Tyler S Mathis

List of Publications by Year in Descending Order

29 papers	2,736 citations	20 h-index	30 g-index
30 ext. papers	3,691 ext. citations	16.2 avg, IF	5.52 L-index

#	Paper	IF	Citations
29	Modified MAX Phase Synthesis for Environmentally Stable and Highly Conductive TiC MXene. *ACS Nano*, **2021**, 15, 6420-6429	16.7	116
28	Additive-Free Aqueous MXene Inks for Thermal Inkjet Printing on Textiles. *Small*, **2021**, 17, 2006376	11	26
27	Optimizing Ion Pathway in Titanium Carbide MXene for Practical High-Rate Supercapacitor. *Advanced Energy Materials*, **2021**, 11, 2003025	21.8	59
26	Probing the Pseudocapacitive Charge Storage in TiC MXene Thin Films with X-ray Reflectivity. *ACS Applied Materials & Interfaces*, **2021**, 13, 43597-43605	9.5	2
25	Titanium Carbide MXene Shows an Electrochemical Anomaly in Water-in-Salt Electrolytes. *ACS Nano*, **2021**, 15, 15274-15284	16.7	18
24	MXene-infused bioelectronic interfaces for multiscale electrophysiology and stimulation. *Science Translational Medicine*, **2021**, 13, eabf8629	17.5	13
23	Maximizing ion accessibility in MXene-knotted carbon nanotube composite electrodes for high-rate electrochemical energy storage. *Nature Communications*, **2020**, 11, 6160	17.4	71
22	Energy Storage Data Reporting in Perspective□Guidelines for Interpreting the Performance of Electrochemical Energy Storage Systems. *Advanced Energy Materials*, **2019**, 9, 1902007	21.8	349
21	Tuning the Electrochemical Performance of Titanium Carbide MXene by Controllable In Situ Anodic Oxidation. *Angewandte Chemie*, **2019**, 131, 18013-18019	3.6	17
20	Tuning the Electrochemical Performance of Titanium Carbide MXene by Controllable In Situ Anodic Oxidation. *Angewandte Chemie - International Edition*, **2019**, 58, 17849-17855	16.4	64
19	Influences from solvents on charge storage in titanium carbide MXenes. *Nature Energy*, **2019**, 4, 241-248	62.3	229
18	Superfast high-energy storage hybrid device composed of MXene and Chevrel-phase electrodes operated in saturated LiCl electrolyte solution. *Journal of Materials Chemistry A*, **2019**, 7, 19761-19773	13	24
17	Diffusion-Induced Transient Stresses in Li-Battery Electrodes Imaged by Electrochemical Quartz Crystal Microbalance with Dissipation Monitoring and Environmental Scanning Electron Microscopy. *ACS Energy Letters*, **2019**, 4, 1907-1917	20.1	15
16	Direct Writing of Additive-Free MXene-in-Water Ink for Electronics and Energy Storage. *Advanced Materials Technologies*, **2019**, 4, 1800256	6.8	78
15	Selective Etching of Silicon from Ti SiC (MAX) To Obtain 2D Titanium Carbide (MXene). *Angewandte Chemie - International Edition*, **2018**, 57, 5444-5448	16.4	185
14	Layer-by-layer assembly of MXene and carbon nanotubes on electrospun polymer films for flexible energy storage. *Nanoscale*, **2018**, 10, 6005-6013	7.7	124
13	Influence of thermal treatment conditions on capacitive deionization performance and charge efficiency of carbon electrodes. *Separation and Purification Technology*, **2018**, 202, 67-75	8.3	15

List of Publications

12	Selective Etching of Silicon from Ti3SiC2 (MAX) To Obtain 2D Titanium Carbide (MXene). *Angewandte Chemie*, **2018**, 130, 5542-5546	3.6	56
11	In Situ Acoustic Diagnostics of Particle-Binder Interactions in Battery Electrodes. *Joule*, **2018**, 2, 988-1003	37.8	24
10	Development of asymmetric supercapacitors with titanium carbide-reduced graphene oxide couples as electrodes. *Electrochimica Acta*, **2018**, 259, 752-761	6.7	71
9	Direct Assessment of Nanoconfined Water in 2D TiC Electrode Interspaces by a Surface Acoustic Technique. *Journal of the American Chemical Society*, **2018**, 140, 8910-8917	16.4	66
8	Thickness-independent capacitance of vertically aligned liquid-crystalline MXenes. *Nature*, **2018**, 557, 409-412	50.4	627
7	Processing of Onion-like Carbon for Electrochemical Capacitors. *ECS Journal of Solid State Science and Technology*, **2017**, 6, M3103-M3108	2	10
6	Nanodiamonds suppress the growth of lithium dendrites. *Nature Communications*, **2017**, 8, 336	17.4	257
5	Selective Charging Behavior in an Ionic Mixture Electrolyte-Supercapacitor System for Higher Energy and Power. *Journal of the American Chemical Society*, **2017**, 139, 18681-18687	16.4	76
4	Demonstration of Li-Ion Capacity of MAX Phases. *ACS Energy Letters*, **2016**, 1, 1094-1099	20.1	37
3	An Electrochemical Capacitor with Applicable Energy Density of 7.4 Wh/kg at Average Power Density of 3000 W/kg. *Nano Letters*, **2015**, 15, 3189-94	11.5	100
2	Modified MAX Phase Synthesis for Environmentally Stable and Highly Conductive Ti3C2 MXene		6
1	MXtrodes: MXene-infused bioelectronic interfaces for multiscale electrophysiology and stimulation		1