

# Tyler S Mathis

## List of Publications by Year in descending order

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Version: 2024-02-01

28  
papers

4,876  
citations

279798

23  
h-index

501196

28  
g-index

30  
all docs

30  
docs citations

30  
times ranked

5807  
citing authors

| #  | ARTICLE  | IF   | CITATIONS |
|----|--|------|-----------|
| 1  | Thickness-independent capacitance of vertically aligned liquid-crystalline MXenes. <i>Nature</i> , 2018, 557, 409-412.   | 27.8 | 965       |
| 2  | Energy Storage Data Reporting in Perspective—Guidelines for Interpreting the Performance of Electrochemical Energy Storage Systems. <i>Advanced Energy Materials</i> , 2019, 9, 1902007. | 19.5 | 793       |
| 3  | Modified MAX Phase Synthesis for Environmentally Stable and Highly Conductive $Ti_3C_2$ MXene. <i>ACS Nano</i> , 2021, 15, 6420-6429.  | 14.6 | 417       |
| 4  | Influences from solvents on charge storage in titanium carbide MXenes. <i>Nature Energy</i> , 2019, 4, 241-248.  | 39.5 | 363       |
| 5  | Nanodiamonds suppress the growth of lithium dendrites. <i>Nature Communications</i> , 2017, 8, 336.  | 12.8 | 327       |
| 6  | Selective Etching of Silicon from $Ti_3SiC_2$ (MAX) To Obtain 2D Titanium Carbide (MXene). <i>Angewandte Chemie - International Edition</i> , 2018, 57, 5444-5448.                       | 13.8 | 299       |
| 7  | Layer-by-layer assembly of MXene and carbon nanotubes on electrospun polymer films for flexible energy storage. <i>Nanoscale</i> , 2018, 10, 6005-6013.                                  | 5.6  | 184       |
| 8  | Maximizing ion accessibility in MXene-knotted carbon nanotube composite electrodes for high-rate electrochemical energy storage. <i>Nature Communications</i> , 2020, 11, 6160.          | 12.8 | 183       |
| 9  | Optimizing Ion Pathway in Titanium Carbide MXene for Practical High-Rate Supercapacitor. <i>Advanced Energy Materials</i> , 2021, 11, 2003025.   | 19.5 | 152       |
| 10 | Selective Etching of Silicon from $Ti_3SiC_2$ (MAX) To Obtain 2D Titanium Carbide (MXene). <i>Angewandte Chemie</i> , 2018, 130, 5542-5546.  | 2.0  | 127       |
| 11 | An Electrochemical Capacitor with Applicable Energy Density of 7.4 Wh/kg at Average Power Density of 3000 W/kg. <i>Nano Letters</i> , 2015, 15, 3189-3194.                               | 9.1  | 118       |
| 12 | Tuning the Electrochemical Performance of Titanium Carbide MXene by Controllable In Situ Anodic Oxidation. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 17849-17855.     | 13.8 | 117       |
| 13 | Direct Writing of Additive-Free MXene in Water Ink for Electronics and Energy Storage. <i>Advanced Materials Technologies</i> , 2019, 4, 1800256.  | 5.8  | 112       |
| 14 | Development of asymmetric supercapacitors with titanium carbide-reduced graphene oxide couples as electrodes. <i>Electrochimica Acta</i> , 2018, 259, 752-761.                           | 5.2  | 103       |
| 15 | Direct Assessment of Nanoconfined Water in 2D $Ti_3C_2$ Electrode Interspaces by a Surface Acoustic Technique. <i>Journal of the American Chemical Society</i> , 2018, 140, 8910-8917.   | 13.7 | 102       |
| 16 | Selective Charging Behavior in an Ionic Mixture Electrolyte-Supercapacitor System for Higher Energy and Power. <i>Journal of the American Chemical Society</i> , 2017, 139, 18681-18687. | 13.7 | 101       |
| 17 | MXene-infused bioelectronic interfaces for multiscale electrophysiology and stimulation. <i>Science Translational Medicine</i> , 2021, 13, eabf8629.                                     | 12.4 | 68        |
| 18 | Additive-Free Aqueous MXene Inks for Thermal Inkjet Printing on Textiles. <i>Small</i> , 2021, 17, .   | 10.0 | 61        |

| #  | ARTICLE   | IF   | CITATIONS |
|----|---|------|-----------|
| 19 | Demonstration of Li-Ion Capacity of MAX Phases. ACS Energy Letters, 2016, 1, 1094-1099.   | 17.4 | 57        |
| 20 | Titanium Carbide MXene Shows an Electrochemical Anomaly in Water-in-Salt Electrolytes. ACS Nano, 2021, 15, 15274-15284.   | 14.6 | 56        |
| 21 | Tuning the Electrochemical Performance of Titanium Carbide MXene by Controllable In Situ Anodic Oxidation. Angewandte Chemie, 2019, 131, 18013-18019.   | 2.0  | 38        |
| 22 | 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.                                     | 10.3 | 32        |
| 23 | In Situ Acoustic Diagnostics of Particle-Binder Interactions in Battery Electrodes. Joule, 2018, 2, 988-1003.   | 24.0 | 29        |
| 24 | Influence of thermal treatment conditions on capacitive deionization performance and charge efficiency of carbon electrodes. Separation and Purification Technology, 2018, 202, 67-75.  | 7.9  | 21        |
| 25 | 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. | 17.4 | 17        |
| 26 | Processing of Onion-like Carbon for Electrochemical Capacitors. ECS Journal of Solid State Science and Technology, 2017, 6, M3103-M3108.  | 1.8  | 14        |
| 27 | Probing the <i>In Situ</i> Pseudocapacitive Charge Storage in $Ti_3C_2$ MXene Thin Films with X-ray Reflectivity. ACS Applied Materials & Interfaces, 2021, 13, 43597-43605.  | 8.0  | 8         |
| 28 | Water dynamics in pristine and porous $Ti_3C_2$ MXene as probed by quasielastic neutron scattering. Physical Review Materials, 2022, 6, .   | 2.4  | 1         |