

Dong Suk Han

List of Publications by Year in descending order

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79
papers

2,625
citations

159358

30
h-index

205818

48
g-index

81
all docs

81
docs citations

81
times ranked

3473
citing authors

#	ARTICLE	IF	CITATIONS
1	Viologen-Based Conjugated Covalent Organic Networks via Zincke Reaction. <i>Journal of the American Chemical Society</i> , 2017, 139, 9558-9565.	6.6	228
2	Photosynthesis of formate from CO ₂ and water at 1% energy efficiency via copper iron oxide catalysis. <i>Energy and Environmental Science</i> , 2015, 8, 2638-2643.	15.6	204
3	Lithiated Polycalix[4]arenes for Efficient Adsorption of Iodine from Solution and Vapor Phases. <i>Chemistry of Materials</i> , 2017, 29, 8968-8972.	3.2	117
4	Multifunctional redox-tuned viologen-based covalent organic polymers. <i>Journal of Materials Chemistry A</i> , 2016, 4, 15361-15369.	5.2	114
5	Solar desalination coupled with water remediation and molecular hydrogen production: a novel solar water-energy nexus. <i>Energy and Environmental Science</i> , 2018, 11, 344-353.	15.6	111
6	A review on lithium recovery using electrochemical capturing systems. <i>Desalination</i> , 2021, 500, 114883.	4.0	96
7	Reactive iron sulfide (FeS)-supported ultrafiltration for removal of mercury (Hg(II)) from water. <i>Water Research</i> , 2014, 53, 310-321.	5.3	79
8	XPS analysis of sorption of selenium(IV) and selenium(VI) to mackinawite (FeS). <i>Environmental Progress and Sustainable Energy</i> , 2013, 32, 84-93.	1.3	67
9	Sorption of selenium(IV) and selenium(VI) to mackinawite (FeS): Effect of contact time, extent of removal, sorption envelopes. <i>Journal of Hazardous Materials</i> , 2011, 186, 451-457.	6.5	64
10	Removal of arsenite(As(III)) and arsenate(As(V)) by synthetic pyrite (FeS ₂): Synthesis, effect of contact time, and sorption/desorption envelopes. <i>Journal of Colloid and Interface Science</i> , 2013, 392, 311-318.	5.0	64
11	Synthesis, characterization, and application of pyrite for removal of mercury. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2016, 490, 326-335.	2.3	53
12	Salinity gradient energy generation by pressure retarded osmosis: A review. <i>Desalination</i> , 2021, 500, 114841.	4.0	52
13	Dual modification of hematite photoanode by Sn-doping and Nb ₂ O ₅ layer for water oxidation. <i>Applied Catalysis B: Environmental</i> , 2017, 201, 591-599.	10.8	47
14	Dual cationic modified high Ni-low co layered oxide cathode with a heteroepitaxial interface for high energy-density lithium-ion batteries. <i>Chemical Engineering Journal</i> , 2021, 416, 129118.	6.6	47
15	Sorption of selenium(IV) and selenium(VI) onto synthetic pyrite (FeS ₂): Spectroscopic and microscopic analyses. <i>Journal of Colloid and Interface Science</i> , 2012, 368, 496-504.	5.0	45
16	Shape-Dependent Charge Transfers in Crystalline ZnO Photocatalysts: Rods versus Plates. <i>Journal of Physical Chemistry C</i> , 2014, 118, 21331-21338.	1.5	43
17	Redox-Responsive Covalent Organic Nanosheets from Viologens and Calix[4]arene for Iodine and Toxic Dye Capture. <i>Chemistry - A European Journal</i> , 2018, 24, 8648-8655.	1.7	43
18	Thin film composite hollow fibre forward osmosis membrane module for the desalination of brackish groundwater for fertigation. <i>Desalination</i> , 2015, 364, 108-118.	4.0	42

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19	Ion-Enhanced Conversion of CO ₂ into Formate on Porous Dendritic Bismuth Electrodes with High Efficiency and Durability. <i>ChemSusChem</i> , 2020, 13, 698-706.	3.6	42
20	Modification of Nanofiber Support Layer for Thin Film Composite forward Osmosis Membranes via Layer-by-Layer Polyelectrolyte Deposition. <i>Membranes</i> , 2018, 8, 70.	1.4	41
21	Facilitating hole transfer on electrochemically synthesized p-type CuAlO ₂ films for efficient solar hydrogen production from water. <i>Journal of Materials Chemistry A</i> , 2017, 5, 10165-10172.	5.2	40
22	Electrocatalytic arsenite oxidation using iron oxyhydroxide polymorphs (Î±-, Î²-, and Î³-FeOOH) in aqueous bicarbonate solution. <i>Applied Catalysis B: Environmental</i> , 2021, 283, 119608.	10.8	40
23	Calix[4]arene-Based Porous Organic Nanosheets. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 17359-17365.	4.0	39
24	Efficient fouling control using outer-selective hollow fiber thin-film composite membranes for osmotic membrane bioreactor applications. <i>Bioresource Technology</i> , 2019, 282, 9-17.	4.8	39
25	Degradation of 1,2-dichloroethane using advanced reduction processes. <i>Journal of Environmental Chemical Engineering</i> , 2014, 2, 731-737.	3.3	38
26	Thin-film composite hollow fiber membranes incorporated with graphene oxide in polyethersulfone support layers for enhanced osmotic power density. <i>Desalination</i> , 2019, 464, 63-75.	4.0	37
27	Surface complexation modeling of arsenic(III) and arsenic(V) adsorption onto nanoporous titania adsorbents (NTAs). <i>Journal of Colloid and Interface Science</i> , 2010, 348, 591-599.	5.0	35
28	Thin-film composite membrane on a compacted woven backing fabric for pressure assisted osmosis. <i>Desalination</i> , 2017, 406, 98-108.	4.0	35
29	High-Efficiency Solar Desalination Accompanying Electrocatalytic Conversions of Desalted Chloride and Captured Carbon Dioxide. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 15320-15328.	3.2	32
30	Electrocatalytic arsenite oxidation in bicarbonate solutions combined with CO ₂ reduction to formate. <i>Applied Catalysis B: Environmental</i> , 2020, 265, 118607.	10.8	31
31	Redox-Responsive Viologen-Mediated Self-Assembly of CB[7]-Modified Patchy Particles. <i>Langmuir</i> , 2016, 32, 7144-7150.	1.6	30
32	Sanitation and dewatering of human urine via membrane bioreactor and membrane distillation and its reuse for fertigation. <i>Journal of Cleaner Production</i> , 2020, 270, 122390.	4.6	30
33	Perchlorate reduction during electrochemically induced pitting corrosion of zero-valent titanium (ZVT). <i>Journal of Hazardous Materials</i> , 2011, 197, 183-189.	6.5	28
34	Homogeneous photoconversion of seawater uranium using copper and iron mixed-oxide semiconductor electrodes. <i>Applied Catalysis B: Environmental</i> , 2017, 207, 35-41.	10.8	27
35	Photoelectrochemical hydrogen production on silicon microwire arrays overlaid with ultrathin titanium nitride. <i>Journal of Materials Chemistry A</i> , 2016, 4, 14008-14016.	5.2	24
36	Synthesis of Aliphatic Acids from CO ₂ and Water at Efficiencies Close to the Photosynthesis Limit Using Mixed Copper and Iron Oxide Films. <i>ACS Energy Letters</i> , 2019, 4, 2075-2080.	8.8	24

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37	Sulfur-containing air pollutants as draw solution for fertilizer drawn forward osmosis desalination process for irrigation use. <i>Desalination</i> , 2017, 424, 1-9.	4.0	23
38	Reduced titania nanorods and Ni ²⁺ /MoS ₂ catalysts for photoelectrocatalytic water treatment and hydrogen production coupled with desalination. <i>Applied Catalysis B: Environmental</i> , 2021, 284, 119745.	10.8	23
39	Evaluating the Catalytic Effects of Carbon Materials on the Photocatalytic Reduction and Oxidation Reactions of TiO ₂ . <i>Bulletin of the Korean Chemical Society</i> , 2013, 34, 1137-1144.	1.0	22
40	High efficiency solar chemical conversion using electrochemically disordered titania nanotube arrays transplanted onto transparent conductive oxide electrodes. <i>Applied Catalysis B: Environmental</i> , 2018, 226, 194-201.	10.8	21
41	Morphological Diversity in Nanoporous Covalent Organic Materials Derived from Viologen and Pyrene. <i>ChemNanoMat</i> , 2018, 4, 61-65.	1.5	20
42	Computational density functional theory study on the selective conversion of CO ₂ to formate on homogeneously and heterogeneously mixed CuFeO ₂ and CuO surfaces. <i>Catalysis Today</i> , 2019, 335, 345-353.	2.2	20
43	Application of a reactive adsorbent-coated support system for removal of mercury(II). <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2016, 509, 623-630.	2.3	19
44	Solar hydrogen peroxide production on carbon nanotubes wired to titania nanorod arrays catalyzing As(III) oxidation. <i>Applied Catalysis B: Environmental</i> , 2019, 252, 55-61.	10.8	19
45	A windable and stretchable three-dimensional all-inorganic membrane for efficient oil/water separation. <i>Scientific Reports</i> , 2017, 7, 16081.	1.6	18
46	Ti ₃ C ₂ T _x MXene-Based Light-Responsive Hydrogel Composite for Bendable Bilayer Photoactuator. <i>Nanomaterials</i> , 2020, 10, 1419.	1.9	18
47	Theoretical insight into effect of cation/anion pairs on CO ₂ reduction on bismuth electrocatalysts. <i>Applied Surface Science</i> , 2020, 532, 147459.	3.1	18
48	Thermo-osmosis-Coupled Thermally Regenerative Electrochemical Cycle for Efficient Lithium Extraction. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 6276-6285.	4.0	18
49	In Situ-Generated Reactive Oxygen Species in Precharged Titania and Tungsten Trioxide Composite Catalyst Membrane Filters: Application to As(III) Oxidation in the Absence of Irradiation. <i>Environmental Science & Technology</i> , 2020, 54, 9601-9608.	4.6	17
50	Facile Electrochemical Synthesis of Highly Efficient Copper/Cobalt Oxide Nanostructures for Oxygen Evolution Reactions. <i>Journal of the Electrochemical Society</i> , 2020, 167, 026510.	1.3	14
51	Standalone photoconversion of CO ₂ using Ti and TiO _x -sandwiched heterojunction photocatalyst of CuO and CuFeO ₂ films. <i>Applied Catalysis B: Environmental</i> , 2021, 288, 119985.	10.8	14
52	Photocatalytic H ₂ production on trititanate nanotubes coupled with CdS and platinum nanoparticles under visible light: revisiting H ₂ production and material durability. <i>Faraday Discussions</i> , 2017, 198, 419-431.	1.6	12
53	Effects of electrochemical synthetic conditions on surface property and photocatalytic performance of copper and iron-mixed p-type oxide electrodes. <i>Journal of Materials Science and Technology</i> , 2018, 34, 1503-1510.	5.6	12
54	Fouling and performance of outer selective hollow fiber membrane in osmotic membrane bioreactor: Cross flow and air scouring effects. <i>Bioresource Technology</i> , 2020, 295, 122303.	4.8	12

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55	Photoelectrochemical hydrogen production using CdS nanoparticles photodeposited onto Li-ion-inserted titania nanotube arrays. <i>Catalysis Today</i> , 2018, 303, 289-295.	2.2	11
56	Electrocatalytic cogeneration of reactive oxygen species for synergistic water treatment. <i>Chemical Engineering Journal</i> , 2019, 358, 497-503.	6.6	11
57	Electrocatalytic activity of nanoparticulate TiO ₂ coated onto Ta-doped IrO ₂ /Ti substrates: Effects of the TiO ₂ overlayer thickness. <i>Chemical Engineering Journal</i> , 2021, 425, 131435.	6.6	11
58	Reduction of perchlorate using zero-valent titanium (ZVT) anode: reaction mechanism. <i>Advances in Environmental Research</i> , 2012, 1, 37-55.	0.3	11
59	Degradation of perchlorate in water using aqueous multivalent titanium: Effect of titanium type, ionic strength, and metal and solid catalysts. <i>Journal of Colloid and Interface Science</i> , 2012, 380, 128-133.	5.0	10
60	Perchlorate degradation using a titanium and membrane hybrid (TMH) system: Transport, adsorption, chemical reduction. <i>Journal of Membrane Science</i> , 2012, 390-391, 84-92.	4.1	10
61	Influence of nanoparticle inclusions on the performance of reverse osmosis membranes. <i>Environmental Science: Water Research and Technology</i> , 2018, 4, 411-420.	1.2	10
62	Submerged versus side-stream osmotic membrane bioreactors using an outer-selective hollow fiber osmotic membrane for desalination. <i>Desalination</i> , 2021, 515, 115196.	4.0	10
63	Chloride removal from industrial cooling water using a two-stage ultra-high lime with aluminum process. , 0, 120, 228-233.		10
64	As(V) adsorption onto nanoporous titania adsorbents (NTAs): Effects of solution composition. <i>Journal of Hazardous Materials</i> , 2012, 229-230, 273-281.	6.5	9
65	Perchlorate degradation using aqueous titanium ions produced by oxidative dissolution of zero-valent titanium. <i>Chemical Engineering Journal</i> , 2012, 192, 301-307.	6.6	9
66	Optimum sintering method and temperature for cold compact Bismuth Telluride pellets for thermoelectric applications. <i>Journal of Alloys and Compounds</i> , 2021, 877, 160256.	2.8	9
67	Effect of shape-driven intrinsic surface defects on photocatalytic activities of titanium dioxide in environmental application. <i>Applied Surface Science</i> , 2017, 423, 71-77.	3.1	7
68	Computational characterization of nitrogen-doped carbon nanotube functionalized by Fe adatom and Fe substituent for oxygen reduction reaction. <i>Applied Surface Science</i> , 2019, 485, 342-352.	3.1	7
69	Sunlight-charged heterojunction TiO ₂ and WO ₃ particle-embedded inorganic membranes for night-time environmental applications. <i>Photochemical and Photobiological Sciences</i> , 2018, 17, 491-498.	1.6	6
70	Catalytic activity of photocharged binary TiO ₂ and WO ₃ membrane filters: Effect of AlO interlayer on direct vs. mediated electron transfers. <i>Chemical Engineering Journal</i> , 2022, 437, 135319.	6.6	6
71	Reduction of perchlorate using zero-valent titanium (ZVT) anode: Kinetic models. <i>Journal of Colloid and Interface Science</i> , 2012, 385, 122-129.	5.0	5
72	Exploring the photoelectrocatalytic behavior of free-standing TiO ₂ nanotube arrays on transparent conductive oxide electrodes: Irradiation direction vs. alignment direction. <i>Catalysis Today</i> , 2019, 335, 319-325.	2.2	5

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73	Control of the antagonistic effects of heat-assisted chlorine oxidative degradation on pressure retarded osmosis thin film composite membrane surface. <i>Journal of Membrane Science</i> , 2021, 636, 119567.	4.1	5
74	Fluorescent Zn(II)-Based Metal-Organic Framework: Interaction with Organic Solvents and CO ₂ and Methane Capture. <i>Molecules</i> , 2022, 27, 3845.	1.7	4
75	Effect of Fe/N-doped carbon nanotube (CNT) wall thickness on CO ₂ conversion: A DFT study. <i>Sustainable Materials and Technologies</i> , 2020, 26, e00224.	1.7	3
76	Pyrite (FeS ₂)-supported ultrafiltration system for removal of mercury (II) from water. <i>Emergent Materials</i> , 2021, 4, 1441-1453.	3.2	3
77	Submerged module of outer selective hollow fiber membrane for effective fouling mitigation in osmotic membrane bioreactor for desalination. <i>Desalination</i> , 2020, 496, 114707.	4.0	2
78	Ion-Enhanced Conversion of CO ₂ into Formate on Porous Dendritic Bismuth Electrodes with High Efficiency and Durability. <i>ChemSusChem</i> , 2020, 13, 662-662.	3.6	2
79	Application of TiO ₂ -WO ₃ Composite for Continuous Reduction of Chromium(VI) in Light-limited Condition. , 2016, , .		0