

Heechul Choi

List of Publications by Year in descending order

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100
papers

7,357
citations

61857

43
h-index

53109

85
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101
all docs

101
docs citations

101
times ranked

7743
citing authors

#	ARTICLE	IF	CITATIONS
1	Removal of Arsenic(III) from Groundwater by Nanoscale Zero-Valent Iron. <i>Environmental Science & Technology</i> , 2005, 39, 1291-1298.	4.6	1,051
2	Arsenic(V) Removal from Groundwater Using Nano Scale Zero-Valent Iron as a Colloidal Reactive Barrier Material. <i>Environmental Science & Technology</i> , 2006, 40, 2045-2050.	4.6	644
3	Carbon nanotube blended polyethersulfone membranes for fouling control in water treatment. <i>Water Research</i> , 2011, 45, 274-282.	5.3	453
4	Adsorption of Humic Acid onto Nanoscale Zerovalent Iron and Its Effect on Arsenic Removal. <i>Environmental Science & Technology</i> , 2007, 41, 2022-2027.	4.6	448
5	Adsorptive removal of selected pharmaceuticals by mesoporous silica SBA-15. <i>Journal of Hazardous Materials</i> , 2009, 168, 602-608.	6.5	322
6	Transport of surface-modified iron nanoparticle in porous media and application to arsenic(III) remediation. <i>Journal of Nanoparticle Research</i> , 2007, 9, 725-735.	0.8	226
7	Synthesis and characterization of ZrO ₂ -TiO ₂ binary oxide semiconductor nanoparticles: Application and interparticle electron transfer process. <i>Applied Catalysis A: General</i> , 2007, 333, 264-271.	2.2	216
8	Aqueous Ethanol modified Nanoscale Zerovalent Iron in Bromate Reduction: Synthesis, Characterization, and Reactivity. <i>Environmental Science & Technology</i> , 2009, 43, 3292-3299.	4.6	159
9	Protein fouling behavior of carbon nanotube/polyethersulfone composite membranes during water filtration. <i>Water Research</i> , 2011, 45, 5287-5294.	5.3	159
10	Sonolytic degradation of methyl tert-butyl ether: the role of coupled fenton process and persulphate ion. <i>Water Research</i> , 2002, 36, 4699-4708.	5.3	149
11	Kinetic decomposition of ozone and para-chlorobenzoic acid (pCBA) during catalytic ozonation. <i>Water Research</i> , 2004, 38, 2285-2292.	5.3	146
12	Reduction of highly concentrated nitrate using nanoscale zero-valent iron: Effects of aggregation and catalyst on reactivity. <i>Applied Catalysis B: Environmental</i> , 2011, 105, 128-135.	10.8	143
13	Influence of ionic strength, anions, cations, and natural organic matter on the adsorption of pharmaceuticals to silica. <i>Chemosphere</i> , 2010, 80, 681-686.	4.2	129
14	Efficacy of carbon nanotube positioning in the polyethersulfone support layer on the performance of thin-film composite membrane for desalination. <i>Chemical Engineering Journal</i> , 2015, 266, 376-384.	6.6	117
15	Catalytic decomposition of ozone and para-Chlorobenzoic acid (pCBA) in the presence of nanosized ZnO. <i>Applied Catalysis B: Environmental</i> , 2006, 66, 288-294.	10.8	102
16	Aging Study on the Structure of Fe ₀ -Nanoparticles: Stabilization, Characterization, and Reactivity. <i>Journal of Physical Chemistry C</i> , 2010, 114, 2027-2033.	1.5	94
17	Effect of Fenton-like oxidation on enhanced oxidative degradation of para-chlorobenzoic acid by ultrasonic irradiation. <i>Ultrasonics Sonochemistry</i> , 2004, 11, 273-279.	3.8	88
18	Transport characteristics of gas phase ozone in unsaturated porous media for in-situ chemical oxidation. <i>Journal of Contaminant Hydrology</i> , 2002, 57, 81-98.	1.6	85

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19	Thin-film nanocomposite membrane with CNT positioning in support layer for energy harvesting from saline water. <i>Chemical Engineering Journal</i> , 2016, 284, 68-77.	6.6	85
20	Organically functionalized mesoporous SBA-15 as sorbents for removal of selected pharmaceuticals from water. <i>Journal of Hazardous Materials</i> , 2011, 193, 156-163.	6.5	84
21	Characterization of natural organic matter treated by iron oxide nanoparticle incorporated ceramic membrane-ozonation process. <i>Water Research</i> , 2012, 46, 5861-5870.	5.3	84
22	Capillary effect in Janus electrospun nanofiber membrane for oil/water emulsion separation. <i>Chemosphere</i> , 2019, 221, 479-485.	4.2	81
23	Photochemical Oxidation of Arsenic(III) to Arsenic(V) using Peroxydisulfate Ions as an Oxidizing Agent. <i>Environmental Science & Technology</i> , 2008, 42, 6179-6184.	4.6	74
24	Nanofiber-Based Proton Exchange Membranes: Development of Aligned Electrospun Nanofibers for Polymer Electrolyte Fuel Cell Applications. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 1808-1825.	3.2	72
25	Preparation of Biotic and Abiotic Iron Oxide Nanoparticles (IONPs) and Their Properties and Applications in Heterogeneous Catalytic Oxidation. <i>Environmental Science & Technology</i> , 2007, 41, 4741-4747.	4.6	69
26	A New era of water treatment technologies: 3D printing for membranes. <i>Journal of Industrial and Engineering Chemistry</i> , 2020, 91, 1-14.	2.9	67
27	Efficacy of piezoelectric electrospun nanofiber membrane for water treatment. <i>Chemical Engineering Journal</i> , 2017, 307, 670-678.	6.6	64
28	Removal of Arsenic(III) from Groundwater using Low-Cost Industrial By-products-Blast Furnace Slag. <i>Water Quality Research Journal of Canada</i> , 2006, 41, 130-139.	1.2	63
29	Involvement of process parameters and various modes of application of TiO ₂ nanoparticles in heterogeneous photocatalysis of pharmaceutical wastes – a short review. <i>RSC Advances</i> , 2014, 4, 57250-57266.	1.7	63
30	Alginate fouling reduction of functionalized carbon nanotube blended cellulose acetate membrane in forward osmosis. <i>Chemosphere</i> , 2015, 136, 204-210.	4.2	63
31	Adsorption of pharmaceuticals onto trimethylsilylated mesoporous SBA-15. <i>Journal of Hazardous Materials</i> , 2013, 254-255, 345-353.	6.5	62
32	Modeling in situ ozonation for the remediation of nonvolatile PAH-contaminated unsaturated soils. <i>Journal of Contaminant Hydrology</i> , 2002, 55, 261-285.	1.6	60
33	Removal of 12 selected pharmaceuticals by granular mesoporous silica SBA-15 in aqueous phase. <i>Chemical Engineering Journal</i> , 2014, 256, 475-485.	6.6	59
34	Heterogeneous Catalytic Oxidation of Phenanthrene by Hydrogen Peroxide in Soil Slurry: Kinetics, Mechanism, and Implication. <i>Soil and Sediment Contamination</i> , 2003, 12, 101-117.	1.1	58
35	Fabrication of ultra-thin polyelectrolyte/carbon nanotube membrane by spray-assisted layer-by-layer technique: characterization and its anti-protein fouling properties for water treatment. <i>Desalination and Water Treatment</i> , 2013, 51, 6194-6200.	1.0	58
36	Remediation of Antiseptic Components in Wastewater by Photocatalysis Using TiO ₂ Nanoparticles. <i>Industrial & Engineering Chemistry Research</i> , 2014, 53, 3012-3020.	1.8	58

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37	Integrating seawater desalination and wastewater reclamation forward osmosis process using thin-film composite mixed matrix membrane with functionalized carbon nanotube blended polyethersulfone support layer. <i>Chemosphere</i> , 2017, 185, 1181-1188.	4.2	57
38	Adsorption dynamics of methyl violet onto granulated mesoporous carbon: Facile synthesis and adsorption kinetics. <i>Water Research</i> , 2016, 101, 187-194.	5.3	56
39	As(V) remediation using electrochemically synthesized maghemite nanoparticles. <i>Journal of Nanoparticle Research</i> , 2009, 11, 1981-1989.	0.8	54
40	Preparation and properties of visible light responsive ZrTiO ₄ /Bi ₂ O ₃ photocatalysts for 4-chlorophenol decomposition. <i>Journal of Hazardous Materials</i> , 2010, 182, 557-562.	6.5	53
41	Investigation of the performance behavior of a forward osmosis membrane system using various feed spacer materials fabricated by 3D printing technique. <i>Chemosphere</i> , 2018, 202, 708-715.	4.2	53
42	Mechanically enhanced PES electrospun nanofiber membranes (ENMs) for microfiltration: The effects of ENM properties on membrane performance. <i>Water Research</i> , 2016, 105, 406-412.	5.3	49
43	Controllable synthesis, characterization, and magnetic properties of nanoscale zerovalent iron with specific high Brunauer-Emmett-Teller surface area. <i>Journal of Nanoparticle Research</i> , 2009, 11, 749-755.	0.8	48
44	Synthesis of nanosized biogenic magnetite and comparison of its catalytic activity in ozonation. <i>Applied Catalysis B: Environmental</i> , 2008, 83, 208-213.	10.8	42
45	Solar-assisted smart nanofibrous membranes for atmospheric water harvesting. <i>Chemical Engineering Journal</i> , 2021, 425, 131601.	6.6	37
46	Removal Mechanism of Natural Organic Matter and Organic Acid by Ozone in the Presence of Goethite. <i>Ozone: Science and Engineering</i> , 2004, 26, 141-151.	1.4	36
47	Monitoring of petroleum hydrocarbon degradative potential of indigenous microorganisms in ozonated soil. <i>Biodegradation</i> , 2005, 16, 45-56.	1.5	35
48	Removal of As(V) and Sb(V) in water using magnetic nanoparticle-supported layered double hydroxide nanocomposites. <i>Journal of Geochemical Exploration</i> , 2018, 184, 247-254.	1.5	35
49	Effects of in-situ ozonation on indigenous microorganisms in diesel contaminated soil: Survival and regrowth. <i>Chemosphere</i> , 2005, 61, 923-932.	4.2	32
50	Effects of In Situ Ozonation on Structural Change of Soil Organic Matter. <i>Environmental Engineering Science</i> , 2003, 20, 289-299.	0.8	31
51	Omni-Directional Protected Nanofiber Membranes by Surface Segregation of PDMS-Terminated Triblock Copolymer for High-Efficiency Oil/Water Emulsion Separation. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 25324-25333.	4.0	31
52	EARTHWORM TOXICITY DURING CHEMICAL OXIDATION OF DIESEL-CONTAMINATED SAND. <i>Environmental Toxicology and Chemistry</i> , 2005, 24, 1924.	2.2	30
53	Ultrasonic-assisted pH Swing Method for the Synthesis of Highly Efficient TiO ₂ Nano-size Photocatalysts. <i>Catalysis Letters</i> , 2008, 125, 183-191.	1.4	30
54	Complete arsenite removal from groundwater by UV activated potassium persulfate and iron oxide impregnated granular activated carbon. <i>Chemosphere</i> , 2021, 277, 130225.	4.2	30

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55	Effect of soil organic matter (SOM) and soil texture on the fatality of indigenous microorganisms in integrated ozonation and biodegradation. <i>Journal of Hazardous Materials</i> , 2008, 150, 809-817.	6.5	29
56	As(III) removal by hybrid reactive membrane process combined with ozonation. <i>Water Research</i> , 2011, 45, 1933-1940.	5.3	29
57	Influence of extreme concentrations of hydrophilic pore-former on reinforced polyethersulfone ultrafiltration membranes for reduction of humic acid fouling. <i>Chemosphere</i> , 2017, 179, 194-201.	4.2	29
58	Multiwalled Carbon Nanotube Buckypaper/Polyacrylonitrile Nanofiber Composite Membranes for Electromagnetic Interference Shielding. <i>ACS Applied Nano Materials</i> , 2021, 4, 729-738.	2.4	29
59	Comparative Removal of Polycyclic Aromatic Hydrocarbons Using Iron Oxide and Hydrogen Peroxide in Soil Slurries. <i>Environmental Engineering Science</i> , 2004, 21, 741-751.	0.8	27
60	Efficacy of CNT-bound polyelectrolyte membrane by spray-assisted layer-by-layer (LbL) technique on water purification. <i>RSC Advances</i> , 2014, 4, 32858-32865.	1.7	26
61	Improved antifouling performance of polyethersulfone (PES) membrane via surface modification by CNTs bound polyelectrolyte multilayers. <i>RSC Advances</i> , 2015, 5, 7340-7348.	1.7	26
62	Bio-mimetically inspired 3D-printed honeycombed support (spacer) for the reduction of reverse solute flux and fouling of osmotic energy driven membranes. <i>Journal of Industrial and Engineering Chemistry</i> , 2020, 83, 343-350.	2.9	26
63	High performance nanofiber-supported thin film composite forward osmosis membranes based on continuous thermal-rolling pretreated electrospun PES/PAN blend substrates. <i>Chemosphere</i> , 2020, 261, 127687.	4.2	26
64	Development of a mathematical model to predict different parameters during pharmaceutical wastewater treatment using TiO ₂ coated membrane. <i>Ecotoxicology and Environmental Safety</i> , 2015, 121, 193-198.	2.9	24
65	Reaction Kinetics of Ozone in Variably Saturated Porous Media. <i>Journal of Environmental Engineering, ASCE</i> , 2004, 130, 432-441.	0.7	22
66	Simultaneous photooxidation and sorptive removal of As(III) by TiO ₂ supported layered double hydroxide. <i>Journal of Environmental Management</i> , 2015, 161, 228-236.	3.8	22
67	Efficacy of synthesis conditions on functionalized carbon nanotube blended cellulose acetate membrane for desalination. <i>Desalination and Water Treatment</i> , 2016, 57, 7545-7554.	1.0	19
68	Boron Nitride Nanotube (BNNT) Membranes for Energy and Environmental Applications. <i>Membranes</i> , 2020, 10, 430.	1.4	19
69	Fabrication of functionalized halloysite nanotube blended ultrafiltration membranes for high flux and fouling resistance. <i>Environmental Engineering Research</i> , 2020, 25, 771-778.	1.5	19
70	Mobilization and deposition of iron nano and sub-micrometer particles in porous media: A glass micromodel study. <i>Journal of Hazardous Materials</i> , 2011, 192, 1466-1475.	6.5	17
71	Removal of trichloroethylene DNAPL trapped in porous media using nanoscale zerovalent iron and bimetallic nanoparticles: Direct observation and quantification. <i>Journal of Hazardous Materials</i> , 2012, 213-214, 299-310.	6.5	16
72	Removal of As(V) and Sb(V) in aqueous solution by Mg/Al-layered double hydroxide-incorporated polyethersulfone polymer beads (PES-LDH). <i>Environmental Geochemistry and Health</i> , 2018, 40, 2119-2129.	1.8	16

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73	Enhanced antibacterial properties and suppressed biofilm growth on multi-walled carbon nanotube (MWCNT) blended polyethersulfone (PES) membranes. <i>Journal of Environmental Chemical Engineering</i> , 2021, 9, 104755.	3.3	16
74	Optimized Synthesis Conditions of Polyethersulfone Support Layer for Enhanced Water Flux for Thin Film Composite Membrane. <i>Environmental Engineering Research</i> , 2014, 19, 339-344.	1.5	16
75	Toward greener membranes with 3D printing technology. <i>Environmental Engineering Research</i> , 2021, 26, 200027-0.	1.5	16
76	Application of ANFIS model to optimise the photocatalytic degradation of chlorhexidine digluconate. <i>RSC Advances</i> , 2014, 4, 21141.	1.7	15
77	Adsorptive Removal of Arsenic by Mesoporous Iron Oxide in Aquatic Systems. <i>Water (Switzerland)</i> , 2020, 12, 3147.	1.2	15
78	Thin film composite forward osmosis membranes based on thermally treated PAN hydrophilized PVDF electrospun nanofiber substrates for improved performance. <i>Journal of Environmental Chemical Engineering</i> , 2021, 9, 106240.	3.3	15
79	Anomalous diffusion in two-dimensional Euclidean and prefractal geometrical models of heterogeneous porous media. <i>Water Resources Research</i> , 2007, 43, .	1.7	14
80	Switchable Wettability of Thermoresponsive Core-Shell Nanofibers for Water Capture and Release. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 19870-19879.	3.2	14
81	Thin-film nanocomposite membrane with vertically embedded carbon nanotube for forward osmosis. <i>Desalination and Water Treatment</i> , 2016, 57, 26670-26679.	1.0	12
82	Continuous thermal-rolling of electrospun nanofiber for polyamide layer deposition and its detection by engineered osmosis. <i>Polymer</i> , 2018, 145, 281-285.	1.8	12
83	Anti-biofouling effect of a thin film nanocomposite membrane with a functionalized-carbon-nanotube-blended polymeric support for the pressure-retarded osmosis process. <i>RSC Advances</i> , 2020, 10, 5697-5703.	1.7	11
84	Efficacy of Electrically-Polarized 3D Printed Graphene-blended Spacers on the Flux Enhancement and Scaling Resistance of Water Filtration Membranes. <i>ACS Sustainable Chemistry and Engineering</i> , 2021, 9, 6623-6631.	3.2	11
85	Geometric and Hydrodynamic Characteristics of Three-dimensional Saturated Prefractal Porous Media Determined with Lattice Boltzmann Modeling. <i>Transport in Porous Media</i> , 2011, 90, 831-846.	1.2	10
86	Iron Oxide Nanoparticle-Impregnated Alumina for Catalytic Ozonation of para-Chlorobenzoic Acid in Aqueous Solution. <i>Water, Air, and Soil Pollution</i> , 2014, 225, 1.	1.1	10
87	Simultaneous attenuation of pharmaceuticals, organic matter, and nutrients in wastewater effluent through managed aquifer recharge: Batch and column studies. <i>Chemosphere</i> , 2016, 143, 135-141.	4.2	10
88	Arsenic Removal by Nano-scale Zero Valent Iron and how it is Affected by Natural Organic Matter. <i>ACS Symposium Series</i> , 2010, , 135-161.	0.5	8
89	Parametrization Study of Electrospun Nanofiber Including LiCl Using Response Surface Methodology (RSM) for Water Treatment Application. <i>Applied Sciences (Switzerland)</i> , 2020, 10, 7295.	1.3	8
90	Modeling and study of the mechanism of mobilization of arsenic contamination in the groundwater of Nepal in South Asia. <i>Clean Technologies and Environmental Policy</i> , 2013, 15, 1077-1082.	2.1	7

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91	Electrically Polarized Graphene-Blended Spacers for Organic Fouling Reduction in Forward Osmosis. Membranes, 2021, 11, 36.	1.4	7
92	Comment on "Manipulating the Size and Dispersibility of Zerovalent Iron Nanoparticles by Use of Carboxymethyl Cellulose Stabilizers". Environmental Science & Technology, 2008, 42, 3479-3479.	4.6	6
93	Carbon Nanotube/Polyethersulfone Composite Membranes for Water Filtration. ACS Symposium Series, 2011, , 257-269.	0.5	5
94	Laboratory-scale application of fiber optic transfection dip probe (FOTDP) for in situ monitoring of gas phase ozone in unsaturated porous media. Journal of Contaminant Hydrology, 2006, 82, 133-144.	1.6	3
95	Fate of veterinary antibiotics in riverine soils: evaluation of applicability in riverbank filtration. Desalination and Water Treatment, 2016, 57, 20457-20463.	1.0	1
96	Synthesis of Nanoparticles and One-Dimensional Nanomaterials. , 2009, , 14-42.		0
97	Reactive Ceramic Membrane Incorporated with Iron Oxide Nanoparticle for Fouling Control. Daehan Hwan'gyeong Gonghag Hoeji, 2013, 35, 144-150.	0.4	0
98	Removal of Organic Matter and Pharmaceuticals in Wastewater Effluent through Managed Aquifer Recharge. Daehan Hwan'gyeong Gonghag Hoeji, 2015, 37, 182-190.	0.4	0
99	Nanotechnology in Engineered Membranes. , 2017, , 802-824.		0
100	Nanotechnology in Engineered Membranes. Advances in Environmental Engineering and Green Technologies Book Series, 0, , 50-71.	0.3	0