO4	1	3	371	0	0	0	0	0.9	53
KOH	1	6	47	0.34	0.45	0	0	1	33
H2SO4	1	7	47	0.34	0.45	0	0	1	25
Na2SO4	1	3	47	0.34	0.45	0	0	1	13
KOH	6	6	903	0	1.51	0	0	1	401
KOH	6	6	903	0	1.51	0	0	1	271
KOH	6	6	903	0	1.51	0	0	1	394
KOH	6	6	903	0	1.51	0	0	1	387
KOH	6	6	903	0	1.51	0	0	1	136
Na2SO4	0.1	3	0	0	1.25	0	0	0.8	278
Na2SO4	0.1	3	0	0	1.25	0	0	0.8	131

Where ECF is Electrolyte Chemical Formula, EC is Electrolyte Concentration, EIC is Electrolyte Ionic Conductivity, SSA is Specific Surface Area, PS is Pore Size, and VW is Voltage Window.