David Aili

List of Publications by Year in descending order

68 papers	3,205 citations	109137 35 h-index	155451 55 g-index
70 all docs	70 docs citations	70 times ranked	2536 citing authors

#	Article	IF	Citations
1	Regiospecific One-Pot Synthesis of Diaryliodonium Tetrafluoroborates from Arylboronic Acids and Aryl Iodides. Journal of Organic Chemistry, 2008, 73, 4602-4607.	1.7	218
2	Ion-solvating membranes as a new approach towards high rate alkaline electrolyzers. Energy and Environmental Science, 2019, 12, 3313-3318.	15.6	150
3	Thermal curing of PBI membranes for high temperature PEM fuel cells. Journal of Materials Chemistry, 2012, 22, 5444.	6.7	146
4	1,2,4-Triazolium perfluorobutanesulfonate as an archetypal pure protic organic ionic plastic crystal electrolyte for all-solid-state fuel cells. Energy and Environmental Science, 2015, 8, 1276-1291.	15.6	134
5	From polybenzimidazoles to polybenzimidazoliums and polybenzimidazolides. Journal of Materials Chemistry A, 2020, 8, 12854-12886.	5.2	133
6	Phosphoric acid doped membranes based on NafionÂ®, PBI and their blends â€“ Membrane preparation, characterization and steam electrolysis testing. International Journal of Hydrogen Energy, 2011, 36, 6985-6993.	3.8	129
7	Benzimidazole grafted polybenzimidazoles for proton exchange membrane fuel cells. Polymer Chemistry, 2013, 4, 4768.	1.9	104
8	Zero-Gap Alkaline Water Electrolysis Using Ion-Solvating Polymer Electrolyte Membranes at Reduced KOH Concentrations. Journal of the Electrochemical Society, 2016, 163, F3125-F3131.	1.3	97
9	Covalently Crossâ€Linked Sulfone Polybenzimidazole Membranes with Poly(Vinylbenzyl Chloride) for Fuel Cell Applications. ChemSusChem, 2013, 6, 275-282.	3.6	95
10	Exceptional durability enhancement of PA/PBI based polymer electrolyte membrane fuel cells for high temperature operation at 200 Â°C. Journal of Materials Chemistry A, 2016, 4, 4019-4024.	5.2	93
11	Polybenzimidazole-Based High-Temperature Polymer Electrolyte Membrane Fuel Cells: New Insights and Recent Progress. Electrochemical Energy Reviews, 2020, 3, 793-845.	13.1	92
12	Heterogeneous anion conducting membranes based on linear and crosslinked KOH doped polybenzimidazole for alkaline water electrolysis. Journal of Membrane Science, 2013, 447, 424-432.	4.1	86
13	Insights and Challenges for Applying Bipolar Membranes in Advanced Electrochemical Energy Systems. ACS Energy Letters, 2021, 6, 2539-2548.	8.8	86
14	Long-term durability of HT-PEM fuel cells based on thermally cross-linked polybenzimidazole. Journal of Power Sources, 2017, 342, 570-578.	4.0	83
15	Oxygen evolution catalysts on supports with a 3-D ordered array structure and intrinsic proton conductivity for proton exchange membrane steam electrolysis. Energy and Environmental Science, 2014, 7, 820.	15.6	79
16	Towards a stable ion-solvating polymer electrolyte for advanced alkaline water electrolysis. Journal of Materials Chemistry A, 2017, 5, 5055-5066.	5.2	63
17	Blend membranes of polybenzimidazole and an anion exchange ionomer (FAA3) for alkaline water electrolysis: Improved alkaline stability and conductivity. Journal of Membrane Science, 2018, 564, 653-662.	4.1	60
18	PEM steam electrolysis at 130ÂÂ°C using a phosphoric acid doped short side chain PFSA membrane. International Journal of Hydrogen Energy, 2012, 37, 10992-11000.	3.8	59

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19	Membranes for zinc-air batteries: Recent progress, challenges and perspectives. Journal of Power Sources, 2020, 475, 228689.	4.0	58
20	Poly(vinyl benzyl methylpyrrolidinium) hydroxide derived anion exchange membranes for water electrolysis. Journal of Materials Chemistry A, 2019, 7, 17914-17922.	5.2	56
21	Evaluation of Diaphragms and Membranes as Separators for Alkaline Water Electrolysis. Journal of the Electrochemical Society, 2021, 168, 014510.	1.3	54
22	Polybenzimidazole and sulfonated polyhedral oligosilsesquioxane composite membranes for high temperature polymer electrolyte membrane fuel cells. Electrochimica Acta, 2014, 140, 182-190.	2.6	53
23	Crosslinking of polybenzimidazole membranes by divinylsulfone postâ€treatment for highâ€temperature proton exchange membrane fuel cell applications. Polymer International, 2011, 60, 1201-1207.	1.6	52
24	Porous poly(perfluorosulfonic acid) membranes for alkaline water electrolysis. Journal of Membrane Science, 2015, 493, 589-598.	4.1	48
25	Design of Monovalent Ion Selective Membranes for Reducing the Impacts of Multivalent Ions in Reverse Electrodialysis. Membranes, 2020, 10, 7.	1.4	48
26	High CO tolerance of new SiO2 doped phosphoric acid/polybenzimidazole polymer electrolyte membrane fuel cells at high temperatures of 200â€“250ÂÂ°C. International Journal of Hydrogen Energy, 2018, 43, 22487-22499.	3.8	47
27	Protic ionic liquids immobilized in phosphoric acid-doped polybenzimidazole matrix enable polymer electrolyte fuel cell operation at 200ÂÂ°C. Journal of Membrane Science, 2020, 608, 118188.	4.1	47
28	In Situ Formed Phosphoric Acid/Phosphosilicate Nanoclusters in the Exceptional Enhancement of Durability of Polybenzimidazole Membrane Fuel Cells at Elevated High Temperatures. Journal of the Electrochemical Society, 2017, 164, F1615-F1625.	1.3	45
29	Poly(imide benzimidazole)s for high temperature polymer electrolyte membrane fuel cells. Journal of Membrane Science, 2014, 454, 351-358.	4.1	44
30	Thermally crosslinked sulfonated polybenzimidazole membranes and their performance in high temperature polymer electrolyte fuel cells. Journal of Membrane Science, 2019, 588, 117218.	4.1	44
31	Polysulfone-polyvinylpyrrolidone blend membranes as electrolytes in alkaline water electrolysis. Journal of Membrane Science, 2020, 598, 117674.	4.1	44
32	Diamine crosslinked anion exchange membranes based on poly(vinyl benzyl methylpyrrolidinium) for alkaline water electrolysis. Journal of Membrane Science, 2021, 633, 119418.	4.1	44
33	The stability of poly(2,2â€²-(m-phenylene)-5,5â€²-bibenzimidazole) membranes in aqueous potassium hydroxide. Journal of Membrane Science, 2015, 492, 422-429.	4.1	40
34	Understanding ternary poly(potassium benzimidazolide)-based polymer electrolytes. Polymer, 2016, 84, 304-310.	1.8	39
35	Antimony doped tin oxide modified carbon nanotubes as catalyst supports for methanol oxidation and oxygen reduction reactions. Journal of Materials Chemistry A, 2013, 1, 9737.	5.2	38
36	Anion exchange membranes of bis-imidazolium cation crosslinked poly(2,6-dimethyl-1,4- phenylene) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	5.8	38

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37	Advancement toward Polymer Electrolyte Membrane Fuel Cells at Elevated Temperatures. Research, 2020, 2020, 9089405.	2.8	36
38	Probing phosphoric acid redistribution and anion migration in polybenzimidazole membranes. Electrochemistry Communications, 2017, 82, 21-24.	2.3	33
39	Rechargeable organicâ€“air redox flow batteries. Sustainable Energy and Fuels, 2018, 2, 2252-2259.	2.5	29
40	Determination of Anion Transference Number and Phosphoric Acid Diffusion Coefficient in High Temperature Polymer Electrolyte Membranes. Journal of the Electrochemical Society, 2018, 165, F863-F869.	1.3	29
41	Preparation of super-hydrophilic polyphenylsulfone nanofiber membranes for water treatment. RSC Advances, 2019, 9, 278-286.	1.7	26
42	Acid-base chemistry and proton conductivity of CsHSO4, CsH2PO4 and their mixtures with N-heterocycles. Solid State Ionics, 2017, 306, 13-19.	1.3	23
43	Ion-Exchange-Induced Selective Etching for the Synthesis of Amino-Functionalized Hollow Mesoporous Silica for Elevated-High-Temperature Fuel Cells. ACS Applied Materials & Interfaces, 2017, 9, 31922-31930.	4.0	22
44	(Invited) A Stability Study of Alkali Doped PBI Membranes for Alkaline Electrolyzer Cells. ECS Transactions, 2014, 64, 1175-1184.	0.3	21
45	Bipolar Membrane and Interface Materials for Electrochemical Energy Systems. ACS Applied Energy Materials, 2021, 4, 7419-7439.	2.5	21
46	Sulfonated copolyimide membranes derived from a novel diamine monomer with pendant benzimidazole groups for fuel cells. Journal of Membrane Science, 2015, 481, 44-53.	4.1	20
47	Cationic ether-free poly(bis-alkylimidazolium) ionene blend polybenzimidazole as anion exchange membranes. Polymer Chemistry, 2020, 11, 6037-6046.	1.9	20
48	Anion exchange membranes based on long side-chain quaternary ammonium-functionalized poly(arylene piperidinium)s for vanadium redox flow batteries. Science China Materials, 2022, 65, 683-694.	3.5	20
49	Methyl phosphate formation as a major degradation mode of direct methanol fuel cells with phosphoric acid based electrolytes. Journal of Power Sources, 2015, 279, 517-521.	4.0	18
50	Three-layered electrolyte membranes with acidÂreservoir for prolonged lifetime of high-temperature polymer electrolyte membrane fuel cells. International Journal of Hydrogen Energy, 2020, 45, 1008-1017.	3.8	17
51	The Electrochemical Behavior of Phosphoricâ€Acidâ€Doped Poly(perfluorosulfonic Acid) Membranes. ChemElectroChem, 2014, 1, 1471-1475.	1.7	15
52	Aminoâ€Functional Polybenzimidazole Blends with Enhanced Phosphoric Acid Mediated Proton Conductivity as Fuel Cell Electrolytes. Macromolecular Chemistry and Physics, 2016, 217, 1161-1168.	1.1	14
53	Phosphoric Acid Dynamics in High Temperature Polymer Electrolyte Membranes. Journal of the Electrochemical Society, 2020, 167, 134507.	1.3	13
54	Gel Electrolytes of Covalent Network Polybenzimidazole and Phosphoric Acid by Direct Casting. Macromolecular Materials and Engineering, 2017, 302, 1700347.	1.7	10

#	Article	IF	Citations
55	Facile synthesis and properties of poly(ether ketone cardo)s bearing heterocycle groups for high temperature polymer electrolyte membrane fuel cells. Journal of Membrane Science, 2021, 636, 119584.	4.1	10
56	On the stability of imidazolium and benzimidazolium salts in phosphoric acid based fuel cell electrolytes. Journal of Power Sources, 2021, 515, 230642.	4.0	10
57	Fuel Cell Electrolytes of Polybenzimidazole Membranes Crossâ€linked with Bis(chloromethyl) Arenes. Fuel Cells, 2018, 18, 688-697.	1.5	9
58	An Imidazolium Type Ionic Liquid Functionalized Ether-Free Poly(terphenyl piperidinium) Membrane for High Temperature Polymer Electrolyte Membrane Fuel Cell Applications. Journal of the Electrochemical Society, 2022, 169, 024504.	1.3	8
59	Durability and degradation of vapor-fed direct dimethyl ether high temperature polymer electrolyte membrane fuel cells. Journal of Power Sources, 2019, 432, 30-37.	4.0	7
60	Electroreduction of CO₂ to ethanol by electrochemically deposited Cu-lignin complexes on Ni foam electrodes. Nanotechnology, 2022, 33, 055403.	1.3	7
61	Polybenzimidazole Membranes by Post Acid Doping. , 2016, , 195-215.		6
62	Acidâ€“Base Chemistry and Proton Conductivity. , 2016, , 37-57.		4
63	Synthesis of Polybenzimidazoles. , 2016, , 151-167.		4
64	High-Temperature Polymer Electrolyte Membrane Fuel Cells. Nanostructure Science and Technology, 2019, , 45-79.	0.1	3
65	Studies on Anion Exchange Membrane and Interface Properties by Electrochemical Impedance Spectroscopy: The Role of pH. Membranes, 2021, 11, 771.	1.4	2
66	Advanced Membrane Materials for Polymer Electrolyte Membrane Fuel Cells. Electrochemical Energy Storage and Conversion, 2015, , 363-383.	0.0	0
67	Alkaline Electrolysis with an Ion-Solvating Membrane. ECS Meeting Abstracts, 2018, , .	0.0	0
68	Durability and Degradation of Direct Dimethyl Ether High Temperature Polymer Electrolyte Membrane Fuel Cells. ECS Meeting Abstracts, 2018, , .	0.0	0