Yixi Zhao

List of Publications by Year
in descending order

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Version: 2024-02-01

72 papers	3,569 citations	76326 40 h-index	149698 56 g-index
72 all docs	72 docs citations	72 times ranked	2130 citing authors

#	Article	IF	Citations
1	Plastic Deformation Forming of Metallic Bipolar Plate â€“ Part 2: Implementation and Application. , 2022, , 278-307.		0
2	Fabrication of micro channels for titanium PEMFC bipolar plates by multistage forming process. International Journal of Hydrogen Energy, 2021, 46, 11092-11103.	7.1	51
3	Performance evaluation of commercial-size proton exchange membrane fuel cell stacks considering air flow distribution in the manifold. Energy Conversion and Management, 2020, 203, 112256.	9.2	49
4	Towards mass applications: A review on the challenges and developments in metallic bipolar plates for PEMFC. Progress in Natural Science: Materials International, 2020, 30, 815-824.	4.4	75
5	Investigation of the assembly for high-power proton exchange membrane fuel cell stacks through an efficient equivalent model. Applied Energy, 2020, 277, 115532.	10.1	23
6	Impact of pressure on carbon films by PECVD toward high deposition rates and high stability as metallic bipolar plate for PEMFCs. International Journal of Hydrogen Energy, 2020, 45, 16277-16286.	7.1	40
7	Numerical analysis of air-cooled proton exchange membrane fuel cells with various cathode flow channels. Energy, 2020, 198, 117334.	8.8	61
8	Investigation of the non-uniform distribution of current density in commercial-size proton exchange membrane fuel cells. Journal of Power Sources, 2020, 453, 227836.	7.8	58
9	Flexible Transparent Electrodes Based on Silver Nanowires: Material Synthesis, Fabrication, Performance, and Applications. Advanced Materials Technologies, 2019, 4, 1900413.	5.8	70
10	Mechanical failure and mitigation strategies for the membrane in a proton exchange membrane fuel cell. Renewable and Sustainable Energy Reviews, 2019, 113, 109289.	16.4	93
11	Thin metallic wave-like channel bipolar plates for proton exchange membrane fuel cells: Deformation behavior, formability analysis and process design. Journal of Power Sources, 2019, 444, 227217.	7.8	30
12	A lifetime prediction model for coated metallic bipolar plates in proton exchange membrane fuel cells. Energy Conversion and Management, 2019, 183, 65-72.	9.2	33
13	Amorphous carbon films doped with silver and chromium to achieve ultra-low interfacial electrical resistance and long-term durability in the application of proton exchange membrane fuel cells. Carbon, 2019, 145, 333-344.	10.3	60
14	An integrated model of the water transport in nonuniform compressed gas diffusion layers for PEMFC. International Journal of Hydrogen Energy, 2019, 44, 13777-13785.	7.1	25
15	Carbon-based coatings for metallic bipolar plates used in proton exchange membrane fuel cells. International Journal of Hydrogen Energy, 2019, 44, 6813-6843.	7.1	85
16	In-situ measurement of temperature and humidity distribution in gas channels for commercial-size proton exchange membrane fuel cells. Journal of Power Sources, 2019, 412, 717-724.	7.8	52
17	Niobium doped amorphous carbon film on metallic bipolar plates for PEMFCs: First principle calculation, microstructure and performance. International Journal of Hydrogen Energy, 2019, 44, 3144-3156.	7.1	41
18	Numerical investigation of liquid water dynamics in wave-like gas channels of PEMFCs. International Journal of Energy Research, 2019, 43, 1191-1202.	4.5	28

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19	An investigation on the formability of sheet metals in the micro/meso scale hydroforming process. International Journal of Mechanical Sciences, 2019, 150, 265-276.	6.7	40
20	Experimental and numerical investigation on thin sheet metal roll forming process of micro channels with high aspect ratio. International Journal of Advanced Manufacturing Technology, 2019, 100, 117-129.	3.0	18
21	Formability and flow channel design for thin metallic bipolar plates in PEM fuel cells: Modeling. International Journal of Energy Research, 2019, 43, 2592-2604.	4.5	14
22	Size effect affected springback in micro/meso scale bending process: Experiments and numerical modeling. Journal of Materials Processing Technology, 2018, 252, 407-420.	6.3	51
23	Mechanical degradation of proton exchange membrane along the MEA frame in proton exchange membrane fuel cells. Energy, 2018, 165, 210-222.	8.8	37
24	Electrical resistance and microstructure of typical gas diffusion layers for proton exchange membrane fuel cell under compression. Applied Energy, 2018, 231, 127-137.	10.1	76
25	Impact of Film Thickness on Defects and the Graphitization of Nanothin Carbon Coatings Used for Metallic Bipolar Plates in Proton Exchange Membrane Fuel Cells. ACS Applied Materials & Interfaces, 2018, 10, 34561-34572.	8.0	59
26	Flow channel design for metallic bipolar plates in proton exchange membrane fuel cells: Experiments. Energy Conversion and Management, 2018, 174, 814-823.	9.2	47
27	Contact resistance prediction of proton exchange membrane fuel cell considering fabrication characteristics of metallic bipolar plates. Energy Conversion and Management, 2018, 169, 334-344.	9.2	55
28	Enhanced Corrosion Resistance and Interfacial Conductivity of TiC_x/a-C Nanolayered Coatings via Synergy of Substrate Bias Voltage for Bipolar Plates Applications in PEMFCs. ACS Applied Materials & Interfaces, 2018, 10, 19087-19096.	8.0	51
29	Strategy of alternating bias voltage on corrosion resistance and interfacial conductivity enhancement of TiCx/a-C coatings on metallic bipolar plates in PEMFCs. Energy, 2018, 162, 933-943.	8.8	34
30	Influence of the electric pulse on springback during stretch U-bending of Ti6Al4V titanium alloy sheets. Journal of Materials Processing Technology, 2018, 261, 12-23.	6.3	51
31	Recovery behavior of thermoplastic polymers in micro hot embossing process. Journal of Materials Processing Technology, 2017, 243, 205-216.	6.3	23
32	Structure failure of the sealing in the assembly process for proton exchange membrane fuel cells. International Journal of Hydrogen Energy, 2017, 42, 10217-10227.	7.1	49
33	Characteristics of amorphous carbon films to resist high potential impact in PEMFCs bipolar plates for automotive application. International Journal of Hydrogen Energy, 2017, 42, 14279-14289.	7.1	46
34	Mechanisms of growth, properties and degradation of amorphous carbon films by closed field unbalanced magnetron sputtering on stainless steel bipolar plates for PEMFCs. Applied Surface Science, 2017, 422, 921-931.	6.1	50
35	Continuous Fabrication of Highly Conductive and Transparent Ag Mesh Electrodes for Flexible Electronics. IEEE Nanotechnology Magazine, 2017, 16, 687-694.	2.0	25
36	Flexible silver-mesh electrodes with moth-eye nanostructures for transmittance enhancement by double-sided roll-to-roll nanoimprint lithography. RSC Advances, 2017, 7, 48835-48840.	3.6	37

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37	Contact behavior modelling and its size effect on proton exchange membrane fuel cell. Journal of Power Sources, 2017, 365, 190-200.	7.8	29
38	Recent Progress on the Key Materials and Components for Proton Exchange Membrane Fuel Cells in Vehicle Applications. Energies, 2016, 9, 603.	3.1	64
39	Roll-to-roll hot embossing system with shape preserving mechanism for the large-area fabrication of microstructures. Review of Scientific Instruments, 2016, 87, 105120.	1.3	16
40	Analysis of the flow distribution for thin stamped bipolar plates with tapered channel shape. International Journal of Hydrogen Energy, 2016, 41, 5084-5095.	7.1	41
41	Continuous Fabrication of Multiscale Compound Eyes Arrays With Antireflection and Hydrophobic Properties. IEEE Nanotechnology Magazine, 2016, 15, 971-976.	2.0	24
42	Multilayered TiAlN films on Ti6Al4V alloy for biomedical applications by closed field unbalanced magnetron sputter ion plating process. Materials Science and Engineering C, 2016, 59, 669-676.	7.3	49
43	Multilayered Zrâ€“C/a-C film on stainless steel 316L as bipolar plates for proton exchange membrane fuel cells. Journal of Power Sources, 2016, 314, 58-65.	7.8	76
44	Influence of Cr-C film composition on electrical and corrosion properties of 316L stainless steel asÂbipolar plates for PEMFCs. International Journal of Hydrogen Energy, 2016, 41, 1142-1150.	7.1	92
45	Assembly design of proton exchange membrane fuel cell stack with stamped metallic bipolar plates. International Journal of Hydrogen Energy, 2015, 40, 11559-11568.	7.1	44
46	Mechanism of forming defects in roll-to-roll hot embossing of micro-pyramid arrays I: experiments. Journal of Micromechanics and Microengineering, 2015, 25, 105017.	2.6	10
47	Analysis of Micro/Mesoscale Sheet Forming Process by Strain Gradient Plasticity and Its Characterization of Tool Feature Size Effects. Journal of Micro and Nano-Manufacturing, 2015, 3, .	0.7	6
48	Grain and geometry size effects on plastic deformation in roll-to-plate micro/meso-imprinting process. Journal of Materials Processing Technology, 2015, 219, 28-41.	6.3	43
49	Effects of Al incorporation on the interfacial conductivity and corrosion resistance of CrN film on SS316L as bipolar plates for proton exchange membrane fuel cells. International Journal of Hydrogen Energy, 2015, 40, 9790-9802.	7.1	72
50	Fabrication of Moth-Eye Nanostructure Arrays Using Roll-to-Roll UV-Nanoimprint Lithography With an Anodic Aluminum Oxide Mold. IEEE Nanotechnology Magazine, 2015, 14, 1127-1137.	2.0	18
51	Design and manufacturing of stainless steel bipolar plates for proton exchange membrane fuel cells. International Journal of Hydrogen Energy, 2014, 39, 21127-21153.	7.1	133
52	Study on shape error effect of metallic bipolar plate on the GDL contact pressure distribution in proton exchange membrane fuel cell. International Journal of Hydrogen Energy, 2013, 38, 6762-6772.	7.1	48
53	Composition optimization of multilayered chromium-nitrideâ€“carbon film on 316L stainless steel as bipolar plates for proton exchange membrane fuel cells. Journal of Power Sources, 2013, 236, 47-53.	7.8	31
54	Crâ€“Nâ€“C multilayer film on 316L stainless steel as bipolar plates for proton exchange membrane fuel cells using closed field unbalanced magnetron sputter ion plating. International Journal of Hydrogen Energy, 2013, 38, 1535-1543.	7.1	50

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55	Development and characterization of multilayered Crâ€“C/a-C:Cr film on 316L stainless steel as bipolar plates for proton exchange membrane fuel cells. Journal of Power Sources, 2013, 230, 25-31.	7.8	62
56	Electrical-assisted embossing process for fabrication of micro-channels on 316L stainless steel plate. Journal of Materials Processing Technology, 2013, 213, 314-321.	6.3	43
57	Investigation of sintered stainless steel fiber felt as gas diffusion layer in proton exchange membrane fuel cells. International Journal of Hydrogen Energy, 2012, 37, 11334-11344.	7.1	50
58	Experimental study of electrical resistivity and flow stress of stainless steel 316L in electroplastic deformation. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 3539-3544.	5.6	49
59	Optimum design of the slotted-interdigitated channels flow field for proton exchange membrane fuel cells with consideration of the gas diffusion layer intrusion. Renewable Energy, 2011, 36, 1413-1420.	8.9	36
60	Effect of assembly error of bipolar plate on the contact pressure distribution and stress failure of membrane electrode assembly in proton exchange membrane fuel cell. Journal of Power Sources, 2010, 195, 4213-4221.	7.8	36
61	Performance of a proton exchange membrane fuel cell stack using conductive amorphous carbon-coated 304 stainless steel bipolar plates. Journal of Power Sources, 2010, 195, 7061-7066.	7.8	86
62	Study on the mechanical behavior of laser micro-adjustment of two-bridge actuators. Journal of Micromechanics and Microengineering, 2010, 20, 115010.	2.6	12
63	Fabrication of Metallic Bipolar Plates for Proton Exchange Membrane Fuel Cell by Flexible Forming Process-Numerical Simulations and Experiments. Journal of Fuel Cell Science and Technology, 2010, 7, .	0.8	54
64	Optimization design of slotted-interdigitated channel for stamped thin metal bipolar plate in proton exchange membrane fuel cell. Journal of Power Sources, 2009, 187, 407-414.	7.8	21
65	Analysis of micro/mesoscale sheet forming process with uniform size dependent material constitutive model. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2009, 526, 93-99.	5.6	93
66	Analysis and optimization of flow distribution in parallel-channel configurations for proton exchange membrane fuel cells. Journal of Power Sources, 2009, 194, 931-940.	7.8	53
67	Investigation of micro/meso sheet soft punch stamping process â€“ simulation and experiments. Materials & Design, 2009, 30, 783-790.	5.1	110
68	Flow channel shape optimum design for hydroformed metal bipolar plate in PEM fuel cell. Journal of Power Sources, 2008, 178, 223-230.	7.8	76
69	A mechanicalâ€“electrical finite element method model for predicting contact resistance between bipolar plate and gas diffusion layer in PEM fuel cells. Journal of Power Sources, 2008, 182, 153-159.	7.8	96
70	Material behavior modelling in micro/meso-scale forming process with considering size/scale effects. Computational Materials Science, 2008, 43, 1003-1009.	3.0	159
71	Robust design of assembly parameters on membrane electrode assembly pressure distribution. Journal of Power Sources, 2007, 172, 760-767.	7.8	34
72	Transition surface design for blank holder in multi-point forming. International Journal of Machine Tools and Manufacture, 2006, 46, 1336-1342.	13.4	16