

Supplementary Information

S1

Year	DOI	Remarks	Termination	Material	Capacitance (F/g)	Specific Capacitance (mAh/g)	Volumetric Specific Capacitance (F/cm ³)	Specific surface area (m ² /g)	Percentages of Terminations	Electrolyte Chemical Formula	Cation ion mobility (cm ² /Vs) x10 ⁻⁴	Anion ion mobility (cm ² /Vs) x10 ⁻⁴	Electrolyte Concentration (M)	Scan Rate (mV/s)	Current Density (A/g)	Cell Configuration (three/two electrode system)	Potential Window (V)	Sheet thickness (mm)	Density of sheet (g/cm ³)	Intercalation (charge per gram)	wt% Ti3C2 in electrode		
2015	https://doi.org/10.1007/s40145-015-0143-3			Ti3C2 exfoliated by HF in KOH	71.2		119.8	22.35		KOH	7.61	20.5	3	1	2.5	2		0.15					
					60.4			22.35		KOH	7.61	20.5	3	1	5	2	0.9	0.15					
2018	https://doi.org/10.1016/j.electacta.2018.09.148		-F, -OH/-O	Ti3C2/Ni2CO3(OH)2	695.2	173.8				KOH	7.61	20.5	6	20	1	4	0.6						
2014	https://doi.org/10.1016/j.elecom.2014.07.026			Ti3C2	35.2	8.8				KOH	7.61	20.5	6	20	1	3	0.6						
				Exfoliated by HF (ex-Ti3C2)	317.4	264.5				1 M LiPF6 in a mixture of ethylene carbonate (EC)/dimethyl carbonate (DMC) /ethylmethyl carbonate (EMC) in a 1:1:1 volume ratio.						3							
2014	https://doi.org/10.1016/j.elecom.2014.09.002		-OH/-O/-F	intercalated with DMSO after exfoliation (in-Ti3C2)				123.6															
				Ti3C2-intercalated with KOH	350			98		H2SO4	36.2	8.27	1	1	5	3	0.6		1.37				
				Ti3C2-intercalated with Potassium acetate	230					H2SO4	36.2	8.27	1	1		3	0.6		1.51				
2018	https://doi.org/10.1016/j.ceramint.2018.08.096			Ti3C2Tx Ti3C2/MnO2	88 254			88.6		H2SO4 KOH	36.2 7.61	8.27 20.5	1 6	1 50	0.5	3	0.6 0.5		0.79				
2019	https://doi.org/10.1016/j.ceramint.2019.01.016			Ti3C2	47					KOH	7.61	20.5	6	50	0.5		3	0.55					
				Ti3C2/polypropylene composites																			
				Ti3C2	133.91					Na2SO4	5.2	8.27	1	2		3	0.55						
				Ti3C2/PPy-1	156.64				Na2SO4	5.2	8.27	1	2		3	0.55						1.0234	
				Ti3C2/PPy-2	184.36				Na2SO4	5.2	8.27	1	2		3	0.55							0.5117
				Ti3C2/PPy-3	159.57					Na2SO4	5.2	8.27	1	2		3	0.55					0.2559	
				Ti3C2/PPy-4	135.69					Na2SO4	5.2	8.27	1	2		3	0.55					0.1279	
				Ti3C2/PPy-5	132.87					Na2SO4	5.2	8.27	1	2		3	0.55					0.0639	
				Ti3C2	112.02					Na2SO4	5.2	8.27	1	5		3	0.55					0.5117	
				Ti3C2/PPy-1	132.32					Na2SO4	5.2	8.27	1	5		3	0.55					1.0234	
				Ti3C2/PPy-2	149.1					Na2SO4	5.2	8.27	1	5		3	0.55					0.2559	
				Ti3C2/PPy-3	128.63					Na2SO4	5.2	8.27	1	5		3	0.55					0.1279	
				Ti3C2/PPy-4	116.87					Na2SO4	5.2	8.27	1	5		3	0.55					0.0639	
				Ti3C2/PPy-5	108.15					Na2SO4	5.2	8.27	1	5		3	0.55					0.0639	
				Ti3C2	105.43					Na2SO4	5.2	8.27	1	10		3	0.55					1.0234	
				Ti3C2/PPy-1	121.77					Na2SO4	5.2	8.27	1	10		3	0.55					0.5117	
				Ti3C2/PPy-2	138.79					Na2SO4	5.2	8.27	1	10		3	0.55					0.2559	
				Ti3C2/PPy-3	120.11					Na2SO4	5.2	8.27	1	10		3	0.55					0.1279	
				Ti3C2/PPy-4	108.25					Na2SO4	5.2	8.27	1	10		3	0.55					0.0639	
				Ti3C2/PPy-5	98.79					Na2SO4	5.2	8.27	1	10		3	0.55					0.0639	
				Ti3C2	99.48					Na2SO4	5.2	8.27	1	20		3	0.55					1.0234	
				Ti3C2/PPy-1	112.78					Na2SO4	5.2	8.27	1	20		3	0.55					0.5117	
				Ti3C2/PPy-2	129.75					Na2SO4	5.2	8.27	1	20		3	0.55					0.2559	
				Ti3C2/PPy-3	112.96					Na2SO4	5.2	8.27	1	20		3	0.55					0.1279	
				Ti3C2/PPy-4	100.19					Na2SO4	5.2	8.27	1	20		3	0.55					0.0639	
				Ti3C2/PPy-5	87.57					Na2SO4	5.2	8.27	1	20		3	0.55					0.0639	
				Ti3C2	90.21					Na2SO4	5.2	8.27	1	50		3	0.55						
				Ti3C2/PPy-1	98.61					Na2SO4	5.2	8.27	1	50		3	0.55					1.0234	
				Ti3C2/PPy-2	117.97					Na2SO4	5.2	8.27	1	50		3	0.55					0.5117	
				Ti3C2/PPy-3	102.28					Na2SO4	5.2	8.27	1	50		3	0.55					0.2559	
				Ti3C2/PPy-4	88.39					Na2SO4	5.2	8.27	1	50		3	0.55					0.1279	
				Ti3C2/PPy-5	74.86					Na2SO4	5.2	8.27	1	50		3	0.55					0.0639	
				Ti3C2	80.08					Na2SO4	5.2	8.27	1	100		3	0.55						
				Ti3C2/PPy-1	83.18					Na2SO4	5.2	8.27	1	100		3	0.55					1.0234	
				Ti3C2/PPy-2	104.51					Na2SO4	5.2	8.27	1	100		3	0.55					0.5117	
				Ti3C2/PPy-3	90.73					Na2SO4	5.2	8.27	1	100		3	0.55					0.2559	
				Ti3C2/PPy-4	82.22					Na2SO4	5.2	8.27	1	100		3	0.55					0.1279	
				Ti3C2/PPy-5	62.13					Na2SO4	5.2	8.27	1	100		3	0.55					0.0639	
2021	https://doi.org/10.1016/j.elecom.2020.148272			N-Ti3C2/NiCo2S4	1849					KOH	7.61	20.5	3	2		3	0.5						
				N-Ti3C2/NiCo2S4	1697					KOH	7.61	20.5	3	5		3	0.5						
				N-Ti3C2/NiCo2S4	1611					KOH	7.61	20.5	3	10		3	0.5						
				N-Ti3C2/NiCo2S4	1418					KOH	7.61	20.5	3	20		3	0.5						
				N-Ti3C2/NiCo2S4	1045					KOH	7.61	20.5	3	40		3	0.5						
				N-Ti3C2/NiCo2S4	254					KOH	7.61	20.5	3		0.5	3	0.5						
				N-Ti3C2/NiCo2S4	282.5					KOH	7.61	20.5	3		1	3	0.5						

Year	DOI	Remarks	Termination	Material	Capacitance (F/g)	Specific Capacitance (mAh/g)	Volumetric Specific Capacitance (F/cm ³)	Specific surface area (m ² /g)	Percentages of Terminations	Electrolyte Chemical Formula	Cation ion mobility (cm ² /Vs) x10 ⁻⁴	Anion ion mobility (cm ² /Vs) x10 ⁻⁴	Electrolyte Concentration (M)	Scan Rate (mV/s)	Current Density (A/g)	Cell Configuration (three two electrode system)	Potential Window (V)	Sheet thickness (mm)	Density of sheet (g/cm ³)	Intercalation(charge per gram)	wt% Ti3C2 in electrode				
2022	https://doi.org/10.1007/s13391-022-00337-9	Review paper. Citing the next 2 papers																							
2020	https://doi.org/10.1039/D0TA00687D			Ti3C2Tx flakes layered with organic photovoltaics	502		450			Solid organic ionogel				1											
2018	https://doi.org/10.1021/acsnano.8b02908			Ti3C2Tx (5 μm thick) /elastomer composites stretched to:	118 117 108		395 390 362			Solid organic ionogel				2											
2022	https://doi.org/10.1002/psm2.1130	Review paper:																							
2021	https://doi.org/10.1016/j.nanosci.2021.143710	Ti3C2Tx MXene/carbon nanofiber by electrospinning		Small-sized mxene sheets (SMX/C)	120					H2SO4	36.2	8.27	1	5		3	0.7	0.00075							
		To investigate the effects of MXene sheet size the MXene/CF hybrid, the freestanding hybrid cut and assembled into a symmetric supercapacitor.		Medium-sized mxene sheets (MMX/C)	113					H2SO4	36.2	8.27	1	5		3	0.7	0.0025							
				Large-sized mxene sheets (LMX/C)	106					H2SO4	36.2	8.27	1	5		3	0.7	0.007							
				Small-sized mxene sheets (SMX/C)	90					H2SO4	36.2	8.27	1	300		3	0.7	0.00075							
				Medium-sized mxene sheets (MMX/C)	69					H2SO4	36.2	8.27	1	300		3	0.7	0.0025							
				Large-sized mxene sheets (LMX/C)	51					H2SO4	36.2	8.27	1	300		3	0.7	0.007							
2020	https://doi.org/10.1016/j.nanoen.2020.104971			Small-sized mxene sheets (SMX/C) flexible and asymmetric pseudocapacitor using a Ti3C2Tx/MXene film with wavy architecture	76 340		1293			H2SO4 H2SO4	36.2 36.2	8.27 8.27	1 3	100 10		3 2	0.7 0.85	0.00075 0.006	3.8						
2017	https://doi.org/10.1038/nenergy.2017.105			Ti3 C2 O0.84(F) (OH)0.06(2) F0.25(8)	299 208 450 380 370		1136 790			H2SO4 H2SO4 H2SO4 H2SO4	36.2 36.2 36.2 36.2	8.27 8.27 8.27 8.27	3 3 3 3	1000 5000 100 2		2 2 2 2	0.85 0.85 1 1	0.006 0.006 0.00009 0.003 0.013	3.8 3.8						
				templating macroporous MXene flakes with polymethyl methacrylate (PMMA) microspheres	310					H2SO4	36.2	8.27	3	10		2 2	1 1	0.013							
					210					H2SO4	36.2	8.27	3	10000			1	0.013							
2019	https://doi.org/10.1038/s41560-019-0339-9	Ti3C2 electrodes tested in three 1M LITFSI organic electrolytes with different solvents		DMSO	100 130					H2SO4 H2SO4	36.2 36.2	8.27 8.27	3 1	40000 2		3 1	1 2.1	0.013		0.46					
				acetonitrile (ACN)	110					lithium bis (trifluoromethyl sulfonyl) amine (LITFSI)			1	2		3	2.2			0.37					
				propylene carbonate (PC)	195					lithium bis (trifluoromethyl sulfonyl) amine (LITFSI)			1	2		3	2.4			0.93					
2014	https://doi.org/10.1038/nature13970			Ti3C2Tx Clay	245					lithium bis (trifluoromethyl sulfonyl) amine (LITFSI)	36.2	8.27	1	2			0.6	0.005							
2020	https://doi.org/10.1016/j.nanoen.2020.104734				35.2 1849 363.6073579	8.8 264.5 106.6090482	119.8 1293 413.5561518	22.35 98 41.14236462			5.2 36.2 13.90473538	8.27 20.5 4.817404844	1 6 1.345019213	1 40000 4896.335716	0.5 5 1.782632261	2 4 0.3564261874	0.5 3 0.4477507472	0.00009 0.15 0.04566600335	0.79 3.8 1.431801895	0.37 0.93 0.300721355		min max std	0.04566600335 4896.335716	min max	0.02101789474 823.8450704
	avg				249.1307792	142.675	616.975	57.825			14.63956522	10.5742029	1.77777778	823.8450704	1.8	2.893939394	0.7215277778	0.02101789474	2.511666667	0.586666667					