Masahiro Watanabe

List of Publications by Year
in descending order

56	1,625	279798	302126
papers	citations	23 h-index	39 g-index

59	59	59	1689
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Synthesis and properties of anion conductive ionomers containing fluorenyl groups for alkaline fuel cell applications. Polymer Chemistry, 2011, 2, 99-106.	3.9	124
2	Effect of the Hydrophobic Component on the Properties of Sulfonated Poly(arylene ether sulfone)s. Macromolecules, 2009, 42, 1873-1880.	4.8	106
3	Effect of the state of distribution of supported Pt nanoparticles on effective Pt utilization in polymer electrolyte fuel cells. Physical Chemistry Chemical Physics, 2013, 15, 11236.	2.8	99
4	Sulfonated Block Poly(arylene ether sulfone) Membranes for Fuel Cell Applications via Oligomeric Sulfonation. Macromolecules, 2011, 44, 3884-3892.	4.8	96
5	Characterization of Pt catalysts on Nb-doped and Sb-doped SnO2â€“ support materials with aggregated structure by rotating disk electrode and fuel cell measurements. Electrochimica Acta, 2013, 110, 316-324.	5.2	88
6	Fluorene-containing cardo polymers as ion conductive membranes for fuel cells. Polymer Chemistry, 2011, 2, 1919.	3.9	87
7	Structural effects on the surface oxidation processes at Pt single-crystal electrodes studied by X-ray photoelectron spectroscopy. Energy and Environmental Science, 2011, 4, 1662.	30.8	71
8	Improvements in electrical and electrochemical properties of Nb-doped SnO_{2â˜Î´} supports for fuel cell cathodes due to aggregation and Pt loading. RSC Advances, 2014, 4, 32180-32188.	3.6	56
9	Investigation of the effect of a hydrophilic layer in the gas diffusion layer of a polymer electrolyte membrane fuel cell on the cell performance and cold start behaviour. Electrochimica Acta, 2014, 120, 240-247.	5.2	52
10	Effect of ammonium groups on the properties and alkaline stability of poly(arylene ether)â€based anion exchange membranes. Journal of Polymer Science Part A, 2014, 52, 383-389.	2.3	51
11	Block poly(arylene ether sulfone ketone)s containing densely sulfonated linear hydrophilic segments as proton conductive membranes. Polymer Chemistry, 2012, 3, 2517.	3.9	43
12	Direct Visualization of Oxygen Distribution in Operating Fuel Cells. Angewandte Chemie - International Edition, 2008, 47, 2792-2795.	13.8	42
13	Effect of Particle Size and Composition on CO-Tolerance at Ptâ€“Ru/C Catalysts Analyzed by In Situ Attenuated Total Reflection FTIR Spectroscopy. ACS Catalysis, 2012, 2, 450-455.	11.2	40
14	Oxygen Reduction Reaction Activity of Carbon-Supported Pt-Fe, Pt-Co, and Pt-Ni Alloys with Stabilized Pt-Skin Layers. Electrochemistry, 2016, 84, 133-137.	1.4	34
15	Proton conductive polyimide ionomer membranes: Effect of NH, OH, and COOH groups. Journal of Polymer Science Part A, 2010, 48, 2846-2854.	2.3	32
16	Electrochemical Activity and Durability of Platinum Catalysts Supported on Nanometer-Size Titanium Nitride Particles for Polymer Electrolyte Fuel Cells. Electrochemistry, 2011, 79, 399-403.	1.4	30
17	Synthesis and properties of multiblock copoly(arylene ether)s containing superacid groups for fuel cell membranes. Journal of Polymer Science Part A, 2011, 49, 452-464.	2.3	28
18	High-performance electrodes for reversible solid oxide fuel cell/solid oxide electrolysis cell: Niâ€“Co dispersed ceria hydrogen electrodes. RSC Advances, 2014, 4, 16260.	3.6	28

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19	Oxygen Reduction Activity and Durability of Ordered and Disordered Pt₃Co Alloy Nanoparticle Catalysts at Practical Temperatures of Polymer Electrolyte Fuel Cells. Journal of the Electrochemical Society, 2017, 164, F966-F972.	2.9	27
20	Oxygen Reduction at the Pt/Carbon Black-Polyimide Ionomer Interface. Journal of Physical Chemistry C, 2009, 113, 7772-7778.	3.1	26
21	Simultaneous visualization of oxygen distribution and water blockages in an operating triple-serpentine polymer electrolyte fuel cell. Journal of Power Sources, 2011, 196, 2635-2639.	7.8	26
22	Metal separators coated with carbon/resin composite layers for PEFCs. Electrochimica Acta, 2007, 53, 2025-2033.	5.2	23
23	Ammonium-functionalized poly(arylene ether)s as anion-exchange membranes. Polymer Journal, 2014, 46, 656-663.	2.7	23
24	Temperature dependence of oxygen reduction activity at Nafion-coated Pt/graphitized carbon black catalysts prepared by the nanocapsule method. Energy and Environmental Science, 2010, 3, 1511.	30.8	22
25	Durability of Pt/Graphitized Carbon Catalyst Prepared by the Nanocapsule Method for the Start/Stop Operating Condition of Polymer Electrolyte Fuel Cells. Electrochemistry, 2011, 79, 381-387.	1.4	21
26	Simultaneous visualization of oxygen partial pressure, current density, and water droplets in serpentine fuel cell during power generation for understanding reaction distributions. Journal of Power Sources, 2017, 343, 135-141.	7.8	21
27	Imaging of Water Droplets Formed during PEFC Operation on GDLs With Different Pore Sizes. Electrochemistry, 2011, 79, 388-391.	1.4	20
28	In situATR-FTIR analysis of the CO-tolerance mechanism on Pt₂Ru₃/C catalysts prepared by the nanocapsule method. Energy and Environmental Science, 2011, 4, 433-438.	30.8	19
29	Luminescent Sensory Polymer Coating Composed of Platinumporphyrin and Poly(trimethylsilylpropyne) for Realâ€Time Oxygen Visualization in Operating PEFCs. Macromolecular Chemistry and Physics, 2011, 212, 42-47.	2.2	18
30	Neutron imaging of generated water inside polymer electrolyte fuel cell using newly-developed gas diffusion layer with gas flow channels during power generation. Journal of Power Sources, 2022, 530, 231251.	7.8	18
31	Electrocatalysis of the Oxygen Reduction Reaction at Pt and Pt-Alloys. Electrochemistry, 2011, 79, 303-311.	1.4	17
32	Synthesis and properties of sulfonated poly(arylene ether)s containing azole groups. Journal of Polymer Science Part A, 2011, 49, 3863-3873.	2.3	16
33	Correlation between surface chemical composition with catalytic activity and selectivity of organic-solvent synthesized Ptâ€“Ti nanoparticles. Journal of Materials Chemistry A, 2013, 1, 8798.	10.3	16
34	ATR-FTIR Analysis of the State of Water in a Sulfonated Block Poly(arylene ether sulfone ketone) Membrane and Proton Conductivity Measurement during the Hydration/Dehydration Cycle. Journal of Physical Chemistry C, 2013, 117, 3762-3771.	3.1	16
35	Effect of Surface Ion Conductivity of Anion Exchange Membranes on Fuel Cell Performance. Langmuir, 2016, 32, 9557-9565.	3.5	15
36	Visualization of Oxygen Partial Pressure and Numerical Simulation of a Running Polymer Electrolyte Fuel Cell with Straight Flow Channels to Elucidate Reaction Distributions. ChemElectroChem, 2015, 2, 1495-1501.	3.4	13

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37	Synthesis and Properties of Sulfonated Poly(arylene ether) Block Copolymers as Proton Conductive Membranes. Bulletin of the Chemical Society of Japan, 2012, 85, 389-396.	3.2	12
38	Synthesis and Properties of Partially Fluorinated Poly(arylene ether) Block Copolymers Containing Ammonium Groups as Anion Conductive Membranes. Bulletin of the Chemical Society of Japan, 2013, 86, 663-670.	3.2	12
39	Intrapolymer Heck reaction for proton conductive ladder-type aromatic block copolymers. RSC Advances, 2014, 4, 21049-21053.	3.6	12
40	A sulfonated polybenzophenone/polyimide copolymer as a novel proton exchange membrane. RSC Advances, 2015, 5, 50082-50086.	3.6	12
41	Real-time visualization of oxygen partial pressures in straight channels of running polymer electrolyte fuel cell with water plugging. Journal of Power Sources, 2015, 273, 873-877.	7.8	12
42	Synthesis of superacid-modified poly(arylene ether sulfone)s via post-bromination. RSC Advances, 2012, 2, 5199.	3.6	11
43	Proton Conductive Areas on Sulfonated Poly(Arylene Ketone) Multiblock Copolymer Electrolyte Membrane Studied by Current-Sensing Atomic Force Microscopy. Electrochemistry, 2014, 82, 369-375.	1.4	8
44	Polyimide ionomer containing superacid groups. Polymers for Advanced Technologies, 2011, 22, 1305-1310.	3.2	7
45	Proton conductive aromatic block copolymers from a new bistriazole monomer. RSC Advances, 2013, 3, 20202.	3.6	7
46	Complete NMR assignment of a sulfonated aromatic block copolymer via heteronuclear single-quantum correlation, heteronuclear multiple-bond correlation and heteronuclear single-quantum correlation total correlation spectroscopy. Polymer Journal, 2012, 44, 845-849.	2.7	6
47	Synthesis and Properties of Sulfonated and Brominated Poly(arylene ether)s as Proton Conductive Membranes. Bulletin of the Chemical Society of Japan, 2015, 88, 183-191.	3.2	6
48	Effects of SiO₂ Nanoparticles Incorporated into Poly(Arylene Ether Sulfone) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5 Electrochemistry, 2015, 83, 150-154.	1.4	6
49	A Proton Conductive Aromatic Block Copolymer Containing Dibenzofuran Moieties. Chemistry Letters, 2015, 44, 964-966.	1.3	6
50	Effect of an Sb-Doped SnO2 Support on the CO-Tolerance of Pt2Ru3 Nanocatalysts for Residential Fuel Cells. Catalysts, 2016, 6, 139.	3.5	6
51	Development and Analysis of an Innovative Flat-Metal Separator Integrating the GDL with Gas-Flow Channels as PEFC Components. Journal of the Electrochemical Society, 2019, 166, F3210-F3215.	2.9	6
52	Oscillation mechanism in polymer electrolyte membrane fuel cell studied by <i>operando</i> monitoring of oxygen partial pressure using optical probes. Hyomen Gijutsu/Journal of the Surface Finishing Society of Japan, 2021, 72, 230-237.	0.2	6
53	Compact Fuel Processor by Employing Monolithic Catalyst for 1 kW Class Residential Polymer Electrolyte Fuel Cells. Journal of the Japan Petroleum Institute, 2011, 54, 52-55.	0.6	3
54	Metal-monolithic Catalyst for Selective CO Methanation. Journal of the Japan Petroleum Institute, 2011, 54, 50-51.	0.6	2

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55	Ni-Fe-Ce Mixed Nano-composite Oxide Catalyst Prepared by Solution-spray Plasma Technique for High Temperature Water-gas-shift Reaction. Journal of the Japan Petroleum Institute, 2010, 53, 367-368.	0.6	1
56	Development of Hydrogen Production Catalysts for a Residential PEFC System. Hyomen Kagaku, 2015, 36, 62-68.	0.0	0