

Masahiro Watanabe

List of Publications by Year in descending order

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Version: 2024-02-01

56
papers

1,625
citations

279798

23
h-index

302126

39
g-index

59
all docs

59
docs citations

59
times ranked

1689
citing authors

#	ARTICLE	IF	CITATIONS
1	Neutron imaging of generated water inside polymer electrolyte fuel cell using newly-developed gas diffusion layer with gas flow channels during power generation. <i>Journal of Power Sources</i> , 2022, 530, 231251.	7.8	18
2	Oscillation mechanism in polymer electrolyte membrane fuel cell studied by <i>in situ</i> monitoring of oxygen partial pressure using optical probes. <i>Hyomen Gijutsu/Journal of the Surface Finishing Society of Japan</i> , 2021, 72, 230-237.	0.2	6
3	Development and Analysis of an Innovative Flat-Metal Separator Integrating the GDL with Gas-Flow Channels as PEFC Components. <i>Journal of the Electrochemical Society</i> , 2019, 166, F3210-F3215.	2.9	6
4	Simultaneous visualization of oxygen partial pressure, current density, and water droplets in serpentine fuel cell during power generation for understanding reaction distributions. <i>Journal of Power Sources</i> , 2017, 343, 135-141.	7.8	21
5	Oxygen Reduction Activity and Durability of Ordered and Disordered Pt ₃ Co Alloy Nanoparticle Catalysts at Practical Temperatures of Polymer Electrolyte Fuel Cells. <i>Journal of the Electrochemical Society</i> , 2017, 164, F966-F972.	2.9	27
6	Effect of an Sb-Doped SnO ₂ Support on the CO-Tolerance of Pt ₂ Ru ₃ Nanocatalysts for Residential Fuel Cells. <i>Catalysts</i> , 2016, 6, 139.	3.5	6
7	Oxygen Reduction Reaction Activity of Carbon-Supported Pt-Fe, Pt-Co, and Pt-Ni Alloys with Stabilized Pt-Skin Layers. <i>Electrochemistry</i> , 2016, 84, 133-137.	1.4	34
8	Effect of Surface Ion Conductivity of Anion Exchange Membranes on Fuel Cell Performance. <i>Langmuir</i> , 2016, 32, 9557-9565.	3.5	15
9	Synthesis and Properties of Sulfonated and Brominated Poly(arylene ether)s as Proton Conductive Membranes. <i>Bulletin of the Chemical Society of Japan</i> , 2015, 88, 183-191.	3.2	6
10	Effects of SiO ₂ Nanoparticles Incorporated into Poly(Arylene Ether Sulfone) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 Electrochemistry, 2015, 83, 150-154.	1.4	6
11	Visualization of Oxygen Partial Pressure and Numerical Simulation of a Running Polymer Electrolyte Fuel Cell with Straight Flow Channels to Elucidate Reaction Distributions. <i>ChemElectroChem</i> , 2015, 2, 1495-1501.	3.4	13
12	Development of Hydrogen Production Catalysts for a Residential PEFC System. <i>Hyomen Kagaku</i> , 2015, 36, 62-68.	0.0	0
13	A sulfonated polybenzophenone/polyimide copolymer as a novel proton exchange membrane. <i>RSC Advances</i> , 2015, 5, 50082-50086.	3.6	12
14	A Proton Conductive Aromatic Block Copolymer Containing Dibenzofuran Moieties. <i>Chemistry Letters</i> , 2015, 44, 964-966.	1.3	6
15	Real-time visualization of oxygen partial pressures in straight channels of running polymer electrolyte fuel cell with water plugging. <i>Journal of Power Sources</i> , 2015, 273, 873-877.	7.8	12
16	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. <i>Electrochimica Acta</i> , 2014, 120, 240-247.	5.2	52
17	Effect of ammonium groups on the properties and alkaline stability of poly(arylene ether)-based anion exchange membranes. <i>Journal of Polymer Science Part A</i> , 2014, 52, 383-389.	2.3	51
18	Ammonium-functionalized poly(arylene ether)s as anion-exchange membranes. <i>Polymer Journal</i> , 2014, 46, 656-663.	2.7	23

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19	High-performance electrodes for reversible solid oxide fuel cell/solid oxide electrolysis cell: Ni ²⁺ /Co dispersed ceria hydrogen electrodes. <i>RSC Advances</i> , 2014, 4, 16260.	3.6	28
20	Improvements in electrical and electrochemical properties of Nb-doped SnO ₂ supports for fuel cell cathodes due to aggregation and Pt loading. <i>RSC Advances</i> , 2014, 4, 32180-32188.	3.6	56
21	Intrapolymer Heck reaction for proton conductive ladder-type aromatic block copolymers. <i>RSC Advances</i> , 2014, 4, 21049-21053.	3.6	12
22	Proton Conductive Areas on Sulfonated Poly(Arylene Ketone) Multiblock Copolymer Electrolyte Membrane Studied by Current-Sensing Atomic Force Microscopy. <i>Electrochemistry</i> , 2014, 82, 369-375.	1.4	8
23	Correlation between surface chemical composition with catalytic activity and selectivity of organic-solvent synthesized Pt ²⁺ /Ti nanoparticles. <i>Journal of Materials Chemistry A</i> , 2013, 1, 8798.	10.3	16
24	Effect of the state of distribution of supported Pt nanoparticles on effective Pt utilization in polymer electrolyte fuel cells. <i>Physical Chemistry Chemical Physics</i> , 2013, 15, 11236.	2.8	99
25	Proton conductive aromatic block copolymers from a new bistriazole monomer. <i>RSC Advances</i> , 2013, 3, 20202.	3.6	7
26	Characterization of Pt catalysts on Nb-doped and Sb-doped SnO ₂ support materials with aggregated structure by rotating disk electrode and fuel cell measurements. <i>Electrochimica Acta</i> , 2013, 110, 316-324.	5.2	88
27	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. <i>Journal of Physical Chemistry C</i> , 2013, 117, 3762-3771.	3.1	16
28	Synthesis and Properties of Partially Fluorinated Poly(arylene ether) Block Copolymers Containing Ammonium Groups as Anion Conductive Membranes. <i>Bulletin of the Chemical Society of Japan</i> , 2013, 86, 663-670.	3.2	12
29	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. <i>Polymer Journal</i> , 2012, 44, 845-849.	2.7	6
30	Synthesis and Properties of Sulfonated Poly(arylene ether) Block Copolymers as Proton Conductive Membranes. <i>Bulletin of the Chemical Society of Japan</i> , 2012, 85, 389-396.	3.2	12
31	Synthesis of superacid-modified poly(arylene ether sulfone)s via post-bromination. <i>RSC Advances</i> , 2012, 2, 5199.	3.6	11
32	Block poly(arylene ether sulfone ketone)s containing densely sulfonated linear hydrophilic segments as proton conductive membranes. <i>Polymer Chemistry</i> , 2012, 3, 2517.	3.9	43
33	Effect of Particle Size and Composition on CO-Tolerance at Pt ²⁺ /Ru/C Catalysts Analyzed by In Situ Attenuated Total Reflection FTIR Spectroscopy. <i>ACS Catalysis</i> , 2012, 2, 450-455.	11.2	40
34	Sulfonated Block Poly(arylene ether sulfone) Membranes for Fuel Cell Applications via Oligomeric Sulfonation. <i>Macromolecules</i> , 2011, 44, 3884-3892.	4.8	96
35	Structural effects on the surface oxidation processes at Pt single-crystal electrodes studied by X-ray photoelectron spectroscopy. <i>Energy and Environmental Science</i> , 2011, 4, 1662.	30.8	71
36	In situ ATR-FTIR analysis of the CO-tolerance mechanism on Pt ₂ /Ru ₃ /C catalysts prepared by the nanocapsule method. <i>Energy and Environmental Science</i> , 2011, 4, 433-438.	30.8	19

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37	Fluorene-containing cardo polymers as ion conductive membranes for fuel cells. <i>Polymer Chemistry</i> , 2011, 2, 1919.	3.9	87
38	Synthesis and properties of anion conductive ionomers containing fluorenyl groups for alkaline fuel cell applications. <i>Polymer Chemistry</i> , 2011, 2, 99-106.	3.9	124
39	Metal-monolithic Catalyst for Selective CO Methanation. <i>Journal of the Japan Petroleum Institute</i> , 2011, 54, 50-51.	0.6	2
40	Durability of Pt/Graphitized Carbon Catalyst Prepared by the Nanocapsule Method for the Start/Stop Operating Condition of Polymer Electrolyte Fuel Cells. <i>Electrochemistry</i> , 2011, 79, 381-387.	1.4	21
41	Imaging of Water Droplets Formed during PEFC Operation on GDLs With Different Pore Sizes. <i>Electrochemistry</i> , 2011, 79, 388-391.	1.4	20
42	Electrochemical Activity and Durability of Platinum Catalysts Supported on Nanometer-Size Titanium Nitride Particles for Polymer Electrolyte Fuel Cells. <i>Electrochemistry</i> , 2011, 79, 399-403.	1.4	30
43	Electrocatalysis of the Oxygen Reduction Reaction at Pt and Pt-Alloys. <i>Electrochemistry</i> , 2011, 79, 303-311.	1.4	17
44	Polyimide ionomer containing superacid groups. <i>Polymers for Advanced Technologies</i> , 2011, 22, 1305-1310.	3.2	7
45	Synthesis and properties of multiblock copoly(arylene ether)s containing superacid groups for fuel cell membranes. <i>Journal of Polymer Science Part A</i> , 2011, 49, 452-464.	2.3	28
46	Synthesis and properties of sulfonated poly(arylene ether)s containing azole groups. <i>Journal of Polymer Science Part A</i> , 2011, 49, 3863-3873.	2.3	16
47	Luminescent Sensory Polymer Coating Composed of Platinumporphyrin and Poly(trimethylsilylpropyne) for Real-time Oxygen Visualization in Operating PEFCs. <i>Macromolecular Chemistry and Physics</i> , 2011, 212, 42-47.	2.2	18
48	Simultaneous visualization of oxygen distribution and water blockages in an operating triple-serpentine polymer electrolyte fuel cell. <i>Journal of Power Sources</i> , 2011, 196, 2635-2639.	7.8	26
49	Compact Fuel Processor by Employing Monolithic Catalyst for 1 kW Class Residential Polymer Electrolyte Fuel Cells. <i>Journal of the Japan Petroleum Institute</i> , 2011, 54, 52-55.	0.6	3
50	Proton conductive polyimide ionomer membranes: Effect of NH, OH, and COOH groups. <i>Journal of Polymer Science Part A</i> , 2010, 48, 2846-2854.	2.3	32
51	Ni-Fe-Ce Mixed Nano-composite Oxide Catalyst Prepared by Solution-spray Plasma Technique for High Temperature Water-gas-shift Reaction. <i>Journal of the Japan Petroleum Institute</i> , 2010, 53, 367-368.	0.6	1
52	Temperature dependence of oxygen reduction activity at Nafion-coated Pt/graphitized carbon black catalysts prepared by the nanocapsule method. <i>Energy and Environmental Science</i> , 2010, 3, 1511.	30.8	22
53	Oxygen Reduction at the Pt/Carbon Black-Polyimide Ionomer Interface. <i>Journal of Physical Chemistry C</i> , 2009, 113, 7772-7778.	3.1	26
54	Effect of the Hydrophobic Component on the Properties of Sulfonated Poly(arylene ether sulfone)s. <i>Macromolecules</i> , 2009, 42, 1873-1880.	4.8	106

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55	Direct Visualization of Oxygen Distribution in Operating Fuel Cells. <i>Angewandte Chemie - International Edition</i> , 2008, 47, 2792-2795.	13.8	42
56	Metal separators coated with carbon/resin composite layers for PEFCs. <i>Electrochimica Acta</i> , 2007, 53, 2025-2033.	5.2	23