Takemi Chikahisa

List of Publications by Year
in descending order

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62	905	394421	454955
papers	citations	19 h-index	30 g-index

63	63	63	692
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Cold start characteristics and freezing mechanism dependence on start-up temperature in a polymer electrolyte membrane fuel cell. Journal of Power Sources, 2012, 208, 366-373.	7.8	120
2	Numerical simulation of liquid water and gas flow in a channel and a simplified gas diffusion layer model of polymer electrolyte membrane fuel cells using the lattice Boltzmann method. Journal of Power Sources, 2009, 193, 24-31.	7.8	78
3	The Design and Performance of a PEFC at a Temperature Below Freezing. JSME International Journal Series B, 2004, 47, 235-241.	0.3	77
4	Performance and durability of Pt-MFI zeolite catalyst for selective reduction of nitrogen monoxide in actual diesel engine exhaust. Applied Catalysis B: Environmental, 1994, 5, L1-L16.	20.2	71
5	Performance and liquid water distribution in PEFCs with different anisotropic fiber directions of the GDL. Journal of Power Sources, 2011, 196, 2584-2594.	7.8	49
6	Effect of cathode separator structure on performance characteristics of free-breathing PEMFCs. Journal of Power Sources, 2006, 162, 58-65.	7.8	41
7	Impact of micro-porous layer on liquid water distribution at the catalyst layer interface and cell performance in a polymer electrolyte membrane fuel cell. Journal of Power Sources, 2015, 287, 422-430.	7.8	41
8	Large scale simulation of liquid water transport in a gas diffusion layer of polymer electrolyte membrane fuel cells using the lattice Boltzmann method. Journal of Power Sources, 2017, 361, 133-143.	7.8	40
9	Effects of Cathode Catalyst Layer Structure and Properties Dominating Polymer Electrolyte Fuel Cell Performance. Journal of the Electrochemical Society, 2011, 158, B1246.	2.9	38
10	Ice Formation Processes in PEM Fuel Cell Catalyst Layers during Cold Startup Analyzed by Cryo-SEM. Journal of the Electrochemical Society, 2016, 163, F1139-F1145.	2.9	36
11	Two phase flow simulation in a channel of a polymer electrolyte membrane fuel cell using the lattice Boltzmann method. Journal of Power Sources, 2012, 199, 85-93.	7.8	34
12	Water Transport and PEFC Performance with Different Interface Structure between Micro-Porous Layer and Catalyst Layer. Journal of the Electrochemical Society, 2016, 163, F359-F366.	2.9	33
13	Performance characteristics and internal phenomena of polymer electrolyte membrane fuel cell with porous flow field. Journal of Power Sources, 2013, 238, 21-28.	7.8	31
14	Improving gas diffusivity with bi-porous flow-field in polymer electrolyte membrane fuel cells. International Journal of Hydrogen Energy, 2016, 41, 13180-13189.	7.1	27
15	Gas Channel Optimisation for PEM Fuel Cell using the Lattice Boltzmann Method. Energy Procedia, 2012, 28, 125-133.	1.8	24
16	Observation of water transport in the micro-porous layer of a polymer electrolyte fuel cell with a freezing method and cryo-scanning electron microscope. Electrochemistry Communications, 2014, 41, 72-75.	4.7	24
17	Basic evaluation of separator type specific phenomena of polymer electrolyte membrane fuel cell by the measurement of water condensation characteristics and current density distribution. Journal of Power Sources, 2009, 193, 416-424.	7.8	22
18	Analysis of Water Transport inside Hydrophilic Carbon Fiber Micro-Porous Layers with High-Performance Operation in PEFC. Journal of the Electrochemical Society, 2018, 165, F484-F491.	2.9	20

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19	Analysis of Ice Formation Process in Cathode Catalyst Layer of PEFC at Cold Start. Energy Procedia, 2012, 28, 20-27.	1.8	19
20	Analysis of NO Formation Characteristics and Control Concepts in Diesel Engines from NO Reaction-Kinetic Considerations. , 1995, , .		17
21	Analysis of Water Transport in Anisotropic Gas Diffusion Layers for Improved Flooding Performance of PEFC. Journal of the Electrochemical Society, 2019, 166, F627-F636.	2.9	9
22	A Method for Analyzing Heterogeneity Degree in Diffusion Process.. 880-02 Nihon Kikai Gakkai RonbunshÅ« Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2001, 67, 1563-1570.	0.2	8
23	Microscopic Observation of Freezing Phenomena in PEM Fuel Cell at Cold Start. ECS Transactions, 2009, 25, 773-779.	0.5	6
24	Entropy Analysis of Microscopic Diffusion Phenomena in Diesel Sprays.. JSME International Journal Series B, 2003, 46, 109-116.	0.3	5
25	Study on Gas Diffusion Layer Structure Tolerant to Flooding in PEFC by Scale Model Experiment and LBM Simulation. ECS Transactions, 2017, 80, 123-131.	0.5	5
26	Significant NOx Formation at the Tip of Diesel Spray Flames and Its Reduction by Enhanced Mixing in the Tip Region. , 2003, , .		4
27	Microscopic Observations of Freezing Phenomena in PEM Fuel Cells at Cold Starts. Heat Transfer Engineering, 2013, 34, 258-265.	1.9	4
28	Scale model experiments for evaluation of liquid water transport in the gas diffusion layer of PEFCs. Journal of Thermal Science and Technology, 2018, 13, JTST0025-JTST0025.	1.1	4
29	A Study on the Reduction of NO_x of Diesel Engine by the Use of an Auxiliary Injection Method. Bulletin of the JSME, 1981, 24, 571-577.	0.1	3
30	Study on Predicting Combustion and NOx Formation in Diesel Engines from Scale Model Experiments.. JSME International Journal Series B, 2000, 43, 89-96.	0.3	3
31	Ice Formation from a Supercooled State and Water Transport through Ionomers during PEFC Cold Startup. Journal of the Electrochemical Society, 2021, 168, 064502.	2.9	3
32	Theory on Combustion Similarity for Different-Sized Diesel Engines. The JSME International Journal, Series 2: Fluids Engineering, Heat Transfer, Power, Combustionrmophysical Properties, 1990, 33, 395-400.	0.1	2
33	NOx Reduction in Diesel Combustion by Enhanced Mixing of Spray Tip Region. JSME International Journal Series B, 2005, 48, 665-670.	0.3	2
34	Characteristic of Significant NOx Formation in the Tip Region of Unsteady Jet Diffusion Flames and Its Reduction Concept.. 880-02 Nihon Kikai Gakkai RonbunshÅ« Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2003, 69, 213-220.	0.2	1
35	Entropy Method for Analyzing Heterogeneity Degree in Diffusion Process (Basic Concept and) Tj ETQq1 1 0.784314 rgBT /Overlock 1		1
36	Cost and CO₂ reduction effect of distributed CHPs cooperatively networked by grids. Transactions of the JSME (in Japanese), 2016, 82, 15-00442-15-00442.	0.2	1

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37	Effects of active species transport on current density distribution and performance in redox flow battery. Transactions of the JSME (in Japanese), 2017, 83, 16-00458-16-00458.	0.2	1
38	Analysis of effective measures for power fluctuation mitigation of geographically distributed wind and solar power. Mechanical Engineering Journal, 2022, , .	0.4	1
39	Scenarios of increasing markets for future car types and the environmental effect based on vehicle performance and economic aspects. Review of Automotive Engineering, 2000, 21, 414-416.	0.2	0
40	Evaluation of Cogeneration on Carbon Dioxide Reduction and Economy(Comparison for Building) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 Society of Mechanical Engineers Series B B-hen, 2005, 71, 1671-1677.	0.2	0
41	Effect of Cathode Separator Structures on Performance Characteristics of Free-breathing PEMFCs. 880-02 Nihon Kikai Gakkai RonbunshÅ« Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2005, 71, 2808-2815.	0.2	0
42	Study on Microsocopic Diffusion Structure in Diesel Flame Affecting on NOx Emissions and Their Reduction Method. 880-02 Nihon Kikai Gakkai RonbunshÅ« Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2006, 72, 1037-1043.	0.2	0
43	Mapping Method to Evaluate CO2 Reduction and Economy of Cogeneration Systems. 880-02 Nihon Kikai Gakkai RonbunshÅ« Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2006, 72, 469-476.	0.2	0
44	Liquid Water and Gas Flow Simulation in a Channel of PEM Fuel Cells Using the Lattice Boltzmann Method. , 2010, , .		0
45	Publisher's Note: Effects of Cathode Catalyst Layer Structure and Properties Dominating Polymer Electrolyte Fuel Cell Performance [J. Electrochem. Soc., 158, B1246 (2011)]. Journal of the Electrochemical Society, 2011, 158, S27.	2.9	0
46	Effect of Temperature on Cold Start Characteristics of PEFC and the Freezing Mechanism. 880-02 Nihon Kikai Gakkai RonbunshÅ« Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2011, 77, 160-167.	0.2	0
47	Numerical Simulation of Condensed Water Behavior in Gas Diffusion Layers of PEFC Using the Lattice Boltzmann Method. , 2013, , .		0
48	Effect of cost reduction in power sources on large-scale penetration of wind and solar power in Hokkaido. , 2017, , .		0
49	Analysis on conditions for directing customer selection of networked CHP system toward optimum for social cost and CO₂ reduction. Transactions of the JSME (in Japanese), 2017, 83, 16-00430-16-00430.	0.2	0
50	F208 THE DESIGN AND PERFORMANCE OF A PEFC AT A TEMPERATURE BELOW FREEZING. The Proceedings of the International Conference on Power Engineering (ICOPE), 2003, 2003.2, _2-469_-_2-474_.	0.0	0
51	MS3-3: High-Speed Diesel Combustion Model for Transient Simulation of After-Treatment Systems(MS:) Tj ETQq1 1 0.784314 rgBT /O Diagnostics and Modeling of Combustion in Internal Combustion Engines, 2008, 2008.7, 695-702.	0.1	0
52	CI2-3 Numerical Simulation of the Effect of Enhanced Combustion Zone Mixing on NOx Reduction by Decreasing Residence-Time-Scales in High Temperature Zones in Diesel Engines(CI: Compression Ignition) Tj ETQq0 0 0 rgBT /Overlock 1 Diagnostics and Modeling of Combustion in Internal Combustion Engines, 2012, 2012.8, 212-217.	0.1	0
53	J056025 Analysis and Experiments of Major Parameters in Catalyst Layer Structure Affecting on PEFC Performance. The Proceedings of Mechanical Engineering Congress Japan, 2012, 2012, _J056025-1-_J056025-3.	0.0	0
54	J061043 Influence of material and structure of PEFC porous channel on thermal and water management. The Proceedings of Mechanical Engineering Congress Japan, 2013, 2013, _J061043-1-_J061043-4.	0.0	0

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55	Pore-scale water transport investigation for polymer electrolyte membrane (PEM) fuel cells. Sustainable Energy Developments, 2015, , 1-35.	0.3	0
56	Monolayer Graphene for proton exchange membrane and catalyst layer in PEM fuel cells. The Proceedings of Conference of Hokkaido Branch, 2016, 2016.54, 107-108.	0.0	0
57	Graphene reinforced Nafion^{Â®} based proton exchange membrane for polymer electrolyte membrane fuel cells. The Proceedings of Mechanical Engineering Congress Japan, 2017, 2017, J0620205.	0.0	0
58	Optimum option of selecting Energy Supply Infrastructures for Power Generation in Zambia. The Proceedings of Conference of Hokkaido Branch, 2018, 2018.56, 432.	0.0	0
59	Study on wettability effect in water transport in gas diffusion layer of PEFC by scale model experiment and LBM simulation. The Proceedings of Conference of Hokkaido Branch, 2018, 2018.56, 114.	0.0	0
60	Large Scale LBM Simulation of Condensed Water Transport in Gas Diffusion Layer and Separator of Polymer Electrolyte Fuel Cell. The Proceedings of Mechanical Engineering Congress Japan, 2018, 2018, J0310102.	0.0	0
61	Study on wettability effect in water transport in gas diffusion layer of PEFC by scale model experiment and LBM simulation. The Proceedings of the Symposium on Micro-Nano Science and Technology, 2018, 2018.9, 31am3PN85.	0.0	0
62	Performance evaluation of redox flow batteries using major parameters summarizing effects of structure and operation conditions. Transactions of the JSME (in Japanese), 2020, 86, 20-00108-20-00108.	0.2	0