

Kui Xu

List of Publications by Year in descending order

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49
papers

3,477
citations

159585
30
h-index

214800
47
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all docs

49
docs citations

49
times ranked

5035
citing authors

#	ARTICLE	IF	CITATIONS
1	Fire-safe, mechanically strong and tough thermoplastic Polyurethane/MXene nanocomposites with exceptional smoke suppression. <i>Materials Today Physics</i> , 2022, 22, 100607.	6.0	52
2	Robust interphase on both anode and cathode enables stable aqueous lithium-ion battery with coulombic efficiency exceeding 99%. <i>Energy Storage Materials</i> , 2022, 46, 577-582.	18.0	14
3	How Prussian Blue Analogues Can Be Stable in Concentrated Aqueous Electrolytes. <i>ACS Energy Letters</i> , 2022, 7, 1672-1678.	17.4	32
4	Achieving ultrahigh electrochemical performance by surface design and nanoconfined water manipulation. <i>National Science Review</i> , 2022, 9, .	9.5	9
5	Stepped Porous Carbon@Multilayer Graphene@Fe ₃ C/Fe ₃ N Membrane to Inhibit the Polysulfides Shuttle for High-Performance Lithium-Sulfur Batteries. <i>Advanced Sustainable Systems</i> , 2022, 6, .	5.3	1
6	Light-Controlled Reconfigurable Optical Synapse Based on Carbon Nanotubes/2D Perovskite Heterostructure for Image Recognition. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 28221-28229.	8.0	6
7	Achieving Electronic Engineering of Vanadium Oxide-Based 3D Lithiophilic Sandwiched-Aerogel Framework for Ultrastable Lithium Metal Batteries. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 33306-33314.	8.0	3
8	Stretchable and Ultrasensitive Intelligent Sensors for Wireless Human-Machine Manipulation. <i>Advanced Functional Materials</i> , 2021, 31, 2009466.	14.9	41
9	Ultrafast Microwave Polarizing Electrons to Form Vertically Aligned Metal Hybrids as Lithiophilic Buffer for Lithium-Metal Batteries. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 16594-16601.	8.0	9
10	Robust self-gated-carriers enabling highly sensitive wearable temperature sensors. <i>Applied Physics Reviews</i> , 2021, 8, .	11.3	31
11	Kust-I: a high-performance two-dimensional graphene-based material for seawater desalination. <i>Journal of Materials Chemistry A</i> , 2021, 9, 21158-21166.	10.3	18
12	Comment to the letter to the editor from Costentin et al. Entitled "Ohmic drop correction in electrochemical techniques. Multiple potential step chrono-amperometry at the test bench". <i>Energy Storage Materials</i> , 2020, 24, 4-5.	18.0	1
13	Effects of functional groups and anion size on the charging mechanisms in layered electrode materials. <i>Energy Storage Materials</i> , 2020, 33, 460-469.	18.0	36
14	Unraveling the Charge Storage Mechanism of Ti ₃ C ₂ T _x MXene Electrode in Acidic Electrolyte. <i>ACS Energy Letters</i> , 2020, 5, 2873-2880.	17.4	129
15	Development Status and Prospects of Artificial Intelligence in the Field of Energy Conversion Materials. <i>Frontiers in Energy Research</i> , 2020, 8, .	2.3	7
16	Computational Insights into Charge Storage Mechanisms of Supercapacitors. <i>Energy and Environmental Materials</i> , 2020, 3, 235-246.	12.8	49
17	MXenes as High-Rate Electrodes for Energy Storage. <i>Trends in Chemistry</i> , 2020, 2, 654-664.	8.5	81
18	A Survey of Artificial Intelligence Techniques Applied in Energy Storage Materials R&D. <i>Frontiers in Energy Research</i> , 2020, 8, .	2.3	15

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19	Metallic Sandwiched-Aerogel Hybrids Enabling Flexible and Stretchable Intelligent Sensor. Nano Letters, 2020, 20, 3449-3458.	9.1	87
20	Charge Storage Mechanisms of Single-Layer Graphene in Ionic Liquid. Journal of the American Chemical Society, 2019, 141, 16559-16563.	13.7	67
21	Electrochemical study of pseudocapacitive behavior of Ti ₃ C ₂ T _x MXene material in aqueous electrolytes. Energy Storage Materials, 2019, 18, 456-461.	18.0	111
22	Mutually beneficial Co ₃ O ₄ @MoS ₂ heterostructures as a highly efficient bifunctional catalyst for electrochemical overall water splitting. Journal of Materials Chemistry A, 2018, 6, 2067-2072.	10.3	178
23	Tracking Ionic Rearrangements and Interpreting Dynamic Volumetric Changes in Two-Dimensional Metal Carbide Supercapacitors: A Molecular Dynamics Simulation Study. ChemSusChem, 2018, 11, 1892-1899.	6.8	50
24	Tracking Ionic Rearrangements and Interpreting Dynamic Volumetric Changes in Two-Dimensional Metal Carbide Supercapacitors: A Molecular Dynamics Simulation Study. ChemSusChem, 2018, 11, 1889-1889.	6.8	3
25	Stabilizing the oxygen vacancies and promoting water-oxidation kinetics in cobalt oxides by lower valence-state doping. Nano Energy, 2018, 53, 144-151.	16.0	114
26	Commensurate lattice constant dependent thermal conductivity of misoriented bilayer graphene. Carbon, 2018, 138, 451-457.	10.3	38
27	Promoted Electrochemical Performance of β -MnO ₂ through Surface Engineering. ACS Applied Materials & Interfaces, 2017, 9, 15176-15181.	8.0	18
28	Prediction of T _a and H _a Phase Two-Dimensional Transition-Metal Carbides/Nitrides and Their Semiconducting \rightarrow Metallic Phase Transition. ChemPhysChem, 2017, 18, 1897-1902.	2.1	30
29	Hierarchical NiCo ₂ S ₄ @NiFe LDH Heterostructures Supported on Nickel Foam for Enhanced Overall-Water-Splitting Activity. ACS Applied Materials & Interfaces, 2017, 9, 15364-15372.	8.0	468
30	The mechanism of hydrogen adsorption on transition metal dichalcogenides as hydrogen evolution reaction catalyst. Physical Chemistry Chemical Physics, 2017, 19, 10125-10132.	2.8	126
31	Synergistic effect of two actions sites on cobalt oxides towards electrochemical water-oxidation. Nano Energy, 2017, 42, 98-105.	16.0	101
32	Synthesis of 2D/3D carbon hybrids by heterogeneous space-confined effect for electrochemical energy storage. Journal of Materials Chemistry A, 2017, 5, 19175-19183.	10.3	15
33	Interface engineering: The Ni(OH) ₂ /MoS ₂ heterostructure for highly efficient alkaline hydrogen evolution. Nano Energy, 2017, 37, 74-80.	16.0	436
34	Charging/Discharging Dynamics in Two-Dimensional Titanium Carbide (MXene) Slit Nanopore: Insights from molecular dynamic study. Electrochimica Acta, 2016, 196, 75-83.	5.2	59
35	Intercalation of Glucose in NiMn-Layered Double Hydroxide Nanosheets: an Effective Path Way towards Battery-type Electrodes with Enhanced Performance. Electrochimica Acta, 2016, 216, 35-43.	5.2	98
36	Unraveling the different charge storage mechanism in T and H phases of MoS ₂ . Electrochimica Acta, 2016, 217, 1-8.	5.2	37

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37	Probing the electrochemical capacitance of MXene nanosheets for high-performance pseudocapacitors. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 4460-4467.	2.8	65
38	Different charge-storage mechanisms in disulfide vanadium and vanadium carbide monolayer. <i>Journal of Materials Chemistry A</i> , 2015, 3, 9909-9914.	10.3	76
39	Enhanced electrochemical performance by facile oxygen vacancies from lower valence-state doping for ramsdellite-MnO ₂ . <i>Journal of Materials Chemistry A</i> , 2015, 3, 12461-12467.	10.3	54
40	Nickel Sulfide Nanoparticles Synthesized by Microwave-assisted Method as Promising Supercapacitor Electrodes: An Experimental and Computational Study. <i>Electrochimica Acta</i> , 2015, 182, 361-367.	5.2	99
41	The effective adsorption and decomposition of N ₂ O on Al-decorated graphene oxide under electric field. <i>RSC Advances</i> , 2015, 5, 18761-18766.	3.6	12
42	Electrochemical double layer near polar reduced graphene oxide electrode: Insights from molecular dynamic study. <i>Electrochimica Acta</i> , 2015, 166, 142-149.	5.2	51
43	Enhanced adsorption of acidic gases (CO ₂ , NO ₂ and SO ₂) on light metal decorated graphene oxide. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 11031.	2.8	87
44	Activation Mechanism Study of Dandelion-Like Co ₉ S ₈ Nanotubes in Supercapacitors. <i>Journal of the Electrochemical Society</i> , 2014, 161, A996-A1000.	2.9	53
45	The application of genetic algorithm for lattice matching of composite structure. , 2013, , .		0
46	Electric field induced orientation-selective unzipping of zigzag carbon nanotubes upon oxidation. <i>Physical Chemistry Chemical Physics</i> , 2013, 15, 6431.	2.8	17
47	Rapid microwave-assisted synthesis NiMoO ₄ ·H ₂ O nanoclusters for supercapacitors. <i>Materials Letters</i> , 2013, 108, 164-167.	2.6	89
48	NiCo ₂ S ₄ porous nanotubes synthesis via sacrificial templates: high-performance electrode materials of supercapacitors. <i>CrystEngComm</i> , 2013, 15, 7649.	2.6	285
49	Lithium diffusion in silicon and induced structure disorder: A molecular dynamics study. <i>AIP Advances</i> , 2013, 3, .	1.3	19