Faradaic Reactions in Water Desalination by Batch-Mod

Environmental Science and Technology Letters
3, 222-226
DOI: 10.1021/acs.estlett.6b00124

Citation Report

#	Article	IF	Citations
2	Hydrogen peroxide generation in flow-mode capacitive deionization. Journal of Electroanalytical Chemistry, 2016, 776, 101-104.	1.9	60
3	Fluoride Removal from Brackish Groundwaters by Constant Current Capacitive Deionization (CDI). Environmental Science & Technology, 2016, 50, 10570-10579.	4.6	80
4	Polymer-coated composite anodes for efficient and stable capacitive deionization. Desalination, 2016, 399, 16-20.	4.0	64
5	Energy breakdown in capacitive deionization. Water Research, 2016, 104, 303-311.	5.3	114
6	Development of Redox-Active Flow Electrodes for High-Performance Capacitive Deionization. Environmental Science & Technology, 2016, 50, 13495-13501.	4.6	122
7	High performance stability of titania decorated carbon for desalination with capacitive deionization in oxygenated water. RSC Advances, 2016, 6, 106081-106089.	1.7	32
8	A protic salt-derived porous carbon for efficient capacitive deionization: Balance between porous structure and chemical composition. Carbon, 2017, 116, 21-32.	5.4	82
9	Hydrogen-treated, sub-micrometer carbon beads for fast capacitive deionization with high performance stability. Carbon, 2017, 117, 46-54.	5.4	50
10	Removal of nitrate by asymmetric capacitive deionization. Separation and Purification Technology, 2017, 183, 145-152.	3.9	50
11	Comparison of Faradaic reactions in capacitive deionization (CDI) and membrane capacitive deionization (MCDI) water treatment processes. Water Research, 2017, 120, 229-237.	5.3	242
12	Equilibria model for pH variations and ion adsorption in capacitive deionization electrodes. Water Research, 2017, 122, 387-397.	5.3	46
13	Enhanced performance stability of carbon/titania hybrid electrodes during capacitive deionization of oxygen saturated saline water. Electrochimica Acta, 2017, 224, 314-328.	2.6	98
14	Optimization of the voltage window for long-term capacitive deionization stability. Desalination, 2017, 424, 53-61.	4.0	67
15	A Combined Heat- and Power-Driven Membrane Capacitive Deionization System. Environmental Science and Technology Letters, 2017, 4, 470-474.	3.9	38
16	Low Energy Desalination Using Battery Electrode Deionization. Environmental Science and Technology Letters, 2017, 4, 444-449.	3.9	224
17	Electrosorption at functional interfaces: from molecular-level interactions to electrochemical cell design. Physical Chemistry Chemical Physics, 2017, 19, 23570-23584.	1.3	71
18	High-performance activated carbon from polyaniline for capacitive deionization. Carbon, 2017, 123, 318-333.	5.4	97
19	Organic-inorganic hybrid binder enhances capacitive deionization performance of activated-carbon electrode. Carbon, 2017, 123, 574-582.	5.4	34

#	Article	IF	Citations
20	Size-Based Ion Selectivity of Micropore Electric Double Layers in Capacitive Deionization Electrodes. Journal of the Electrochemical Society, 2017, 164, E270-E275.	1.3	73
21	Titanium Disulfide: A Promising Low-Dimensional Electrode Material for Sodium Ion Intercalation for Seawater Desalination. Chemistry of Materials, 2017, 29, 9964-9973.	3.2	112
22	Investigation of pH-dependent phosphate removal from wastewaters by membrane capacitive deionization (MCDI). Environmental Science: Water Research and Technology, 2017, 3, 875-882.	1.2	43
23	Starch Derived Porous Carbon Nanosheets for High-Performance Photovoltaic Capacitive Deionization. Environmental Science & Technology, 2017, 51, 9244-9251.	4.6	120
24	Anion Exchange Membrane Capacitive Deionization Cells. Journal of the Electrochemical Society, 2017, 164, E242-E247.	1.3	23
25	Ultrahigh Desalinization Performance of Asymmetric Flow-Electrode Capacitive Deionization Device with an Improved Operation Voltage of 1.8 V. ACS Sustainable Chemistry and Engineering, 2017, 5, 189-195.	3.2	70
26	A Combined Modeling and Experimental Study Assessing the Impact of Fluid Pulsation on Charge and Energy Efficiency in Capacitive Deionization. Journal of the Electrochemical Society, 2017, 164, E536-E547.	1.3	31
27	A direct comparison of flow-by and flow-through capacitive deionization. Desalination, 2018, 444, 169-177.	4.0	65
28	Hollow ZIFs-derived nanoporous carbon for efficient capacitive deionization. Electrochimica Acta, 2018, 273, 34-42.	2.6	85
29	Design of nitrogen-doped cluster-like porous carbons with hierarchical hollow nanoarchitecture and their enhanced performance in capacitive deionization. Desalination, 2018, 430, 45-55.	4.0	95
30	Two-Dimensional Molybdenum Carbide (MXene) with Divacancy Ordering for Brackish and Seawater Desalination via Cation and Anion Intercalation. ACS Sustainable Chemistry and Engineering, 2018, 6, 3739-3747.	3.2	183
31	Highly Stable Hybrid Capacitive Deionization with a MnO₂ Anode and a Positively Charged Cathode. Environmental Science and Technology Letters, 2018, 5, 98-102.	3.9	124
32	Voltage-Based Stabilization of Microporous Carbon Electrodes for Inverted Capacitive Deionization. Journal of Physical Chemistry C, 2018, 122, 1158-1168.	1.5	36
33	Capacitive Membrane Stripping for Ammonia Recovery (CapAmm) from Dilute Wastewaters. Environmental Science and Technology Letters, 2018, 5, 43-49.	3.9	111
34	A comparison of multicomponent electrosorption in capacitive deionization and membrane capacitive deionization. Water Research, 2018, 131, 100-109.	5.3	127
35	Charging and Transport Dynamics of a Flow-Through Electrode Capacitive Deionization System. Journal of Physical Chemistry B, 2018, 122, 240-249.	1.2	36
36	Temporal and spatial distribution of pH in flow-mode capacitive deionization and membrane capacitive deionization. Desalination, 2018, 439, 188-195.	4.0	62
37	Charge and Potential Balancing for Optimized Capacitive Deionization Using Ligninâ€Derived, Lowâ€Cost Activated Carbon Electrodes. ChemSusChem, 2018, 11, 2101-2113.	3.6	68

#	Article	IF	Citations
38	Calcined MgAl-Layered Double Hydroxide/Graphene Hybrids for Capacitive Deionization. Industrial & Engineering Chemistry Research, 2018, 57, 6417-6425.	1.8	59
39	Membrane Capacitive Deionization with Constant Current vs Constant Voltage Charging: Which Is Better?. Environmental Science & Technology, 2018, 52, 4051-4060.	4.6	75
40	Capacitive deionization for nutrient recovery from wastewater with disinfection capability. Environmental Science: Water Research and Technology, 2018, 4, 33-39.	1.2	43
41	Faradaic reactions in capacitive deionization (CDI) - problems and possibilities: A review. Water Research, 2018, 128, 314-330.	5.3	523
42	Semi-continuous capacitive deionization using multi-channel flow stream and ion exchange membranes. Desalination, 2018, 425, 104-110.	4.0	51
43	Intrinsic tradeoff between kinetic and energetic efficiencies in membrane capacitive deionization. Water Research, 2018, 129, 394-401.	5.3	86
44	Quantifying the flow efficiency in constant-current capacitive deionization. Water Research, 2018, 129, 327-336.	5.3	66
45	Mechanisms of Humic Acid Fouling on Capacitive and Insertion Electrodes for Electrochemical Desalination. Environmental Science & Technology, 2018, 52, 12633-12641.	4.6	38
46	How to achieve the optimal performance of capacitive deionization and inverted-capacitive deionization. Desalination, 2018, 442, 89-98.	4.0	31
47	Interconnected metal oxide CNT fibre hybrid networks for current collector-free asymmetric capacitive deionization. Journal of Materials Chemistry A, 2018, 6, 10898-10908.	5.2	53
48	Application of anion exchange membrane and the effect of its properties on asymmetric membrane capacitive deionization. Separation and Purification Technology, 2018, 207, 387-395.	3.9	32
49	Role of metastable-adsorbed charges in the stability degradation of carbon-based electrodes for capacitive deionization. Environmental Science: Water Research and Technology, 2018, 4, 1172-1180.	1.2	4
50	Short-Circuited Closed-Cycle Operation of Flow-Electrode CDI for Brackish Water Softening. Environmental Science & Technology, 2018, 52, 9350-9360.	4.6	146
51	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
52	Solvent-Free CO₂ Capture Using Membrane Capacitive Deionization. Environmental Science & Technology, 2018, 52, 9478-9485.	4.6	62
53	Battery Electrode Materials with Omnivalent Cation Storage for Fast and Chargeâ€Efficient Ion Removal of Asymmetric Capacitive Deionization. Advanced Functional Materials, 2018, 28, 1802665.	7.8	117
54	Analysis of capacitive and electrodialytic contributions to water desalination by flow-electrode CDI. Water Research, 2018, 144, 296-303.	5.3	135
55	Thermodynamics of Ion Separation by Electrosorption. Environmental Science & Technology, 2018, 52, 10196-10204.	4.6	50

#	Article	IF	Citations
56	Efficient Capacitive Deionization Using Natural Basswood-Derived, Freestanding, Hierarchically Porous Carbon Electrodes. ACS Applied Materials & Interfaces, 2018, 10, 31260-31270.	4.0	81
57	Removal of nitrate using activated carbon-based electrodes for capacitive deionization. Water Science and Technology: Water Supply, 2018, 18, 2028-2034.	1.0	13
58	Enhanced desalination performance of anion-exchange membrane capacitive deionization via effectively utilizing cathode oxidation. Desalination, 2018, 443, 221-227.	4.0	35
59	Modified Double Potential Step Chronoamperometry (DPSC) Method for As(III) Electro-oxidation and Concomitant As(V) Adsorption from Groundwaters. Environmental Science & Technology, 2019, 53, 9715-9724.	4.6	26
60	Significantly improved stability of hybrid capacitive deionization using nickel hexacyanoferrate/reduced graphene oxide cathode at low voltage operation. Desalination, 2019, 468, 114078.	4.0	112
61	Superiority of a novel flow-electrode capacitive deionization (FCDI) based on a battery material at high applied voltage. Desalination, 2019, 468, 114080.	4.0	55
62	Peroxydisulfate activation by positively polarized carbocatalyst for enhanced removal of aqueous organic pollutants. Water Research, 2019, 166, 115043.	5.3	137
63	Highly efficient and stable desalination via novel hybrid capacitive deionization with redox-active polyimide cathode. Desalination, 2019, 469, 114098.	4.0	53
64	Capacitive Deionization of Saline Water by Using MoS₂â€“Graphene Hybrid Electrodes with High Volumetric Adsorption Capacity. Environmental Science & Technology, 2019, 53, 12668-12676.	4.6	162
65	Additive Manufacturing of Electrodes for Desalination. Procedia Manufacturing, 2019, 34, 252-259.	1.9	5
66	Enhanced adsorption removal of arsenic from mining wastewater using birnessite under electrochemical redox reactions. Chemical Engineering Journal, 2019, 375, 122051.	6.6	54
67	Construction of an inverted-capacitive deionization system utilizing pseudocapacitive materials. Electrochemistry Communications, 2019, 104, 106486.	2.3	22
68	Electrical energy from CO2 emissions by direct gas feeding in capacitive cells. Electrochimica Acta, 2019, 319, 264-276.	2.6	5
69	Integrating a supercapacitor with capacitive deionization for direct energy recovery from the desalination of brackish water. Applied Energy, 2019, 252, 113417.	5.1	38
70	Integrated ultrafiltrationâ€“capacitive-deionization (UCDI) for enhanced antifouling performance and synchronous removal of organic matter and salts. Separation and Purification Technology, 2019, 226, 146-153.	3.9	27
71	Faradaic reactions in capacitive deionization for desalination and ion separation. Journal of Materials Chemistry A, 2019, 7, 15999-16027.	5.2	135
72	Potential limits of capacitive deionization and membrane capacitive deionization for water electrolysis. Separation Science and Technology, 2019, 54, 2112-2125.	1.3	16
73	Effect of the chemical bond on the electrosorption and desorption of anions during capacitive deionization. Chemosphere, 2019, 229, 341-348.	4.2	11

#	Article	IF	Citations
74	Carbon polyaniline capacitive deionization electrodes with stable cycle life. Desalination, 2019, 464, 25-32.	4.0	32
75	Nanostructuring of pseudocapacitive MnFe2O4/Porous rGO electrodes in capacitive deionization. Electrochimica Acta, 2019, 306, 1-8.	2.6	65
76	Energy recovery from the flow-electrode capacitive deionization. Journal of Power Sources, 2019, 421, 50-55.	4.0	44
77	Response to comments on â€œcomparison of energy consumption in desalination by capacitive deionization and reverse osmosisâ€• Desalination, 2019, 462, 48-55.	4.0	22
78	A stable operation method for membrane capacitive deionization systems without electrode reactions at high cell potentials. Water Research, 2019, 157, 167-174.	5.3	35
79	Comments on â€œComparison of energy consumption in desalination by capacitive deionization and reverse osmosisâ€• Desalination, 2019, 461, 30-36.	4.0	37
80	Theoretical framework for designing a desalination plant based on membrane capacitive deionization. Water Research, 2019, 158, 359-369.	5.3	37
81	The Ratio between the Surface Charge and Electrode's Capacitance as a Fast Tool for Assessing the Charge Efficiency in Capacitive Deionization Processes. Journal of the Electrochemical Society, 2019, 166, H119-H125.	1.3	6
82	A positive-negative alternate adsorption effect for capacitive deionization in nano-porous carbon aerogel electrodes to enhance desalination capacity. Desalination, 2019, 458, 45-53.	4.0	51
83	Electro-assisted Adsorption of Zn(II) on Activated Carbon Cloth in Batch-Flow Mode: Experimental and Theoretical Investigations. Environmental Science & Technology, 2019, 53, 2670-2678.	4.6	50
84	Capacitive deionization using symmetric carbon electrode pairs. Environmental Science: Water Research and Technology, 2019, 5, 660-671.	1.2	17
85	Porous carbon electrodes from activated wasted coffee grounds for capacitive deionization. Ionics, 2019, 25, 3443-3452.	1.2	19
86	Technoeconomic Analysis of Brackish Water Capacitive Deionization: Navigating Tradeoffs between Performance, Lifetime, and Material Costs. Environmental Science & Technology, 2019, 53, 13353-13363.	4.6	59
87	Pine pollen derived porous carbon with efficient capacitive deionization performance. Electrochimica Acta, 2019, 298, 360-371.	2.6	45
88	Treatment of low-level Cu(II) wastewater and regeneration through a novel capacitive deionization-electrodeionization (CDI-EDI) technology. Chemosphere, 2019, 217, 763-772.	4.2	47
89	Various cell architectures of capacitive deionization: Recent advances and future trends. Water Research, 2019, 150, 225-251.	5.3	298
90	The maximum allowable charge for operating membrane capacitive deionization without electrode reactions. Separation and Purification Technology, 2019, 215, 125-133.	3.9	20
91	Comparison of faradaic reactions in flow-through and flow-by capacitive deionization (CDI) systems. Electrochimica Acta, 2019, 299, 727-735.	2.6	87

#	Article	IF	Citations
92	A new standard metric describing the adsorption capacity of carbon electrode used in membrane capacitive deionization. Water Research, 2019, 148, 126-132.	5.3	24
93	Enhancing capacitive deionization performance with charged structural polysaccharide electrode binders. Water Research, 2019, 148, 388-397.	5.3	28
94	Membrane-free electrochemical deoxygenation of aqueous solutions using symmetric activated carbon electrodes in flow-through cells. Electrochimica Acta, 2019, 297, 163-172.	2.6	8
95	Ag-Cu bimetallic nanoparticle decorated graphene nanocomposite as an effective anode material for hybrid capacitive deionization (HCDI) system. Electrochimica Acta, 2019, 297, 1052-1062.	2.6	46
96	Degradation of recalcitrant organics in nanofiltration concentrate from biologically pretreated landfill leachate by ultraviolet-Fenton method. Separation and Purification Technology, 2020, 235, 116076.	3.9	39
97	Understanding the mechanism of carbonization and KOH activation of polyaniline leading to enhanced electrosorption performance. Carbon, 2020, 156, 346-358.	5.4	62
98	Biomass-based carbon electrode materials for capacitive deionization: a review. Biomass Conversion and Biorefinery, 2020, 10, 1327-1356.	2.9	45
99	Characteristic and model of phosphate adsorption by activated carbon electrodes in capacitive deionization. Separation and Purification Technology, 2020, 236, 116285.	3.9	29
100	Significance of the micropores electro-sorption resistance in capacitive deionization systems. Water Research, 2020, 169, 115286.	5.3	15
101	Ion removal performance and enhanced cyclic stability of SnO2/CNT composite electrode in hybrid capacitive deionization. Materials Today Communications, 2020, 23, 100904.	0.9	12
102	Performance Recovery in Degraded Carbon-Based Electrodes for Capacitive Deionization. Environmental Science & Technology, 2020, 54, 1848-1856.	4.6	24
103	MoC nanoparticle-embedded carbon nanofiber aerogels as flow-through electrodes for highly efficient pseudocapacitive deionization. Journal of Materials Chemistry A, 2020, 8, 1443-1450.	5.2	43
104	Rapid Inversion of Surface Charges in Heteroatomâ€Doped Porous Carbon: A Route to Robust Electrochemical Desalination. Advanced Functional Materials, 2020, 30, 1909387.	7.8	38
105	Understanding capacitive deionization performance by comparing its electrical response with an electrochemical supercapacitor: Strategies to boost round-trip efficiency. Electrochimica Acta, 2020, 330, 135216.	2.6	9
106	Graphite felt 3D framework composites as an easy to scale capacitive deionization electrode for brackish water desalination. Chemical Engineering Journal, 2020, 392, 123698.	6.6	40
107	Role of ion exchange membranes and capacitive electrodes in membrane capacitive deionization (MCDI) for CO2 capture. Journal of Colloid and Interface Science, 2020, 564, 478-490.	5.0	37
108	Highly porous biomass-based capacitive deionization electrodes for water defluoridation. Ionics, 2020, 26, 2477-2492.	1.2	19
109	Scaling behavior of iron in capacitive deionization (CDI) system. Water Research, 2020, 171, 115370.	5.3	32

#	Article	IF	Citations
110	High-efficiency As(III) oxidation and electrocoagulation removal using hematite with a chargeâ"discharge technique. Science of the Total Environment, 2020, 703, 135678.	3.9	14
111	High performance electrochemical saline water desalination using silver and silver-chloride electrodes. Desalination, 2020, 476, 114216.	4.0	57
112	Advances in capacitive deionization as an effective technique for reverse osmosis reject stream treatment. Journal of Environmental Chemical Engineering, 2020, 8, 104413.	3.3	21
113	Faradaic Electrodes Open a New Era for Capacitive Deionization. Advanced Science, 2020, 7, 2002213.	5.6	104
114	Separation of ions from water and wastewater using micro-scale capacitive-faradaic fuel cells (CFFCs), powered by H2(g) and air. Separation and Purification Technology, 2020, 253, 117494.	3.9	12
115	Efficient visible-light activation of molecular oxygen to produce hydrogen peroxide using P doped g-C₃N₄ hollow spheres. Journal of Materials Chemistry A, 2020, 8, 22720-22727.	5.2	59
116	Effect of cross-chamber flow electrode recirculation on pH and faradaic reactions in capacitive deionization. Desalination, 2020, 492, 114600.	4.0	8
117	Potential Application of Membrane Capacitive Deionization for Heavy Metal Removal from Water: A Mini-Review. International Journal of Electrochemical Science, 2020, 15, 7848-7859.	0.5	16
118	Insights on the role of interparticle porosity and electrode thickness on capacitive deionization performance for desalination. Desalination, 2020, 492, 114594.	4.0	20
119	Asymmetric electrode capacitive deionization for energy efficient desalination. Electrochimica Acta, 2020, 358, 136939.	2.6	27
120	Mn2O3 nanoflower decorated electrospun carbon nanofibers for efficient hybrid capacitive deionization. Desalination, 2020, 494, 114665.	4.0	44
121	Electrically Tuning Ultrafiltration Behavior for Efficient Water Purification. Environmental Science & Technology, 2020, 54, 11536-11545.	4.6	12
122	Selective Arsenic Removal from Groundwaters Using Redox-Active Polyvinylferrocene-Functionalized Electrodes: Role of Oxygen. Environmental Science & Technology, 2020, 54, 12081-12091.	4.6	30
123	Disinfection of Bacteria in Water by Capacitive Deionization. Frontiers in Chemistry, 2020, 8, 774.	1.8	2
124	Recent Advances in Desalination Battery: An Initial Review. ACS Applied Materials & Interfaces, 2020, 12, 57671-57685.	4.0	32
125	Formation mechanism of iron scale in membrane capacitive deionization (MCDI) system. Desalination, 2020, 495, 114636.	4.0	7
126	Removal of Na+ and Ca2+ with Prussian blue analogue electrodes for brackish water desalination. Desalination, 2020, 487, 114479.	4.0	23
127	Progress in Capacitive Deionization for Desalination of Brackish Water: A Materials Perspective. ACS Symposium Series, 2020, , 91-113.	0.5	1

#	Article	IF	Citations
128	Asymmetrical removal of sodium and chloride in flow-through capacitive deionization. Water Research, 2020, 183, 116044.	5.3	25
129	Evaluation of long-term stability in capacitive deionization using activated carbon electrodes coated with ion exchange polymers. Korean Journal of Chemical Engineering, 2020, 37, 1199-1205.	1.2	8
130	Poly(Vinyl Alcohol)-Bonded Carbon Electrodes for Desalination of Brackish Water Using Capacitive Deionization. Journal of the Institution of Engineers (India): Series E, 2020, 101, 125-131.	0.5	4
131	pH Dependence of Phosphorus Speciation and Transport in Flow-Electrode Capacitive Deionization. Environmental Science & Technology, 2020, 54, 9116-9123.	4.6	43
132	Enabling Superior Sodium Capture for Efficient Water Desalination by a Tubular Polyaniline Decorated with Prussian Blue Nanocrystals. Advanced Materials, 2020, 32, e1907404.	11.1	168
133	Coreâ€“shell hybrid zeolitic imidazolate framework-derived hierarchical carbon for capacitive deionization. Journal of Materials Chemistry A, 2020, 8, 14653-14660.	5.2	41
134	Novel membrane-free hybrid capacitive deionization with a radical polymer anode for stable desalination. Desalination, 2020, 481, 114379.	4.0	34
135	Polymer ion-exchange membranes for capacitive deionization of aqueous media with low and high salt concentration. Desalination, 2020, 479, 114331.	4.0	54
136	Performance analysis of the multi-channel membrane capacitive deionization with porous carbon electrode stacks. Desalination, 2020, 479, 114315.	4.0	29
137	Capacitive Deionization of Divalent Cations for Water Softening Using Functionalized Carbon Electrodes. ACS Omega, 2020, 5, 2097-2106.	1.6	37
138	Carbon nanotubes in-situ cross-linking the activated carbon electrode for high-performance capacitive deionization. Separation and Purification Technology, 2020, 239, 116593.	3.9	35
139	Optimal conditions for efficient flow-electrode capacitive deionization. Separation and Purification Technology, 2020, 240, 116626.	3.9	32
140	Characteristics and Vanadium Adsorption Performance of Resin/Carbon Composite Electrodes in Capacitive Deionization. Chemical Engineering and Technology, 2020, 43, 1588-1595.	0.9	8
141	Water Desalination by Flow-Electrode Capacitive Deionization in Overlimiting Current Regimes. Environmental Science & Technology, 2020, 54, 5853-5863.	4.6	40
142	Rocking-chair capacitive deionization with flow-through electrodes. Journal of Materials Chemistry A, 2020, 8, 8476-8484.	5.2	58
143	Frontiers of carbon materials as capacitive deionization electrodes. Dalton Transactions, 2020, 49, 5006-5014.	1.6	32
144	Charge-transfer materials for electrochemical water desalination, ion separation and the recovery of elements. Nature Reviews Materials, 2020, 5, 517-538.	23.3	360
145	Bacteria poration on modified boron-doped diamond electrode surfaces induced by divalent cation chelation. Environmental Science: Water Research and Technology, 2020, 6, 1576-1587.	1.2	5

#	Article	IF	Citations
146	Synthesis of cation exchange membranes for capacitive deionization based on crosslinked polyvinyl alcohol with citric acid. Water Science and Technology, 2020, 81, 491-498.	1.2	4
147	Enhanced salt removal performance of flow electrode capacitive deionization with high cell operational potential. Separation and Purification Technology, 2021, 254, 117500.	3.9	32
148	Controlled synthesis of bismuth oxychloride-carbon nanofiber hybrid materials as highly efficient electrodes for rocking-chair capacitive deionization. Chemical Engineering Journal, 2021, 403, 126326.	6.6	112
149	A Self-Sustained Smart Monitoring Platform for Capacitive De-Ionization Cell in Wireless Sensor Network. IEEE Transactions on Industrial Electronics, 2021, 68, 4164-4172.	5.2	3
150	Electrode degradation mechanisms in capacitive deionisation. Desalination, 2021, 497, 114622.	4.0	7
151	Exploring the electrosorption selectivity of nitrate over chloride in capacitive deionization (CDI) and membrane capacitive deionization (MCDI). Desalination, 2021, 497, 114764.	4.0	58
152	Selective Recovery of Phosphorus from Synthetic Urine Using Flow-Electrode Capacitive Deionization (FCDI)-Based Technology. ACS ES&T Water, 2021, 1, 175-184.	2.3	41
153	Characterizing and mitigating the degradation of oxidized cathodes during capacitive deionization cycling. Carbon, 2021, 173, 1105-1114.	5.4	29
154	Interpretable machine learning modeling of capacitive deionization for contribution analysis of electrode and process features. Journal of Materials Chemistry A, 2021, 9, 2259-2268.	5.2	9
155	Theory of coupled ion-electron transfer kinetics. Electrochimica Acta, 2021, 367, 137432.	2.6	64
156	Synergistic effects of ionic and nonionic surfactants treatment on activated carbon electrodes for inverted capacitive deionization. Separation and Purification Technology, 2021, 258, 117987.	3.9	13
157	Emerging investigator series: local pH effects on carbon oxidation in capacitive deionization architectures. Environmental Science: Water Research and Technology, 2021, 7, 861-869.	1.2	13
158	Bio-Based Carbon Materials for Capacitive Deionization CDI Desalination Processes. , 2021, , .		3
159	Exceptional Reduction of Faradaic Redox Reactions of Activated Carbon-Based Electrodes in the Capacitive Deionization of Water through a Facile Gold Impregnation Method. Journal of the Electrochemical Society, 2021, 168, 023501.	1.3	1
160	Long-lasting, monovalent-selective capacitive deionization electrodes. Npj Clean Water, 2021, 4, .	3.1	30
161	Improving the feasibility and applicability of flow-electrode capacitive deionization (FCDI): Review of process optimization and energy efficiency. Desalination, 2021, 502, 114930.	4.0	64
162	MnO2 decorated porous carbon derived from Enteromorpha prolifera as flow-through electrode for dual-mode capacitive deionization. Desalination, 2021, 504, 114977.	4.0	29
163	Importance of Anode/Cathode Mass Loadings on Capacitive Deionization Performance. Journal of the Electrochemical Society, 2021, 168, 053503.	1.3	8

#	Article	IF	Citations
164	Suppressing the oxygen-related parasitic reactions in NaTi2(PO4)3-based hybrid capacitive deionization with cation exchange membrane. Journal of Colloid and Interface Science, 2021, 591, 139-147.	5.0	24
165	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
166	Active Control of Irreversible Faradic Reactions to Enhance the Performance of Reverse Electrodialysis for Energy Production from Salinity Gradients. Environmental Science & Technology, 2021, 55, 11388-11396.	4.6	5
167	Efficient and stable operation of capacitive deionization assessed by electrode and membrane asymmetry. Electrochimica Acta, 2021, 388, 138631.	2.6	11
168	Disinfection-Dechlorination Battery for Safe Water Production. ACS ES&T Water, 2021, 1, 2146-2154.	2.3	4
169	The Surge of Metalâ€“Organic-Framework (MOFs)-Based Electrodes as Key Elements in Electrochemically Driven Processes for the Environment. Molecules, 2021, 26, 5713.	1.7	12
170	Carbon-based slurry electrodes for energy storage and power supply systems. Energy Storage Materials, 2021, 40, 461-489.	9.5	36
171	Unravelling pH Changes in Electrochemical Desalination with Capacitive Deionization. Environmental Science & Technology, 2021, 55, 14165-14172.	4.6	19
172	Binder-free 3D graphene nanostructures on Ni foam substrate for application in capacitive deionization. Diamond and Related Materials, 2021, 120, 108612.	1.8	11
173	Electrochemical removal of amphoteric ions. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	21
174	Ammonia Recovery from Domestic Wastewater Using a Proton-Mediated Redox Couple. ACS Sustainable Chemistry and Engineering, 2021, 9, 12699-12707.	3.2	7
175	Controlled fabrication of mesoporous electrodes with unprecedented stability for water capacitive deionization under harsh conditions in large size cells. Desalination, 2021, 511, 115099.	4.0	18
176	Enhanced desalination performance in asymmetric flow electrode capacitive deionization with nickel hexacyanoferrate and activated carbon electrodes. Desalination, 2021, 514, 115172.	4.0	15
177	Construction and evaluation of a novel three-electrode capacitive deionization system with high desalination performance. Separation and Purification Technology, 2021, 273, 118976.	3.9	33
178	Synergistically enhanced nitrate removal by capacitive deionization with activated carbon/PVDF/polyaniline/ZrO2 composite electrode. Separation and Purification Technology, 2021, 274, 119108.	3.9	12
179	Insights on features' contribution to desalination dynamics and capacity of capacitive deionization through machine learning study. Desalination, 2021, 515, 115197.	4.0	12
180	Block copolymer coated carbon nanotube membrane anodes for enhanced and multipurpose hybrid capacitive deionization. Desalination, 2021, 520, 115368.	4.0	14
181	Suppression of electrode reactions and enhancement of the desalination performance of capacitive deionization using a composite carbon electrode coated with an ion-exchange polymer. Separation and Purification Technology, 2021, 278, 119503.	3.9	8

#	Article	IF	Citations
182	Enhanced Charge Efficiency and Electrode Separation Utilizing Magnetic Carbon in Flow Electrode Capacitive Deionization. ACS ES&T Engineering, 2021, 1, 340-347.	3.7	21
183	MoS2 nanoflakes-coated electrospun carbon nanofibers for â€œrocking-chairâ€•capacitive deionization. Desalination, 2021, 520, 115376.	4.0	36
184	Electrochemical Removal of Cesium Ions via Capacitive Deionization Using an Ion-Exchange Layer Coated on a Carbon Electrode. Applied Sciences (Switzerland), 2021, 11, 10042.	1.3	1
185	Bismuth oxychloride nanostructure coated carbon sponge as flow-through electrode for highly efficient rocking-chair capacitive deionization. Journal of Colloid and Interface Science, 2022, 608, 2752-2759.	5.0	16
186	Fabricating a Flow-Through Hybrid Capacitive Deionization Cell for Selective Recovery of Lithium Ions. ACS Applied Energy Materials, 2021, 4, 13036-13043.	2.5	12
187	Evaluation of synergistic effects of coupling capacitive deionization (CDI) and UV oxidation processes for saline water treatment. Journal of Environmental Chemical Engineering, 2022, 10, 106909.	3.3	7
188	Improving Long-Term Anode Stability in Capacitive Deionization Using Asymmetric Electrode Mass Ratios. ACS ES&T Engineering, 2022, 2, 129-139.	3.7	9
189	Ammonia removal from municipal wastewater via membrane capacitive deionization (MCDI) in pilot-scale. Separation and Purification Technology, 2022, 286, 120469.	3.9	15
190	Interconnected N-doped MXene spherical shells for highly efficient capacitive deionization. Environmental Science: Nano, 2022, 9, 204-213.	2.2	12
191	3D interconnected network architectures assembled from W18O49 and Ti3C2 MXene with excellent electrochemical properties and CDI performance. Chemical Engineering Journal, 2022, 435, 134922.	6.6	19
192	Metal-organic framework derived carbon nanoarchitectures for highly efficient flow-electrode CDI desalination. Environmental Research, 2022, 208, 112727.	3.7	16
193	Dimensional optimization enables high-performance capacitive deionization. Journal of Materials Chemistry A, 2022, 10, 6414-6441.	5.2	43
194	Emerging investigator series: a comparison of strong and weak-acid functionalized carbon electrodes in capacitive deionization. Environmental Science: Water Research and Technology, 2022, 8, 949-956.	1.2	4
195	Enhanced Electrodesorption Performance via Cathode Potential Extension during Capacitive Deionization. Applied Sciences (Switzerland), 2022, 12, 2874.	1.3	0
196	A multifunctional and low-energy electrochemical membrane system for chemical-free regulation of solution pH. Water Research, 2022, 216, 118330.	5.3	5
197	Influence of dissolved organic matter and iron on the anodic capacitance and potential at the point of zero charge of activated carbon electrodes used in capacitive deionization. Desalination, 2022, 532, 115707.	4.0	2
198	Development of novel ZnZr-COOH/CNT composite electrode for selectively removing phosphate by capacitive deionization. Chemical Engineering Journal, 2022, 439, 135527.	6.6	32
199	Nitrate Removal in an Electrically Charged Granular-Activated Carbon Column. Environmental Science & Technology, 2021, 55, 16597-16606.	4.6	11

#	Article	IF	Citations
200	Introduction to electrochemical membrane technology: current status and recent developments. , 2022, , 1-42.		0
201	Ionic covalent organic nanosheet (iCON)â€“quaternized polybenzimidazole nanocomposite anion-exchange membranes to enhance the performance of membrane capacitive deionization. Desalination, 2022, 533, 115777.	4.0	12
202	Knowledge and Technology Used in Capacitive Deionization of Water. Membranes, 2022, 12, 459.	1.4	10
203	A dynamic intercalation mechanism in pre-intercalation carbon nanosheets for capacitive deionization cells. Desalination, 2022, 535, 115842.	4.0	6
204	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
205	Scaling Up the Simultaneous Production of Clean Electricity and Clean Water. Journal of the Electrochemical Society, 0, , .	1.3	0
206	Improvements in desorption rate and electrode stability of membrane capacitive deionization systems by optimizing operation parameters. Water Research, 2022, 220, 118713.	5.3	5
207	Exploring the polarization window during fluoride electrosorption in two activated carbons with significant differences in their pore-size distribution. Separation and Purification Technology, 2022, 295, 121360.	3.9	0
208	Optimization of desorption potential for stable and efficient operation of membrane capacitive deionization systems. Journal of Electroanalytical Chemistry, 2022, 918, 116461.	1.9	4
209	Boron Removal from Reverse Osmosis Permeate Using an Electrosorption Process: Feasibility, Kinetics, and Mechanism. Environmental Science & Technology, 2022, 56, 10391-10401.	4.6	13
210	Electrochemical Methods for Water Purification, Ion Separations, and Energy Conversion. Chemical Reviews, 2022, 122, 13547-13635.	23.0	127
211	Surface Electrochemistry of Carbon Electrodes and Faradaic Reactions in Capacitive Deionization. Environmental Science & Technology, 2022, 56, 12602-12612.	4.6	20
212	Ion Exchange Conversion of Na-Birnessite to Mg-Buserite for Enhanced and Preferential Cu²⁺ Removal via Hybrid Capacitive Deionization. ACS Applied Materials & Interfaces, 2022, 14, 46646-46656.	4.0	13
213	MOFs-derived Fe, N-co doped porous carbon anchored on activated carbon for enhanced phosphate removal by capacitive deionization. Separation and Purification Technology, 2023, 307, 122694.	3.9	23
214	Synthesis of layered double hydroxide-based hybrid electrode for efficient removal of phosphate ions in capacitive deionization. Water Science and Technology, 2022, 86, 3014-3027.	1.2	3
215	Capacitive deionization performance of asymmetric nanoengineered CoFe2O4 carbon nanomaterials composite. Environmental Science and Pollution Research, 2023, 30, 32539-32549.	2.7	3
216	New operation method of a membrane capacitive deionization system with a dual-solution mode for improving the desorption rate. Desalination, 2023, 549, 116364.	4.0	2
217	Efficient Removal of Chlorine Ions by Ultrafine Fe₃C Nanoparticles Encapsulated in a Graphene/N-Doped Carbon Hybrid Electrode: Redox and Confinement Effect. ACS Sustainable Chemistry and Engineering, 2023, 11, 2324-2333.	3.2	11

#	Article	IF	Citations
218	Electron Transfer of Activated Carbon to Anode Excites and Regulates Desalination in Flow Electrode Capacitive Deionization. Environmental Science & Technology, 2023, 57, 2566-2574.	4.6	8
219	The electrosorption of uranium (VI) onto the modified porous biocarbon with ammonia low-temperature plasma: Kinetics and mechanism. Chemical Engineering Journal, 2023, 463, 142413.	6.6	8
220	Dual-activated biochar with a multichannel structure enhanced electrosorption capacity of capacitive deionization for sulfate removal from mining wastewater. Desalination, 2023, 556, 116588.	4.0	10
221	Functional anode of membrane capacitive deionization enabled by Cu2+/Cu+ redox couple for simultaneous anions removal and anodic oxidation mitigation. Desalination, 2023, 556, 116571.	4.0	6
222	Parametric investigation of ferri/ferrocyanide redox flow for performance optimization of redox flow desalination. Desalination, 2023, 550, 116406.	4.0	6
223	Water defluoridation using Al/Fe/Ti ternary metal oxide-loaded activated carbon by capacitive deionization. Environmental Science: Water Research and Technology, 2023, 9, 957-972.	1.2	3
224	A high performance all-polymer symmetric faradaic deionization cell. Chemical Engineering Journal, 2023, 461, 142001.	6.6	1
225	Electrocapacitive Deionization: Mechanisms, Electrodes, and Cell Designs. Advanced Functional Materials, 2023, 33, .	7.8	31
226	Capacitive Deionization for the Extraction and Recovery of Butyrate. ACS Sustainable Chemistry and Engineering, 2023, 11, 6385-6394.	3.2	2
232	Inverted Capacitive Deionization. , 2023, , 214-223.		0
233	Timeline of Capacitive Deionization: The Path to a New Era. , 2023, , 1-22.		0