

Wook-Jin Chung

List of Publications by Year in descending order

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79
papers

2,581
citations

172457

29
h-index

214800

47
g-index

82
all docs

82
docs citations

82
times ranked

2677
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 1 | Graphene oxide incorporated polysulfone substrate for the fabrication of flat-sheet thin-film composite forward osmosis membranes. <i>Journal of Membrane Science</i> , 2015, 493, 496-507. | 8.2 | 213 |
| 2 | Recyclable composite nanofiber adsorbent for Li ⁺ recovery from seawater desalination retentate. <i>Chemical Engineering Journal</i> , 2014, 254, 73-81. | 12.7 | 150 |
| 3 | High yield production of d-xylonic acid from d-xylose using engineered <i>Escherichia coli</i> . <i>Bioresource Technology</i> , 2012, 115, 244-248. | 9.6 | 103 |
| 4 | Adsorptive Li ⁺ mining from liquid resources by H ₂ TiO ₃ : Equilibrium, kinetics, thermodynamics, and mechanisms. <i>Journal of Industrial and Engineering Chemistry</i> , 2016, 35, 347-356. | 5.8 | 99 |
| 5 | Biosynthesis of ethylene glycol in <i>Escherichia coli</i> . <i>Applied Microbiology and Biotechnology</i> , 2013, 97, 3409-3417. | 3.6 | 86 |
| 6 | Macroporous flexible polyvinyl alcohol lithium adsorbent foam composite prepared via surfactant blending and cryo-desiccation. <i>Chemical Engineering Journal</i> , 2015, 280, 536-548. | 12.7 | 80 |
| 7 | H ₂ TiO ₃ composite adsorbent foam for efficient and continuous recovery of Li ⁺ from liquid resources. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2016, 504, 267-279. | 4.7 | 79 |
| 8 | Mixed matrix nanofiber as a flow-through membrane adsorber for continuous Li ⁺ recovery from seawater. <i>Journal of Membrane Science</i> , 2016, 510, 141-154. | 8.2 | 79 |
| 9 | Design of lithium selective crown ethers: Synthesis, extraction and theoretical binding studies. <i>Chemical Engineering Journal</i> , 2017, 326, 921-933. | 12.7 | 78 |
| 10 | Recent advances in the metabolic engineering of microorganisms for the production of 3-hydroxypropionic acid as C ₃ platform chemical. <i>Applied Microbiology and Biotechnology</i> , 2013, 97, 3309-3321. | 3.6 | 66 |
| 11 | Combination of Entner-Doudoroff Pathway with MEP Increases Isoprene Production in Engineered <i>Escherichia coli</i> . <i>PLoS ONE</i> , 2013, 8, e83290. | 2.5 | 64 |
| 12 | Continuous lithium mining from aqueous resources by an adsorbent filter with a 3D polymeric nanofiber network infused with ion sieves. <i>Chemical Engineering Journal</i> , 2017, 309, 49-62. | 12.7 | 62 |
| 13 | Synthesis and characterization of multi-walled carbon nanotubes-supported dibenzo-14-crown-4 ether with proton ionizable carboxyl sidearm as Li ⁺ adsorbents. <i>Chemical Engineering Journal</i> , 2015, 264, 89-98. | 12.7 | 56 |
| 14 | Dual Role of Deep Eutectic Solvent as a Solvent and Template for the Synthesis of Octahedral Cobalt Vanadate for an Oxygen Evolution Reaction. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 16255-16266. | 6.7 | 54 |
| 15 | Direct bioconversion of d-xylose to 1,2,4-butanetriol in an engineered <i>Escherichia coli</i> . <i>Process Biochemistry</i> , 2014, 49, 25-32. | 3.7 | 52 |
| 16 | Development of high capacity Li ⁺ adsorbents from H ₂ TiO ₃ /polymer nanofiber composites: Systematic polymer screening, characterization and evaluation. <i>Journal of Industrial and Engineering Chemistry</i> , 2019, 70, 124-135. | 5.8 | 50 |
| 17 | Covalently decorated crown ethers on magnetic graphene oxides as bi-functional adsorbents with tailorable ion recognition properties for selective metal ion capture in water. <i>Chemical Engineering Journal</i> , 2020, 389, 123421. | 12.7 | 50 |
| 18 | Liquid-liquid extraction of lithium using lipophilic dibenzo-14-crown-4 ether carboxylic acid in hydrophobic room temperature ionic liquid. <i>Hydrometallurgy</i> , 2016, 164, 362-371. | 4.3 | 48 |

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|----|---|------|-----------|
| 19 | Aerosol Cross-Linked Crown Ether Diols Melded with Poly(vinyl alcohol) as Specialized Microfibrinous Li ⁺ Adsorbents. ACS Applied Materials & Interfaces, 2017, 9, 42862-42874. | 8.0 | 47 |
| 20 | One-pot synthesis of 2,5-diformylfuran from fructose using a magnetic bi-functional catalyst. RSC Advances, 2016, 6, 25678-25688. | 3.6 | 41 |
| 21 | Efficient Dehydration of Glucose, Sucrose, and Fructose to 5-Hydroxymethylfurfural Using Tri-cationic Ionic Liquids. Catalysis Letters, 2019, 149, 672-687. | 2.6 | 41 |
| 22 | Engineering Escherichia coli for glycolic acid production from D-xylose through the Dahms pathway and glyoxylate bypass. Applied Microbiology and Biotechnology, 2018, 102, 2179-2189. | 3.6 | 36 |
| 23 | Free standing growth of MnCo ₂ O ₄ nanoflakes as an electrocatalyst for methanol electro-oxidation. New Journal of Chemistry, 2017, 41, 15058-15063. | 2.8 | 34 |
| 24 | Enhanced yield of ethylene glycol production from d-xylose by pathway optimization in Escherichia coli. Enzyme and Microbial Technology, 2017, 97, 11-20. | 3.2 | 34 |
| 25 | The potential of monocationic imidazolium-, phosphonium-, and ammonium-based hydrophilic ionic liquids as draw solutes for forward osmosis. Desalination, 2018, 444, 94-106. | 8.2 | 33 |
| 26 | Blended ionic liquid systems for macroalgae pretreatment. Renewable Energy, 2014, 66, 596-604. | 8.9 | 32 |
| 27 | Engineering of <i>Corynebacterium glutamicum</i> for Consolidated Conversion of Hemicellulosic Biomass into Xylonic Acid. Biotechnology Journal, 2017, 12, 1700040. | 3.5 | 32 |
| 28 | Everyone loves an underdog: metabolic engineering of the xylose oxidative pathway in recombinant microorganisms. Applied Microbiology and Biotechnology, 2018, 102, 7703-7716. | 3.6 | 32 |
| 29 | Identification and characterization of a thermostable endolytic β -agarase Aga2 from a newly isolated marine agarolytic bacteria Cellulophaga omnivescoria W5C. New Biotechnology, 2018, 40, 261-267. | 4.4 | 31 |
| 30 | Silver nanoparticles in a polyether-block-polyamide copolymer towards antimicrobial and antifouling membranes. RSC Advances, 2012, 2, 2439. | 3.6 | 30 |
| 31 | Thia-crown ether functionalized mesoporous silica (SBA-15) adsorbent for selective recovery of gold (Au ³⁺) ions from electronic waste leachate. Microporous and Mesoporous Materials, 2020, 305, 110301. | 4.4 | 30 |
| 32 | Brown algae hydrolysis in 1-n-butyl-3-methylimidazolium chloride with mineral acid catalyst system. Bioresource Technology, 2012, 118, 545-552. | 9.6 | 29 |
| 33 | Metal-free mild oxidation of 5-hydroxymethylfurfural to 2,5-diformylfuran. Korean Journal of Chemical Engineering, 2014, 31, 1362-1367. | 2.7 | 27 |
| 34 | Current advances in ionic liquid-based pre-treatment and depolymerization of macroalgal biomass. Renewable Energy, 2020, 152, 283-299. | 8.9 | 26 |
| 35 | Dimethyl silane-modified silica in polydimethylsiloxane as gas permeation mixed matrix membrane. Journal of Polymer Research, 2011, 18, 2415-2424. | 2.4 | 25 |
| 36 | Water-insoluble hydrophilic polysulfides as microfibrinous composites towards highly effective and practical Hg ²⁺ capture. Chemical Engineering Journal, 2019, 378, 122216. | 12.7 | 25 |

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|----|---|------|-----------|
| 37 | A highly selective SBA-15 supported fluorescent "turn-on" sensor for the fluoride anion. <i>New Journal of Chemistry</i> , 2015, 39, 5570-5579. | 2.8 | 24 |
| 38 | Collective use of deep eutectic solvent for one-pot synthesis of ternary Sn/SnO ₂ @C electrode for supercapacitor. <i>Journal of Alloys and Compounds</i> , 2018, 732, 694-704. | 5.5 | 24 |
| 39 | Liquid-liquid extraction of Li ⁺ using mixed ion carrier system at room temperature ionic liquid. <i>Desalination and Water Treatment</i> , 2015, 53, 2774-2781. | 1.0 | 23 |
| 40 | Multidentate thia-crown ethers as hyper-crosslinked macroporous adsorbent resins for the efficient Pd/Pt recovery and separation from highly acidic spent automotive catalyst leachate. <i>Chemical Engineering Journal</i> , 2021, 424, 130379. | 12.7 | 21 |
| 41 | Surface-functionalized silica nanoparticles as fillers in polydimethylsiloxane membrane for the pervaporative recovery of 1-butanol from aqueous solution. <i>Journal of Chemical Technology and Biotechnology</i> , 2013, 88, 2216-2226. | 3.2 | 20 |
| 42 | Forward osmosis with direct contact membrane distillation using tetrabutylphosphonium p-toluenesulfonate as an effective and safe thermo-recyclable osmotic agent for seawater desalination. <i>Chemosphere</i> , 2021, 263, 128070. | 8.2 | 20 |
| 43 | Asparagine anchored on mesoporous silica for Au (III) capture: Elucidation of adsorption-reduction mechanisms and their implications towards selective Au (III) recovery. <i>Applied Surface Science</i> , 2021, 567, 150743. | 6.1 | 20 |
| 44 | Identification of aldehyde reductase catalyzing the terminal step for conversion of xylose to butanetriol in engineered <i>Escherichia coli</i> . <i>Bioprocess and Biosystems Engineering</i> , 2015, 38, 1761-1772. | 3.4 | 18 |
| 45 | Hypercross-linked microporous polymeric ionic liquid membranes: synthesis, properties and their application in H ₂ generation. <i>Journal of Materials Chemistry A</i> , 2015, 3, 22960-22968. | 10.3 | 18 |
| 46 | Overexpression and secretion of AgaA7 from <i>Pseudoalteromonas hodoensis</i> sp. nov in <i>Bacillus subtilis</i> for the depolymerization of agarose. <i>Enzyme and Microbial Technology</i> , 2016, 90, 19-25. | 3.2 | 18 |
| 47 | SBA-15 supported ionic liquid phase (SILP) with H ₂ PWO ₄ for the hydrolytic catalysis of red macroalgal biomass to sugars. <i>RSC Advances</i> , 2016, 6, 33901-33909. | 3.6 | 18 |
| 48 | Sulfur Copolymerization with Hydrophilic Comonomers as Polysulfides in Microbeads for Highly Efficient Hg ²⁺ Removal from Wastewater. <i>ACS Applied Polymer Materials</i> , 2020, 2, 4677-4689. | 4.4 | 18 |
| 49 | Highly selective extraction of palladium from spent automotive catalyst acid leachate using novel alkylated dioxo-dithiacrown ether derivatives. <i>Journal of Industrial and Engineering Chemistry</i> , 2020, 89, 428-435. | 5.8 | 18 |
| 50 | Ionic Liquid Pretreatment in Tandem with Recombinant Agarase Cocktail Saccharification of <i>Gelidium amansii</i> for d-Galactose and 3,6-Anhydro-l-Galactose Production. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 7563-7571. | 6.7 | 17 |
| 51 | Chemically Cross-Linked Graphene Oxide as a Selective Layer on Electrospun Polyvinyl Alcohol Nanofiber Membrane for Nanofiltration Application. <i>Nanomaterials</i> , 2021, 11, 2867. | 4.1 | 16 |
| 52 | Supramolecular host-guest complex of methylated β -cyclodextrin with polymerized ionic liquid ([vim]TFSI) as highly effective and energy-efficient thermo-regenerable draw solutes in forward osmosis. <i>Chemical Engineering Journal</i> , 2021, 411, 128520. | 12.7 | 15 |
| 53 | l-arabonate and d-galactonate production by expressing a versatile sugar dehydrogenase in metabolically engineered <i>Escherichia coli</i> . <i>Bioresource Technology</i> , 2014, 159, 455-459. | 9.6 | 14 |
| 54 | Macroalgal biomass hydrolysis using dicationic acidic ionic liquids. <i>Journal of Chemical Technology and Biotechnology</i> , 2017, 92, 1290-1297. | 3.2 | 14 |

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|----|---|-----|-----------|
| 55 | Discovering a novel d-xylonate-responsive promoter: the Pyjhl-driven genetic switch towards better 1,2,4-butanetriol production. <i>Applied Microbiology and Biotechnology</i> , 2019, 103, 8063-8074. | 3.6 | 14 |
| 56 | Understanding D-xylonic acid accumulation: a cornerstone for better metabolic engineering approaches. <i>Applied Microbiology and Biotechnology</i> , 2021, 105, 5309-5324. | 3.6 | 13 |
| 57 | Overexpression and characterization of a novel β -D-neoagarobiose hydrolase and its application in the production of D-galactonate from <i>Gelidium amansii</i> . <i>Process Biochemistry</i> , 2017, 63, 105-112. | 3.7 | 12 |
| 58 | A pH-responsive genetic sensor for the dynamic regulation of D-xylonic acid accumulation in <i>Escherichia coli</i> . <i>Applied Microbiology and Biotechnology</i> , 2020, 104, 2097-2108. | 3.6 | 12 |
| 59 | Crown ethers α -cyclic on fibrous polyglycidyl methacrylate for selective Li ⁺ retrieval from aqueous sources. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2020, 596, 124709. | 4.7 | 12 |
| 60 | Aqueous Synthesis of 14-15-Membered Crown Ethers with Mixed O, N and S Heteroatoms: Experimental and Theoretical Binding Studies with Platinum-Group Metals. <i>ChemPlusChem</i> , 2019, 84, 210-221. | 2.8 | 11 |
| 61 | Tyrosinase-Catalyzed Phenol-Mediated Immobilization of β -D-Galactosidase on Lysine-Coated Magnetic Particles for the Production of Neogaroooligosaccharides from <i>Gelidium amansii</i> . <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 3573-3582. | 6.7 | 11 |
| 62 | Engineering of xylose metabolism in <i>Escherichia coli</i> for the production of valuable compounds. <i>Critical Reviews in Biotechnology</i> , 2021, 41, 649-668. | 9.0 | 11 |
| 63 | Enhanced glycolic acid yield through xylose and cellobiose utilization by metabolically engineered <i>Escherichia coli</i> . <i>Bioprocess and Biosystems Engineering</i> , 2021, 44, 1081-1091. | 3.4 | 11 |
| 64 | Metabolic engineering of <i>Escherichia coli</i> for biosynthesis of d-galactonate. <i>Bioprocess and Biosystems Engineering</i> , 2014, 37, 383-391. | 3.4 | 9 |
| 65 | Improved cell growth and biosynthesis of glycolic acid by overexpression of membrane-bound pyridine nucleotide transhydrogenase. <i>Journal of Industrial Microbiology and Biotechnology</i> , 2019, 46, 159-169. | 3.0 | 9 |
| 66 | Synthesis and application of novel hydroxylated thia-crown ethers as composite ionophores for selective recovery of Ag ⁺ from aqueous sources. <i>Journal of Industrial and Engineering Chemistry</i> , 2020, 81, 415-426. | 5.8 | 9 |
| 67 | Partial nitrification in a membrane-aerated biofilm reactor with composite PEBA/PVDF hollow fibers. <i>Desalination and Water Treatment</i> , 2013, 51, 5275-5282. | 1.0 | 7 |
| 68 | Draft Genome Sequence of Newly Isolated Agarolytic Bacteria <i>Cellulophaga omnivescoria</i> sp. nov. W5C Carrying Several Gene Loci for Marine Polysaccharide Degradation. <i>Current Microbiology</i> , 2018, 75, 925-933. | 2.2 | 7 |
| 69 | Performance evaluation of poly-urethane foam packed-bed chemical scrubber for the oxidative absorption of NH ₃ and H ₂ S gases. <i>Journal of Environmental Science and Health - Part A Toxic/Hazardous Substances and Environmental Engineering</i> , 2018, 53, 25-32. | 1.7 | 7 |
| 70 | Microwave-Assisted Synthesis of Dibenzo-Crown Ethers. <i>Letters in Organic Chemistry</i> , 2014, 11, 109-115. | 0.5 | 7 |
| 71 | Systematic Synthesis of Diphenyl-Substituted Carotenoids as Molecular Wires. <i>European Journal of Organic Chemistry</i> , 2017, 2017, 6390-6400. | 2.4 | 6 |
| 72 | Carbon dioxide and methane gas permeations in thermally annealed and chemically cross-linked commercial polyimide hollow fiber membrane. <i>Fibers and Polymers</i> , 2011, 12, 572-579. | 2.1 | 4 |

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|----|---|-----|-----------|
| 73 | Synthetic Strategy for Tetraphenyl-Substituted All-E-Carotenoids with Improved Molecular Properties. <i>European Journal of Organic Chemistry</i> , 2020, 2020, 1769-1777. | 2.4 | 4 |
| 74 | Hyper-crosslinked tetraphenylborate as a regenerable sorbent for Cs ⁺ sequestration in aqueous media through cation-π interactions. <i>Chemosphere</i> , 2022, 288, 132501. | 8.2 | 4 |
| 75 | N-Carbon from Waste Tea as Efficient Anode Electrode Material in Lithium Ion Batteries. <i>Journal of Nanoscience and Nanotechnology</i> , 2017, 17, 1838-1846. | 0.9 | 3 |
| 76 | Apocarotenals of Phenolic Carotenoids for Superior Antioxidant Activities. <i>ACS Omega</i> , 2021, 6, 25096-25108. | 3.5 | 3 |
| 77 | Overexpression and characterization of a novel GH16 β-agarase (Aga1) from <i>Cellulophaga omnivescoria</i> W5C. <i>Biotechnology Letters</i> , 2020, 42, 2231-2238. | 2.2 | 2 |
| 78 | Hydroxypicolinic acid tethered on magnetite core-silica shell (HPCA@SiO ₂ @Fe ₃ O ₄) as an effective and reusable adsorbent for practical Co(II) recovery. <i>Chemosphere</i> , 2022, 298, 134301. | 8.2 | 2 |
| 79 | Removal of odorous compounds emitted from a food-waste composting facility in Korea using a pilot-scale scrubber. <i>Journal of Environmental Science and Health - Part A Toxic/Hazardous Substances and Environmental Engineering</i> , 2018, 53, 1094-1101. | 1.7 | 1 |