Chia-hung Hou

List of Publications by Year
in descending order

97 papers	4,324 citations	81743 39 h-index	118652 62 g-index
97 all docs	97 docs citations	97 times ranked	4969 citing authors

#	Article	IF	Citations
1	A comparative study of electrosorption selectivity of ions by activated carbon electrodes in capacitive deionization. Desalination, 2013, 314, 124-129.	4.0	250
2	Improved performance in capacitive deionization of activated carbon electrodes with a tunable mesopore and micropore ratio. Desalination, 2015, 367, 60-68.	4.0	215
3	Water-energy nexus for urban water systems: A comparative review on energy intensity and environmental impacts in relation to global water risks. Applied Energy, 2017, 205, 589-601.	5.1	192
4	Electrosorption capacitance of nanostructured carbon-based materials. Journal of Colloid and Interface Science, 2006, 302, 54-61.	5.0	149
5	Electro-removal of arsenic(III) and arsenic(V) from aqueous solutions by capacitive deionization. Journal of Hazardous Materials, 2016, 312, 208-215.	6.5	146
6	Electro-enhanced removal of copper ions from aqueous solutions by capacitive deionization. Journal of Hazardous Materials, 2014, 278, 8-15.	6.5	142
7	Active MnO2/biochar composite for efficient As(III) removal: Insight into the mechanisms of redox transformation and adsorption. Water Research, 2021, 188, 116495.	5.3	128
8	Electrodeposited Manganese Dioxide/Activated Carbon Composite As a High-Performance Electrode Material for Capacitive Deionization. ACS Sustainable Chemistry and Engineering, 2016, 4, 4762-4770.	3.2	119
9	A critical review on biochar-based engineered hierarchical porous carbon for capacitive charge storage. Renewable and Sustainable Energy Reviews, 2021, 145, 111029.	8.2	105
10	High performance capacitive deionization using modified ZIF-8-derived, N-doped porous carbon with improved conductivity. Nanoscale, 2018, 10, 14852-14859.	2.8	97
11	Cellulose Framework Directed Construction of Hierarchically Porous Carbons Offering High-Performance Capacitive Deionization of Brackish Water. ACS Sustainable Chemistry and Engineering, 2016, 4, 1885-1893.	3.2	95
12	Meso/micropore-controlled hierarchical porous carbon derived from activated biochar as a high-performance adsorbent for copper removal. Science of the Total Environment, 2019, 692, 844-853.	3.9	81
13	Asymmetric Redoxâ€Polymer Interfaces for Electrochemical Reactive Separations: Synergistic Capture and Conversion of Arsenic. Advanced Materials, 2020, 32, e1906877.	11.1	77
14	Preparation of activated carbon sheet electrode assisted electrosorption process. Journal of the Taiwan Institute of Chemical Engineers, 2012, 43, 473-479.	2.7	75
15	Studying the electrosorption performance of activated carbon electrodes in batch-mode and single-pass capacitive deionization. Separation and Purification Technology, 2019, 215, 403-409.	3.9	75
16	Development of multi-walled carbon nanotube/poly(vinyl alcohol) composite as electrode for capacitive deionization. Separation and Purification Technology, 2014, 130, 7-14.	3.9	74
17	Opportunities for nanotechnology to enhance electrochemical treatment of pollutants in potable water and industrial wastewater â€“ a perspective. Environmental Science: Nano, 2020, 7, 2178-2194.	2.2	74
18	Life cycle assessment of environmental impacts and energy demand for capacitive deionization technology. Desalination, 2016, 399, 53-60.	4.0	72

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19	Non-metallic nanomaterials in cancer theranostics: a review of silica- and carbon-based drug delivery systems. Science and Technology of Advanced Materials, 2013, 14, 044407.	2.8	66
20	Integrating cost-effective microbial fuel cells and energy-efficient capacitive deionization for advanced domestic wastewater treatment. Chemical Engineering Journal, 2017, 330, 1-10.	6.6	66
21	Application of capacitive deionization technology to the removal of sodium chloride from aqueous solutions. International Journal of Environmental Science and Technology, 2013, 10, 753-760.	1.8	65
22	Application of a multiwalled carbon nanotube-chitosan composite as an electrode in the electrosorption process for water purification. Chemosphere, 2016, 146, 113-120.	4.2	64
23	Capacitive deionization of arsenic-contaminated groundwater in a single-pass mode. Chemosphere, 2017, 184, 924-931.	4.2	62
24	Mesoporous TiO₂ Embedded with a Uniform Distribution of CuO Exhibit Enhanced Charge Separation and Photocatalytic Efficiency. ACS Applied Materials & Interfaces, 2017, 9, 42425-42429.	4.0	62
25	Hierarchical porous carbon derived from activated biochar as an eco-friendly electrode for the electrosorption of inorganic ions. Separation and Purification Technology, 2020, 242, 116813.	3.9	62
26	Electrosorption selectivity of ions from mixtures of electrolytes inside nanopores. Journal of Chemical Physics, 2008, 129, 224703.	1.2	60
27	Highly porous activated carbons from resource-recovered Leucaena leucocephala wood as capacitive deionization electrodes. Chemosphere, 2015, 141, 71-79.	4.2	60
28	Highly porous activated carbon with multi-channeled structure derived from loofa sponge as a capacitive electrode material for the deionization of brackish water. Chemosphere, 2018, 208, 285-293.	4.2	59
29	Exploring the electrosorption selectivity of nitrate over chloride in capacitive deionization (CDI) and membrane capacitive deionization (MCDI). Desalination, 2021, 497, 114764.	4.0	58
30	ZIF-8 Derived, Nitrogen-Doped Porous Electrodes of Carbon Polyhedron Particles for High-Performance Electrosorption of Salt Ions. Scientific Reports, 2016, 6, 28847.	1.6	55
31	Enhanced desalination performance via mixed capacitive-Faradaic ion storage using RuO2-activated carbon composite electrodes. Electrochimica Acta, 2019, 295, 769-777.	2.6	54
32	An NAD(P)H:quinone oxidoreductase 1 (NQO1) enzyme responsive nanocarrier based on mesoporous silica nanoparticles for tumor targeted drug delivery in vitro and in vivo. Nanoscale, 2016, 8, 12307-12317.	2.8	50
33	Bio-templated silica composites for next-generation biomedical applications. Advances in Colloid and Interface Science, 2017, 249, 272-289.	7.0	50
34	Enhancing the water desalination and electricity generation of a microbial desalination cell with a three-dimensional macroporous carbon nanotube-chitosan sponge anode. Science of the Total Environment, 2019, 675, 41-50.	3.9	49
35	Carbon-Based Materials for Photo-Triggered Theranostic Applications. Molecules, 2016, 21, 1585.	1.7	47
36	A microbial fuel cell driven capacitive deionization technology for removal of low level dissolved ions. Chemosphere, 2013, 91, 623-628.	4.2	46

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37	Optimization of highly microporous activated carbon preparation from Moso bamboo using central composite design approach. Journal of the Taiwan Institute of Chemical Engineers, 2015, 50, 266-275.	2.7	46
38	Incorporating Manganese Dioxide in Carbon Nanotubeâ€“Chitosan as a Pseudocapacitive Composite Electrode for High-Performance Desalination. ACS Sustainable Chemistry and Engineering, 2018, 6, 3196-3205.	3.2	45
39	RCA combined nanoparticle-based optical detection technique for protein microarray: a novel approach. Biosensors and Bioelectronics, 2004, 20, 123-126.	5.3	43
40	Integrating a supercapacitor with capacitive deionization for direct energy recovery from the desalination of brackish water. Applied Energy, 2019, 252, 113417.	5.1	38
41	When cells divide: Label-free multimodal spectral imaging for exploratory molecular investigation of living cells during cytokinesis. Scientific Reports, 2015, 5, 17541.	1.6	37
42	Performance of integrated membrane filtration and electrodialysis processes for copper recovery from wafer polishing wastewater. Journal of Water Process Engineering, 2014, 4, 149-158.	2.6	36
43	Monte Carlo simulation of electrical double-layer formation from mixtures of electrolytes inside nanopores. Journal of Chemical Physics, 2008, 128, 044705.	1.2	35
44	Quinone-Modified Mn-Doped ZnS Quantum Dots for Room-Temperature Phosphorescence Sensing of Human Cancer Cells That Overexpress NQO1. ACS Applied Materials & Interfaces, 2015, 7, 25961-25969.	4.0	35
45	Assessment of agricultural waste-derived activated carbon in multiple applications. Environmental Research, 2020, 191, 110176.	3.7	34
46	An integrated active biochar filter and capacitive deionization system for high-performance removal of arsenic from groundwater. Journal of Hazardous Materials, 2022, 423, 127084.	6.5	34
47	Membrane capacitive deionization for low-salinity desalination in the reclamation of domestic wastewater effluents. Chemosphere, 2019, 235, 413-422.	4.2	30
48	Effective electrochemically controlled removal of fluoride ions using electrodeposited polyaniline-carbon nanotube composite electrodes. Separation and Purification Technology, 2021, 254, 117561.	3.9	30
49	Development of a membrane capacitive deionization stack for domestic wastewater reclamation: A pilot-scale feasibility study. Desalination, 2021, 500, 114851.	4.0	29
50	Molecular-Sieving Capabilities of Mesoporous Carbon Membranes. Journal of Physical Chemistry B, 2008, 112, 8563-8570.	1.2	28
51	Graphene Oxide Based Nanocarrier Combined with a pH-Sensitive Tracer: A Vehicle for Concurrent pH Sensing and pH-Responsive Oligonucleotide Delivery. ACS Applied Materials & Interfaces, 2015, 7, 11467-11475.	4.0	26
52	Carbon nanotubes/activated carbon hybrid as a high-performance suspension electrode for the electrochemical desalination of wastewater. Desalination, 2022, 522, 115440.	4.0	26
53	Integration of a guided-mode resonance filter with microposts for in-cell protein detection. Analyst, The, 2016, 141, 4189-4195.	1.7	25
54	Direct electrochemical lithium recovery from acidic lithium-ion battery leachate using intercalation electrodes. Resources, Conservation and Recycling, 2021, 175, 105837.	5.3	25

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55	Pseudo-multicolor carbon dots emission and the dilution-induced reversible fluorescence shift. RSC Advances, 2016, 6, 44024-44028.	1.7	24
56	A highly efficient bead extraction technique with low bead number for digital microfluidic immunoassay. Biomicrofluidics, 2016, 10, 011901.	1.2	21
57	The detection of multiple illicit street drugs in liquid samples by direct analysis in real time (DART) coupled to Q-orbitrap tandem mass spectrometry. Forensic Science International, 2016, 267, 1-6.	1.3	21
58	Waterâ€"Energy Nexus for Multi-Criteria Decision Making in Water Resource Management: A Case Study of Choshui River Basin in Taiwan. Water (Switzerland), 2018, 10, 1740.	1.2	21
59	O, N-doped porous biochar by air oxidation for enhancing heavy metal removal: The role of O, N functional groups. Chemosphere, 2022, 293, 133622.	4.2	21
60	In situ engineering of highly conductive TiO2/carbon heterostructure fibers for enhanced electrocatalytic degradation of water pollutants. Journal of Hazardous Materials, 2022, 429, 128328.	6.5	21
61	Predicting the outcomes for out-of-hospital cardiac arrest patients using multiple biomarkers and suspension microarray assays. Scientific Reports, 2016, 6, 27187.	1.6	20
62	Hotspot analysis and improvement schemes for capacitive deionization (CDI) using life cycle assessment. Desalination, 2019, 468, 114087.	4.0	20
63	The effect of redox potential on the removal characteristic of divalent cations during activated carbon-based capacitive deionization. Chemosphere, 2021, 274, 129762.	4.2	19
64	Diatom-assisted biomicroreactor targeting the complete removal of perfluorinated compounds. Journal of Hazardous Materials, 2020, 384, 121491.	6.5	18
65	Artificial peptide-controlled protein release of Zn2+-triggered, self-assembled histidine-tagged protein microparticle. Colloids and Surfaces B: Biointerfaces, 2020, 187, 110644.	2.5	18
66	Exploring the electrosorption selectivity and recovery of indium ions with capacitive deionization in acidic solution. Journal of Colloid and Interface Science, 2021, 586, 819-829.	5.0	17
67	Adsorption and dissociation of N2O molecule on Fe(1 1 1) surface: A DFT study. Computational Materials Science, 2011, 50, 3311-3314.	1.4	16
68	Removal of bisphenol A from aqueous solutions by electrochemical polymerization on a carbon aerogel electrode. Journal of the Taiwan Institute of Chemical Engineers, 2015, 51, 103-108.	2.7	16
69	Improved bauxite residue dealkalization by combination of aerated washing and electrodialysis. Journal of Hazardous Materials, 2019, 364, 682-690.	6.5	16
70	Biothiol-triggered, self-disassembled silica nanobeads for intracellular drug delivery. Acta Biomaterialia, 2015, 23, 263-270.	4.1	15
71	Enhanced electrosorption selectivity of phosphate using an anion-exchange resin-coated activated carbon electrode. Journal of Colloid and Interface Science, 2021, 600, 199-208.	5.0	15
72	Assessment of sludge dewaterability using rheological properties. Journal of the Chinese Institute of Engineers, Transactions of the Chinese Institute of Engineers,Series A/Chung-kuo Kung Ch'eng Hsuch K'an, 2003, 26, 221-226.	0.6	14

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73	In vitro investigation of methylene blue-bearing, electrostatically assembled aptamerâ€“silica nanocomposites as potential photodynamic therapeutics. Colloids and Surfaces B: Biointerfaces, 2015, 135, 217-224.	2.5	13
74	Multifunctional silver nanocluster-hybrid oligonucleotide vehicle for cell imaging and microRNA-targeted gene silencing. Colloids and Surfaces B: Biointerfaces, 2017, 152, 423-431.	2.5	13
75	Redox-flow battery with four-channel architecture for continuous and efficient desalination over a wide salinity working range. Desalination, 2022, 534, 115783.	4.0	13
76	Nickel hexacyanoferrate incorporated with reduced graphene oxide for highly efficient intercalation desalination. Separation and Purification Technology, 2022, 295, 121351.	3.9	13
77	Curved Fragmented Graphenic Hierarchical Architectures for Extraordinary Charging Capacities. Small, 2018, 14, e1702054.	5.2	12
78	Enhanced desalination of electrospun activated carbon fibers with controlled pore structures in the electrosorption process. Environmental Science: Water Research and Technology, 2020, 6, 312-320.	1.2	11
79	Optimizing the energetic performance of capacitive deionization devices with unipolar and bipolar connections under constant current charging. Journal of the Taiwan Institute of Chemical Engineers, 2018, 93, 201-210.	2.7	10
80	Longitudinal and quantitative assessment platform for concurrent analysis of anti-tumor efficacy and cardiotoxicity of nano-formulated medication inÂvivo. Analytica Chimica Acta, 2020, 1095, 129-137.	2.6	10
81	Development of an integrated capacitive-electrodialysis process (CapED) for continuous, low-energy electrochemical deionization. Separation and Purification Technology, 2021, 274, 119063.	3.9	10
82	Differential in situ sensing of extra- and intracellular glutathione by a novel redox-responsive silica matrix-Au nanoprobe. Analytica Chimica Acta, 2016, 902, 196-204.	2.6	9
83	Calculation of Electrical Double Layer Potential Profiles in Nanopores from Grand Canonical Monte Carlo Simulations. Journal of Chemical & Engineering Data, 2018, 63, 2557-2566.	1.0	9
84	Characterization of endogenous fluorescence in nonsmall lung cancerous cells: A comparison with nonmalignant lung normal cells. Journal of Biophotonics, 2020, 13, e201960210.	1.1	9
85	Technological and economic perspectives of membrane capacitive deionization (MCDI) systems in high-tech industries: From tap water purification to wastewater reclamation for water sustainability. Resources, Conservation and Recycling, 2022, 177, 106012.	5.3	9
86	Cation selectivity of activated carbon and nickel hexacyanoferrate electrode materials in capacitive deionization: A comparison study. Chemosphere, 2022, 307, 135613.	4.2	9
87	Mercury vapor adsorption and sustainable recovery using novel electrothermal swing system with gold-electrodeposited activated carbon fiber cloth. Journal of Hazardous Materials, 2021, 410, 124586.	6.5	8
88	Comparison between Effective Electrode/Electrolyte Interface Potential and Applied Potential for Gold Electrodes. Industrial & Engineering Chemistry Research, 2008, 47, 3525-3531.	1.8	6
89	Plant Cell Wall-Penetrable, Redox-Responsive Silica Nanoprobe for the Imaging of Starvation-Induced Vesicle Trafficking. Analytical Chemistry, 2016, 88, 10231-10236.	3.2	5
90	Additive Manufacturing of Electrodes for Desalination. Procedia Manufacturing, 2019, 34, 252-259.	1.9	5

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91	Oligonucleotides as â€˜bio-solventâ€™ for in situ extraction and functionalisation of carbon nanoparticles. Journal of Materials Chemistry B, 2014, 2, 4100-4107.	2.9	4
92	(Invited) An Integrated Microbial Desalination Cell-Driven Capacitive Deionization System as an Electrochemical Means for Wastewater Treatment, Electricity Generation and Desalination. ECS Transactions, 2017, 77, 91-97.	0.3	3
93	Electrically regenerated ion-exchange technology: Leveraging faradaic reactions and assessing the effect of co-ion sorption. Journal of Colloid and Interface Science, 2022, 623, 985-991.	5.0	3
94	Shifts of microbial community structure along substrate concentration gradients in immobilized biomass for nitrogen removal. Npj Clean Water, 2022, 5, .	3.1	3
95	Electrochemical Reactive Separation: Asymmetric Redoxâ€Polymer Interfaces for Electrochemical Reactive Separations: Synergistic Capture and Conversion of Arsenic (Adv. Mater. 6/2020). Advanced Materials, 2020, 32, 2070040.	11.1	1
96	(Invited) An Integrated Microbial Desalination Cell-Driven Capacitive Deionization System as an Electrochemical Means for Wastewater Treatment, Electricity Generation and Desalination. ECS Meeting Abstracts, 2017, , .	0.0	0
97	Electrochemical membrane technology for environmental remediation. , 2022, , 227-263.		0