

# Zixuan Guan

## List of Publications by Year in descending order

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34  
papers

4,510  
citations

257450

24  
h-index

377865

34  
g-index

34  
all docs

34  
docs citations

34  
times ranked

5296  
citing authors

#	ARTICLE	IF	CITATIONS
1	Thermodynamic guiding principles of high-capacity phase transformation materials for splitting $\text{H}_2\text{O}$ and $\text{CO}_2$ by thermochemical looping. <i>Journal of Materials Chemistry A</i> , 2022, 10, 3552-3561.	10.3	2
2	Contact Resistance of Carbon <sup>-</sup> Li <sup>x</sup> (Ni,Mn,Co)O <sub>2</sub> Interfaces. <i>Advanced Energy Materials</i> , 2022, 12, .	19.5	7
3	The Role of Metal Substitution in Tuning Anion Redox in Sodium Metal Layered Oxides Revealed by X-Ray Spectroscopy and Theory. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 10880-10887.	13.8	32
4	Carbonate formation lowers the electrocatalytic activity of perovskite oxides for water electrolysis. <i>Journal of Materials Chemistry A</i> , 2021, 9, 19940-19948.	10.3	11
5	Coulombically-stabilized oxygen hole polarons enable fully reversible oxygen redox. <i>Energy and Environmental Science</i> , 2021, 14, 4858-4867.	30.8	29
6	Tuning electrochemically driven surface transformation in atomically flat LaNiO <sub>3</sub> thin films for enhanced water electrolysis. <i>Nature Materials</i> , 2021, 20, 674-682.	27.5	105
7	Electro-chemo-mechanical charge carrier equilibrium at interfaces. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 23730-23740.	2.8	2
8	Ultrafine-grained Ni-rich layered cathode for advanced Li-ion batteries. <i>Energy and Environmental Science</i> , 2021, 14, 6616-6626.	30.8	82
9	Galvanostatic Intermittent Titration Technique Reinvented: Part II. Experiments. <i>Journal of the Electrochemical Society</i> , 2021, 168, 120503.	2.9	10
10	High-capacity thermochemical CO <sub>2</sub> dissociation using iron-poor ferrites. <i>Energy and Environmental Science</i> , 2020, 13, 592-600.	30.8	23
11	Constructing a pathway for mixed ion and electron transfer reactions for O <sub>2</sub> incorporation in Pr <sub>0.1</sub> Ce <sub>0.9</sub> O <sub>2-x</sub> . <i>Nature Catalysis</i> , 2020, 3, 116-124.	34.4	40
12	Design Rules for High-Valent Redox in Intercalation Electrodes. <i>Joule</i> , 2020, 4, 1369-1397.	24.0	80
13	Hydroxylation and Cation Segregation in (La <sub>0.5</sub> Sr <sub>0.5</sub> )FeO <sub>3</sub> Electrodes. <i>Chemistry of Materials</i> , 2020, 32, 2926-2934.	6.7	12
14	Selective high-temperature CO <sub>2</sub> electrolysis enabled by oxidized carbon intermediates. <i>Nature Energy</i> , 2019, 4, 846-855.	39.5	66
15	Metal <sup>-</sup> oxygen decoordination stabilizes anion redox in Li-rich oxides. <i>Nature Materials</i> , 2019, 18, 256-265.	27.5	280
16	Activation of ultrathin SrTiO <sub>3</sub> with subsurface SrRuO <sub>3</sub> for the oxygen evolution reaction. <i>Energy and Environmental Science</i> , 2018, 11, 1762-1769.	30.8	83
17	Fluid-enhanced surface diffusion controls intraparticle phase transformations. <i>Nature Materials</i> , 2018, 17, 915-922.	27.5	104
18	Electrochemical and Chemical Insertion for Energy Transformation and Switching. <i>Annual Review of Materials Research</i> , 2018, 48, 137-165.	9.3	36

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19	Charged interfaces: electrochemical and mechanical effects. <i>Energy and Environmental Science</i> , 2018, 11, 1993-2000.	30.8	34
20	The use of poly-cation oxides to lower the temperature of two-step thermochemical water splitting. <i>Energy and Environmental Science</i> , 2018, 11, 2172-2178.	30.8	105
21	Equilibrium oxygen storage capacity of ultrathin CeO <sub>2</sub> - $\delta$ depends non-monotonically on large biaxial strain. <i>Nature Communications</i> , 2017, 8, 15360.	12.8	71
22	Pumping liquid metal at high temperatures up to 1,673 kelvin. <i>Nature</i> , 2017, 550, 199-203.	27.8	63
23	Quantifying and Elucidating Thermally Enhanced Minority Carrier Diffusion Length Using Radius-Controlled Rutile Nanowires. <i>Nano Letters</i> , 2017, 17, 5264-5272.	9.1	18
24	Analyzing the dependence of oxygen incorporation current density on overpotential and oxygen partial pressure in mixed conducting oxide electrodes. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 23414-23424.	2.8	19
25	Coupling between oxygen redox and cation migration explains unusual electrochemistry in lithium-rich layered oxides. <i>Nature Communications</i> , 2017, 8, 2091.	12.8	469
26	Surface structure of coherently strained ceria ultrathin films. <i>Physical Review B</i> , 2016, 94, .	3.2	6
27	Persistent State of Charge Heterogeneity in Relaxed, Partially Charged Li <sub>1-x</sub> Ni <sub>1/3</sub> Co <sub>1/3</sub> Mn <sub>1/3</sub> O <sub>2</sub> Secondary Particles. <i>Advanced Materials</i> , 2016, 28, 6631-6638.	21.0	142
28	Sr- and Mn-doped LaAlO <sub>3</sub> for solar thermochemical H <sub>2</sub> and CO production. <i>Energy and Environmental Science</i> , 2013, 6, 2424.	30.8	323
29	High electrochemical activity of the oxide phase in model ceria-Pt and ceria-Ni composite anodes. <i>Nature Materials</i> , 2012, 11, 155-161.	27.5	288
30	Electrochemistry of Mixed Oxygen Ion and Electron Conducting Electrodes in Solid Electrolyte Cells. <i>Annual Review of Chemical and Biomolecular Engineering</i> , 2012, 3, 313-341.	6.8	83
31	Highly Enhanced Concentration and Stability of Reactive Ce <sup>3+</sup> on Doped CeO <sub>2</sub> Surface Revealed In Operando. <i>Chemistry of Materials</i> , 2012, 24, 1876-1882.	6.7	169
32	Surface reaction and transport in mixed conductors with electrochemically-active surfaces: a 2-D numerical study of ceria. <i>Physical Chemistry Chemical Physics</i> , 2011, 13, 2121-2135.	2.8	53
33	A thermochemical study of ceria: exploiting an old material for new modes of energy conversion and CO <sub>2</sub> mitigation. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2010, 368, 3269-3294.	3.4	371
34	High-Flux Solar-Driven Thermochemical Dissociation of CO <sub>2</sub> and H <sub>2</sub> O Using Nonstoichiometric Ceria. <i>Science</i> , 2010, 330, 1797-1801.	12.6	1,292