Tae-Ho Kim

List of Publications by Year
in descending order

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59 papers	2,039 citations	201674 27 h-index	254184 43 g-index
61 all docs	61 docs citations	61 times ranked	1740 citing authors

#	ARTICLE	IF	CITATIONS
1	Poly(carbazole)-based anion-conducting materials with high performance and durability for energy conversion devices. Energy and Environmental Science, 2020, 13, 3633-3645.	30.8	162
2	Highly proton conductive, dense polybenzimidazole membranes with low permeability to vanadium and enhanced H₂SO₄absorption capability for use in vanadium redox flow batteries. Journal of Materials Chemistry A, 2016, 4, 14342-14355.	10.3	108
3	Sulfonated poly(arylene ether sulfone) composite membranes having poly(2,5-benzimidazole)-grafted graphene oxide for fuel cell applications. Journal of Materials Chemistry A, 2015, 3, 20595-20606.	10.3	100
4	High-temperature fuel cell membranes based on mechanically stable para-ordered polybenzimidazole prepared by direct casting. Journal of Power Sources, 2007, 172, 172-179.	7.8	86
5	Polybenzimidazole containing benzimidazole side groups for high-temperature fuel cell applications. Polymer, 2009, 50, 3495-3502.	3.8	81
6	Crosslinked anion exchange membranes with primary diamine-based crosslinkers for vanadium redox flow battery application. Journal of Power Sources, 2017, 363, 78-86.	7.8	76
7	Sulfonated poly(arylene sulfone) multiblock copolymers for proton exchange membrane fuel cells. Journal of Membrane Science, 2014, 459, 72-85.	8.2	71
8	Preparation and characterization of crosslinked anion exchange membrane (AEM) materials with poly(phenylene ether)-based short hydrophilic block for use in electrochemical applications. Journal of Membrane Science, 2017, 530, 73-83.	8.2	69
9	Cross-linked highly sulfonated poly(arylene ether sulfone) membranes prepared by in-situ casting and thiol-ene click reaction for fuel cell application. Journal of Membrane Science, 2019, 579, 70-78.	8.2	60
10	Sulfonated poly(arylene ether sulfone)/sulfonated zeolite composite membrane for high temperature proton exchange membrane fuel cells. Solid State Ionics, 2013, 233, 55-61.	2.7	54
11	Crosslinked sulfonated poly(arylene ether sulfone) membranes for fuel cell application. International Journal of Hydrogen Energy, 2012, 37, 2603-2613.	7.1	50
12	Multi-block copolymers based on poly(p-phenylene)s with excellent durability and fuel cell performance. Journal of Membrane Science, 2015, 492, 209-219.	8.2	50
13	Properties of sulfonated poly(arylene ether sulfone)/electrospun nonwoven polyacrylonitrile composite membrane for proton exchange membrane fuel cells. Journal of Membrane Science, 2013, 446, 212-219.	8.2	48
14	Hydrocarbon membranes with high selectivity and enhanced stability for vanadium redox flow battery applications: Comparative study with sulfonated poly(ether sulfone)s and sulfonated poly(thioether) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	5.2	48
15	Polybenzimidazole/Nafion hybrid membrane with improved chemical stability for vanadium redox flow battery application. RSC Advances, 2018, 8, 25304-25312.	3.6	43
16	Poly(p-phenylene)-based membrane materials with excellent cell efficiencies and durability for use in vanadium redox flow batteries. Journal of Materials Chemistry A, 2017, 5, 12285-12296.	10.3	41
17	Electrocatalytic activity of nitrogen-doped CNT graphite felt hybrid for all-vanadium redox flow batteries. International Journal of Hydrogen Energy, 2018, 43, 1516-1522.	7.1	41
18	Comb-shaped polysulfones containing sulfonated polytriazole side chains for proton exchange membranes. Journal of Membrane Science, 2018, 554, 232-243.	8.2	41

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19	Interlocking Membrane/Catalyst Layer Interface for High Mechanical Robustness of Hydrocarbonâ€Membraneâ€Based Polymer Electrolyte Membrane Fuel Cells. Advanced Materials, 2015, 27, 2974-2980.	21.0	39
20	Ion exchange capacity controlled biphenol-based sulfonated poly(arylene ether sulfone) for polymer electrolyte membrane water electrolyzers: Comparison of random and multi-block copolymers. Journal of Membrane Science, 2021, 634, 119370.	8.2	37
21	Protonâ€Conducting Zirconium Pyrophosphate/Poly(2,5â€benzimidazole) Composite Membranes Prepared by a PPA Direct Casting Method. Macromolecular Chemistry and Physics, 2007, 208, 2293-2302.	2.2	36
22	Threeâ€Dimensional Interlocking Interface: Mechanical Nanofastener for High Interfacial Robustness of Polymer Electrolyte Membrane Fuel Cells. Advanced Materials, 2017, 29, 1603056.	21.0	36
23	Ether-free polymeric anion exchange materials with extremely low vanadium ion permeability and outstanding cell performance for vanadium redox flow battery (VRFB) application. Journal of Power Sources, 2019, 413, 158-166.	7.8	34
24	Low temperature decal transfer method for hydrocarbon membrane based membrane electrode assemblies in polymer electrolyte membrane fuel cells. Journal of Power Sources, 2011, 196, 9800-9809.	7.8	33
25	Synthesis of mesoporous reduced graphene oxide by Zn particles for electrodes of supercapacitor in ionic liquid electrolyte. Journal of Industrial and Engineering Chemistry, 2017, 45, 105-110.	5.8	32
26	Synthesis and investigation of random-structured ionomers with highly sulfonated multi-phenyl pendants for electrochemical applications. Journal of Membrane Science, 2016, 510, 326-337.	8.2	29
27	Multiblock copolymers based on poly(p-phenylene)-co-poly(arylene ether sulfone ketone) with sulfonated multiphenyl pendant groups for polymer electrolyte fuel cell (PEMFC) application. European Polymer Journal, 2015, 66, 1-11.	5.4	27
28	Highly selective porous separator with thin skin layer for alkaline water electrolysis. Journal of Power Sources, 2022, 524, 231059.	7.8	27
29	4â€Alkylphenoxymethylâ€Substituted Polystyrenes for Liquid Crystal Alignment Layers. Macromolecular Chemistry and Physics, 2009, 210, 926-935.	2.2	26
30	Hydrophilic Channel Alignment of Perfluoronated Sulfonic-Acid Ionomers for Vanadium Redox Flow Batteries. ACS Applied Materials & Interfaces, 2018, 10, 19689-19696.	8.0	25
31	Multimodal porous and nitrogen-functionalized electrode based on graphite felt modified with carbonized porous polymer skin layer for all-vanadium redox flow battery. Materials Today Energy, 2019, 11, 159-165.	4.7	25
32	Electrode-Impregnable and Cross-Linkable Poly(ethylene oxide)â€“Poly(propylene oxide)â€“Poly(ethylene) Tj ETQq0 0 0 rgBT /Overlock Flexible Solid-State Supercapacitors. ACS Applied Materials & Interfaces, 2017, 9, 33913-33924.	8.0	23
33	Intrinsically microporous polymer-based hierarchical nanostructuring of electrodes<i>via</i>nonsolvent-induced phase separation for high-performance supercapacitors. Journal of Materials Chemistry A, 2018, 6, 8909-8915.	10.3	23
34	Reinforced anion exchange membrane based on thermal cross-linking method with outstanding cell performance for reverse electrodialysis. RSC Advances, 2019, 9, 27500-27509.	3.6	23
35	Copolymers of Poly(2,5â€benzimidazole) and Poly[2,2â€²â€(<i>p</i>â€phenylene)â€5,5â€²â€bibenzimidazole] for Highâ€Temperature Fuel Cell Applications. Macromolecular Materials and Engineering, 2008, 293, 914-921.	3.6	22
36	A Printable Metallic Current Collector for Allâ€Printed Highâ€Voltage Microâ€Supercapacitors: Instantaneous Surface Passivation by Flashâ€Lightâ€Sintering Reaction. Advanced Functional Materials, 2020, 30, 2000715.	14.9	22

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37	Oligomeric chain extender-derived anion conducting membrane materials with poly(<i>p</i>-phenylene)-based architecture for fuel cells and water electrolyzers. Journal of Materials Chemistry A, 2022, 10, 9693-9706.	10.3	22
38	Water channel morphology of non-perfluorinated hydrocarbon proton exchange membrane under a low humidifying condition. International Journal of Hydrogen Energy, 2019, 44, 2340-2348.	7.1	21
39	Fabrication and Properties of Reinforced Membranes Based on Sulfonated Poly(arylene ether sulfone) Copolymers for Protonâ€Exchange Membrane Fuel Cells. Macromolecular Chemistry and Physics, 2012, 213, 839-846.	2.2	19
40	Poly(ethylene-co-vinyl acetate)/polyimide/poly(ethylene-co-vinyl acetate) tri-layer porous separator with high conductivity and tailored thermal shutdown function for application in sodium-ion batteries. Journal of Power Sources, 2021, 482, 228907.	7.8	19
41	Alcohol-Treated Porous PTFE Substrate for the Penetration of PTFE-Incompatible Hydrocarbon-Based Ionomer Solutions. Langmuir, 2021, 37, 3694-3701.	3.5	18
42	Thin bonding layer using sulfonated poly(arylene ether sulfone)/PVdF blends for hydrocarbon-based membrane electrode assemblies. Electrochimica Acta, 2015, 173, 268-275.	5.2	17
43	Effect of sulfonated poly(arylene ether sulfone) binder on the performance of polymer electrolyte membrane fuel cells. Journal of Industrial and Engineering Chemistry, 2015, 23, 316-320.	5.8	16
44	Simple and Effective Cross-Linking Technology for the Preparation of Cross-Linked Membranes Composed of Highly Sulfonated Poly(ether ether ketone) and Poly(arylene ether sulfone) for Fuel Cell Applications. ACS Applied Energy Materials, 2020, 3, 10495-10505.	5.1	16
45	External reinforcement of hydrocarbon membranes by a three-dimensional interlocking interface for mechanically durable polymer electrolyte membrane fuel cells. Journal of Power Sources, 2019, 415, 44-49.	7.8	13
46	Alkyl Spacer Grafted ABPBI Membranes with Enhanced Acid-Absorption Capabilities for Use in Vanadium Redox Flow Batteries. ACS Applied Energy Materials, 2021, 4, 4672-4685.	5.1	13
47	Perfluorocyclobutyl-containing multiblock copolymers to induce enhanced hydrophilic/hydrophobic phase separation and high proton conductivity at low humidity. Journal of Membrane Science, 2022, 641, 119892.	8.2	13
48	Sulfonated poly(arylene ether sulfone)/disulfonated silsesquioxane hybrid proton conductors for proton exchange membrane fuel cell application. International Journal of Hydrogen Energy, 2012, 37, 18981-18988.	7.1	11
49	Controlling hydrophilic channel alignment of perfluorinated sulfonic acid membranes via biaxial drawing for high performance and durable polymer electrolyte membrane water electrolysis. Journal of Power Sources, 2022, 518, 230772.	7.8	11
50	Synthesis and properties of bonding layer containing flexible and fluorinated moieties for hydrocarbon-based membrane electrode assemblies. International Journal of Hydrogen Energy, 2016, 41, 10884-10895.	7.1	10
51	Cross-Linked Composite Gel Polymer Electrolyte Based on an H-Shaped Poly(ethylene) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 18 Solid-State Supercapacitor Applications. ACS Omega, 2021, 6, 16924-16933.	3.5	10
52	Modification of hydrocarbon structure for polymer electrolyte membrane fuel cell binder application. International Journal of Hydrogen Energy, 2012, 37, 13452-13461.	7.1	9
53	Preparation and properties of sulfonated poly(arylene ether sulfone)/hydrophilic oligomer-g-CNT composite membranes for PEMFC. Macromolecular Research, 2013, 21, 1138-1144.	2.4	9
54	Novel interfacial bonding layers with controlled gradient composition profile for hydrocarbon-based membrane electrode assemblies. Journal of Power Sources, 2018, 398, 1-8.	7.8	9

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55	Simple and effective modification of absorbed glass mat separator through atmospheric plasma treatment for practical use in AGM lead-acid battery applications. Journal of Energy Storage, 2020, 28, 101187.	8.1	9
56	Poly(amide-co-imide)-poly(trimellitic anhydride chloride-co-4,4â€²-methylenedianiline) nonwoven/sulfonated poly(arylene ether sulfone) composite membrane for proton exchange membrane fuel cells. Macromolecular Research, 2014, 22, 79-84.	2.4	7
57	Edge protection using polyacrylonitrile thin-films for hydrocarbon-based membrane electrode assemblies. Journal of Industrial and Engineering Chemistry, 2015, 28, 190-196.	5.8	7
58	Nanofiber Celluloseâ€Incorporated Nanomesh Grapheneâ€“Carbon Nanotube Buckypaper and Ionic Liquidâ€Based Solid Polymer Electrolyte for Flexible Supercapacitors. Energy Technology, 2019, 7, 1900014.	3.8	7
59	Reprogrammable Three-Dimensional Configurations Using Ionomer Bilayers. ACS Applied Polymer Materials, 2019, 1, 2760-2767.	4.4	5