Pei-Yu Hou

List of Publications by Year
in descending order

51 papers	2,367 citations	201674 27 h-index	206112 48 g-index
52 all docs	52 docs citations	52 times ranked	2637 citing authors

#	Article	IF	Citations
1	Surface/Interfacial Structure and Chemistry of Highâ€Energy Nickelâ€Rich Layered Oxide Cathodes: Advances and Perspectives. Small, 2017, 13, 1701802.	10.0	228
2	Coreâ€“shell and concentration-gradient cathodes prepared via co-precipitation reaction for advanced lithium-ion batteries. Journal of Materials Chemistry A, 2017, 5, 4254-4279.	10.3	163
3	Stabilizing the Electrode/Electrolyte Interface of LiNi_{0.8}Co_{0.15}Al_{0.05}O₂ through Tailoring Aluminum Distribution in Microspheres as Long-Life, High-Rate, and Safe Cathode for Lithium-Ion Batteries. ACS Applied Materials & Interfaces, 2017, 9, 29643-29653.	8.0	133
4	Construction of Longanâ€“like hybrid structures by anchoring nickel hydroxide on yolkâ€“shell polypyrrole for asymmetric supercapacitors. Nano Energy, 2019, 56, 207-215.	16.0	132
5	Fabrication of ZnO/ZnFe2O4 hollow nanocages through metal organic frameworks route with enhanced gas sensing properties. Sensors and Actuators B: Chemical, 2017, 251, 27-33.	7.8	113
6	Hierarchical CuCo2O4@nickel-cobalt hydroxides core/shell nanoarchitectures for high-performance hybrid supercapacitors. Science Bulletin, 2017, 62, 1122-1131.	9.0	111
7	Micron-sized monocrystalline LiNi_{1/3}Co_{1/3}Mn_{1/3}O₂ as high-volumetric-energy-density cathode for lithium-ion batteries. Journal of Materials Chemistry A, 2018, 6, 12344-12352.	10.3	99
8	Hierarchically hollow structured NiCo₂S₄@NiS for high-performance flexible hybrid supercapacitors. Nanoscale, 2020, 12, 4686-4694.	5.6	80
9	Design, synthesis, and performances of double-shelled LiNi0.5Co0.2Mn0.3O2 as cathode for long-life and safe Li-ion battery. Journal of Power Sources, 2014, 265, 174-181.	7.8	72
10	One-Step Synthesis of 3D Network-like Ni_{<i>x</i>}Co_{1â€“<i>x</i>}MoO₄ Porous Nanosheets for High Performance Battery-type Hybrid Supercapacitors. ACS Sustainable Chemistry and Engineering, 2017, 5, 10139-10147.	6.7	66
11	A stable layered P3/P2 and spinel intergrowth nanocomposite as a long-life and high-rate cathode for sodium-ion batteries. Nanoscale, 2018, 10, 6671-6677.	5.6	65
12	Nickel-cobalt based aqueous flexible solid state supercapacitors with high energy density by controllable surface modification. Journal of Power Sources, 2019, 427, 56-61.	7.8	62
13	Understanding the Origin of Enhanced Performances in Coreâ€“Shell and Concentration-Gradient Layered Oxide Cathode Materials. ACS Applied Materials & Interfaces, 2015, 7, 12864-12872.	8.0	61
14	Improving Li⁺ Kinetics and Structural Stability of Nickel-Rich Layered Cathodes by Heterogeneous Inactive-Al³⁺ Doping. ACS Sustainable Chemistry and Engineering, 2018, 6, 5653-5661.	6.7	60
15	Tailoring atomic distribution in micron-sized and spherical Li-rich layered oxides as cathode materials for advanced lithium-ion batteries. Journal of Materials Chemistry A, 2016, 4, 7689-7699.	10.3	55
16	Hierarchical flowerlike metal/metal oxide nanostructures derived from layered double hydroxides for catalysis and gas sensing. Journal of Materials Chemistry A, 2017, 5, 23999-24010.	10.3	43
17	Designing flexible asymmetric supercapacitor with high energy density by electrode engineering and charge matching mechanism. Chemical Engineering Journal, 2022, 429, 132406.	12.7	42
18	Pre-heat treatment of carbonate precursor firstly in nitrogen and then oxygen atmospheres: A new procedure to improve tap density of high-performance cathode material Li1.167(Ni0.139Co0.139Mn0.556)O2 for lithium ion batteries. Journal of Power Sources, 2015, 292, 58-65.	7.8	41

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19	Construction of ZnCo₂S₄@Ni(OH)₂ coreâ€“shell nanostructures for asymmetric supercapacitors with high energy densities. Inorganic Chemistry Frontiers, 2019, 6, 2135-2141.	6.0	41
20	Coreâ€“shell structured Li[(Ni0.8Co0.1Mn0.1)0.7(Ni0.45Co0.1Mn0.45)0.3]O2 cathode material for high-energy lithium ion batteries. Journal of Alloys and Compounds, 2014, 587, 710-716.	5.5	40
21	Mitigating the capacity and voltage decay of lithium-rich layered oxide cathodes by fabricating Ni/Mn graded surface. Journal of Materials Chemistry A, 2017, 5, 24758-24766.	10.3	40
22	Mitigating the P2â€“O2 phase transition of high-voltage P2-Na_{2/3}[Ni_{1/3}Mn_{2/3}]O₂ cathodes by cobalt gradient substitution for high-rate sodium-ion batteries. Journal of Materials Chemistry A, 2019, 7, 4705-4713.	10.3	39
23	Multishell Precursors Facilitated Synthesis of Concentration-Gradient Nickel-Rich Cathodes for Long-Life and High-Rate Lithium-Ion Batteries. ACS Applied Materials & Interfaces, 2018, 10, 24508-24515.	8.0	38
24	A high energy density Li-rich positive-electrode material with superior performances via a dual chelating agent co-precipitation route. Journal of Materials Chemistry A, 2015, 3, 9427-9431.	10.3	36
25	Carbonate coprecipitation preparation of Li-rich layered oxides using the oxalate anion ligand as high-energy, high-power and durable cathode materials for lithium-ion batteries. Journal of Materials Chemistry A, 2015, 3, 21219-21226.	10.3	33
26	A high energy-density P2-Na_{2/3}[Ni_{0.3}Co_{0.1}Mn_{0.6}]O₂ cathode with mitigated P2â€“O2 transition for sodium-ion batteries. Nanoscale, 2019, 11, 2787-2794.	5.6	33
27	A novel core-concentration gradient-shelled LiNi_{0.5}Co_{0.2}Mn_{0.3}O₂as high-performance cathode for lithium-ion batteries. RSC Advances, 2014, 4, 15923.	3.6	31
28	Boosting the Redox Kinetics of Highâ€Voltage P2â€Type Cathode by Radially Oriented {010} Exposed Nanoplates for Highâ€Power Sodiumâ€Ion Batteries. Small Structures, 2022, 3, 2100123.	12.0	29
29	Modified Co₄N by B-doping for high-performance hybrid supercapacitors. Nanoscale, 2020, 12, 18400-18408.	5.6	28
30	Li-ion batteries: Phase transition. Chinese Physics B, 2016, 25, 016104.	1.4	27
31	A review of interfaces within solid-state electrolytes: fundamentals, issues and advancements. Chemical Engineering Journal, 2022, 437, 135179.	12.7	27
32	Stabilizing the cationic/anionic redox chemistry of Li-rich layered cathodes by tuning the upper cut-off voltage for high energy-density lithium-ion batteries. Journal of Materials Chemistry A, 2020, 8, 14214-14222.	10.3	25
33	An integrated approach to configure rGO/VS4/S composites with improved catalysis of polysulfides for advanced lithiumâ€“sulfur batteries. Chinese Chemical Letters, 2022, 33, 3909-3915.	9.0	22
34	Defect engineering in Co-doped Ni3S2 nanosheets as cathode for high-performance aqueous zinc ion battery. Journal of Materials Science and Technology, 2022, 118, 190-198.	10.7	22
35	High-rate and long-life lithium-ion batteries coupling surface-Al3+-enriched LiNi0.7Co0.15Mn0.15O2 cathode with porous Li4Ti5O12 anode. Chemical Engineering Journal, 2019, 378, 122057.	12.7	21
36	Research progress on the interfaces of solid-state lithium metal batteries. Journal of Materials Chemistry A, 2021, 9, 9481-9505.	10.3	19

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37	Booting the electrochemical properties of Fe-based anode by the formation multiphasic nanocomposite for lithium-ion batteries. Chinese Chemical Letters, 2021, 32, 2169-2173.	9.0	18
38	Suppressing the P2Ââ"ÂO2 phase transformation and Na+/vacancy ordering of high-voltage manganese-based P2-type cathode by cationic codoping. Journal of Colloid and Interface Science, 2022, 611, 752-759.	9.4	18
39	A stable Li-deficient oxide as high-performance cathode for advanced lithium-ion batteries. Chemical Communications, 2015, 51, 3231-3234.	4.1	17
40	A Novel Double-shelled LiNi0.5Co0.2Mn0.3O2 Cathode Material for Li-ion Batteries. Chemistry Letters, 2012, 41, 1712-1714.	1.3	16
41	Design of Multilayered Porous Aluminum Nitride for Supercapacitor Applications. Energy & Fuels, 2021, 35, 12628-12636.	5.1	16
42	Thermodynamically Metal Atom Trapping in Van der Waals Layers Enabling Multifunctional 3D Carbon Network. Advanced Functional Materials, 2020, 30, 2002626.	14.9	15
43	General flux-free synthesis of single crystal Ni-rich layered cathodes by employing a Li-containing spinel transition phase for lithium-ion batteries. Journal of Materials Chemistry A, 2022, 10, 16420-16429.	10.3	14
44	Design, preparation and properties of core-shelled Li{[NiyCo1-2yMny](1-x)}core{[Ni1/2Mn1/2]x}shellO2 (0â‰xâ‰0.3, 6y+3x-6xy=2) as high-performance cathode for Li-ion battery. Electrochimica Acta, 2014, 133, 589-596.	5.2	12
45	A new CoO/Co2B/rGO nanocomposite anode with large capacitive contribution for high-efficiency and durable lithium storage. Applied Surface Science, 2020, 508, 144698.	6.1	12
46	Mitigating the Microcracks of High-Ni Oxides by <i>In</i> <i>Situ</i> Formation of Binder between Anisotropic Grains for Lithium-Ion Batteries. ACS Applied Materials & Interfaces, 2020, 12, 13923-13930.	8.0	10
47	Amorphous Ni-Co-S nanocages assembled with nanosheet arrays as cathode for high-performance zinc ion battery. Chinese Chemical Letters, 2022, 33, 3272-3276.	9.0	10
48	Hierarchical Li-rich oxide microspheres assembled from {010} exposed primary grains for high-rate lithium-ion batteries. New Journal of Chemistry, 2020, 44, 8486-8493.	2.8	9
49	Synthesis and electrochemical characteristics of Li_{1.2}(Ni_{0.2}Mn_{0.6})_x(Co_{0.4}Mn_{0.4})_y(Ni<su (0 â‰ x + y â‰ 1) cathode materials for lithium ion batteries. RSC Advances, 2015, 5, 36015-36021.	3.6	8
50	A Carbonâ€Free Li 2 TiO 3 /Li 2 MTi 3 O 8 (Mâ•Zn 1/3 Co 2/3) Nanocomposite as Highâ€Rate and Longâ€Life Anode for Lithiumâ€Ion Batteries. Energy Technology, 2019, 7, 1800960.	3.8	6
51	Enhanced Dye-Sensitized Solar Cell Efficiency by Insertion of a H₃PW₁₂O₄₀ Layer Between the Transparent Conductive Oxide Layer and the Compact TiO₂ Layer. Science of Advanced Materials, 2018, 10, 867-871.	0.7	4