

# Hiroyuki Shimada

## List of Publications by Year in Descending Order

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**Version:** 2024-04-27

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

50  
papers

496  
citations

12  
h-index

20  
g-index

59  
ext. papers

688  
ext. citations

3.6  
avg, IF

4.17  
L-index

#	Paper	IF	Citations
50	Lanthanum-doped ceria interlayer between electrolyte and cathode for solid oxide fuel cells. <i>Journal of Asian Ceramic Societies</i> , <b>2021</b> , 9, 609-616	2.4	1
49	Comparison of electrochemical impedance spectra for electrolyte-supported solid oxide fuel cells (SOFCs) and protonic ceramic fuel cells (PCFCs). <i>Scientific Reports</i> , <b>2021</b> , 11, 10622	4.9	5
48	Enhanced La <sub>0.6</sub> Sr <sub>0.4</sub> Co <sub>0.2</sub> Fe <sub>0.8</sub> O <sub>3</sub> -based cathode performance by modification of BaZr <sub>0.1</sub> Ce <sub>0.7</sub> Y <sub>0.1</sub> Yb <sub>0.1</sub> O <sub>3</sub> -electrolyte surface in protonic ceramic fuel cells. <i>Ceramics International</i> , <b>2021</b> , 47, 16358-16362	5.1	9
47	Nanoengineering of cathode layers for solid oxide fuel cells to achieve superior power densities. <i>Nature Communications</i> , <b>2021</b> , 12, 3979	17.4	4
46	High-performance Gd <sub>0.5</sub> Sr <sub>0.5</sub> CoO <sub>3</sub> and Ce <sub>0.8</sub> Gd <sub>0.2</sub> O <sub>1.9</sub> nanocomposite cathode for achieving high power density in solid oxide fuel cells. <i>Electrochimica Acta</i> , <b>2021</b> , 368, 137679	6.7	3
45	Effect of pinholes in electrolyte on re-oxidation tolerance of anode-supported solid oxide fuel cells. <i>Fuel Cells</i> , <b>2021</b> , 21, 398-407	2.9	1
44	Highly active and durable La <sub>0.4</sub> Sr <sub>0.6</sub> MnO <sub>3</sub> and Ce <sub>0.8</sub> Gd <sub>0.2</sub> O <sub>1.9</sub> nanocomposite electrode for high-temperature reversible solid oxide electrochemical cells. <i>Ceramics International</i> , <b>2020</b> , 46, 19617-19623	5.1	12
43	Degradation evaluation by distribution of relaxation times analysis for microtubular solid oxide fuel cells. <i>Electrochimica Acta</i> , <b>2020</b> , 339, 135913	6.7	42
42	Performance Comparison of Perovskite Composite Cathodes with BaZr <sub>0.1</sub> Ce <sub>0.7</sub> Y <sub>0.1</sub> Yb <sub>0.1</sub> O <sub>3</sub> in Anode-Supported Protonic Ceramic Fuel Cells. <i>Journal of the Electrochemical Society</i> , <b>2020</b> , 167, 124506	3.9	10
41	La <sub>0.65</sub> Ca <sub>0.35</sub> FeO <sub>3</sub> -based a novel Sr- and Co-free cathode material for solid oxide fuel cells. <i>Journal of Power Sources</i> , <b>2020</b> , 448, 227426	8.9	13
40	Low-temperature fabrication of (Ba,Sr)(Co,Fe)O <sub>3</sub> cathode by the reactive sintering method. <i>Journal of the Ceramic Society of Japan</i> , <b>2019</b> , 127, 485-490	1	2
39	Near room temperature synthesis of perovskite oxides. <i>Ceramics International</i> , <b>2019</b> , 45, 24936-24940	5.1	3
38	Nanocomposite electrodes for high current density over 3 A cm in solid oxide electrolysis cells. <i>Nature Communications</i> , <b>2019</b> , 10, 5432	17.4	22
37	Development of Portable Solid Oxide Fuel Cell System Driven by Hydrocarbon and Alcohol Fuels. <i>Ceramic Engineering and Science Proceedings</i> , <b>2019</b> , 159-163	0.1	
36	A Key for Achieving Higher Open-Circuit Voltage in Protonic Ceramic Fuel Cells: Lowering Interfacial Electrode Polarization. <i>ACS Applied Energy Materials</i> , <b>2019</b> , 2, 587-597	6.1	8
35	Effect of Ni diffusion into BaZr <sub>0.1</sub> Ce <sub>0.7</sub> Y <sub>0.1</sub> Yb <sub>0.1</sub> O <sub>3</sub> -electrolyte during high temperature co-sintering in anode-supported solid oxide fuel cells. <i>Ceramics International</i> , <b>2018</b> , 44, 3134-3140	5.1	29
34	Effect of Anode Thickness on Polarization Resistance for Metal-Supported Microtubular Solid Oxide Fuel Cells. <i>Journal of the Electrochemical Society</i> , <b>2017</b> , 164, F243-F247	3.9	10

33	Direct Butane Utilization on Ni-(Y <sub>2</sub> O <sub>3</sub> ) <sub>0.08</sub> (ZrO <sub>2</sub> ) <sub>0.92</sub> -(Ce <sub>0.9</sub> Gd <sub>0.1</sub> )O <sub>1.95</sub> Composite Anode-Supported Microtubular Solid Oxide Fuel Cells. <i>Electrocatalysis</i> , <b>2017</b> , 8, 288-293	2.7	8
32	Extremely fine structured cathode for solid oxide fuel cells using Sr-doped LaMnO <sub>3</sub> and Y <sub>2</sub> O <sub>3</sub> -stabilized ZrO <sub>2</sub> nano-composite powder synthesized by spray pyrolysis. <i>Journal of Power Sources</i> , <b>2017</b> , 341, 280-284	8.9	25
31	Development of a Portable SOFC System with Internal Partial Oxidation Reforming of Butane and Steam Reforming of Ethanol. <i>ECS Transactions</i> , <b>2017</b> , 80, 71-77	1	5
30	Reactive-sintering of Ba <sub>0.5</sub> Sr <sub>0.5</sub> Co <sub>0.8</sub> Fe <sub>0.2</sub> O <sub>3-δ</sub> using alkaline earth peroxides for low-temperature synthesis. <i>Journal of the Ceramic Society of Japan</i> , <b>2017</b> , 125, 681-685	1	1
29	Improved transport property of proton-conducting solid oxide fuel cell with multi-layered electrolyte structure. <i>Journal of Power Sources</i> , <b>2017</b> , 364, 458-464	8.9	14
28	Distribution of Relaxation Times Analysis for Optimization of Anode Thickness in Metal-Supported Microtubular Solid Oxide Fuel Cells. <i>ECS Transactions</i> , <b>2017</b> , 78, 2151-2157	1	2
27	Internal Partial Oxidation Reforming of Butane and Steam Reforming of Ethanol for Anode-supported Microtubular Solid Oxide Fuel Cells. <i>Fuel Cells</i> , <b>2017</b> , 17, 875-881	2.9	11
26	Metal-supported microtubular solid oxide fuel cells with ceria-based electrolytes. <i>Journal of the Ceramic Society of Japan</i> , <b>2017</b> , 125, 208-212	1	4
25	Additive effect of NiO on electrochemical properties of mixed ion conductor BaZr <sub>0.1</sub> Ce <sub>0.7</sub> Y <sub>0.1</sub> Yb <sub>0.1</sub> O <sub>3-δ</sub> . <i>Journal of the Ceramic Society of Japan</i> , <b>2017</b> , 125, 257-261	1	7
24	Estimation of micro-size defects in electrolyte thin-film by X-ray stress measurement for anode-supported solid oxide fuel cells. <i>Mechanical Engineering Journal</i> , <b>2016</b> , 3, 16-00177-16-00177	0.5	2
23	High steam utilization operation with high current density in solid oxide electrolysis cells. <i>Journal of the Ceramic Society of Japan</i> , <b>2016</b> , 124, 213-217	1	4
22	Development of anode-supported electrochemical cell based on proton-conductive Ba(Ce,Zr)O <sub>3</sub> electrolyte. <i>Solid State Ionics</i> , <b>2016</b> , 288, 347-350	3.3	12
21	High power density cell using nanostructured Sr-doped SmCoO <sub>3</sub> and Sm-doped CeO <sub>2</sub> composite powder synthesized by spray pyrolysis. <i>Journal of Power Sources</i> , <b>2016</b> , 302, 308-314	8.9	33
20	Challenge for lowering concentration polarization in solid oxide fuel cells. <i>Journal of Power Sources</i> , <b>2016</b> , 302, 53-60	8.9	49
19	Effect of starting solution concentration in spray pyrolysis on powder properties and electrochemical electrode performance. <i>Advanced Powder Technology</i> , <b>2016</b> , 27, 1438-1445	4.6	6
18	Development of Micro Power Generator Using LPG-Fueled Microtubular Solid Oxide Fuel Cells. <i>ECS Transactions</i> , <b>2015</b> , 68, 201-208	1	2
17	Development of Ceria-Based Microtubular Solid Oxide Fuel Cells. <i>ECS Transactions</i> , <b>2015</b> , 69, 61-67	1	1
16	Development of Electrochemical Methanation Reactor with Co-Electrolysis of Humidified CO <sub>2</sub> . <i>ECS Transactions</i> , <b>2015</b> , 68, 3459-3463	1	2

15	Equivalent Circuit Model Analysis of Microstructure-Controlled LSM/ScSZ Composite Cathodes by Powder Slurry Impregnation Method. <i>Journal of the Electrochemical Society</i> , <b>2015</b> , 162, F40-F53	3.9	9
14	Direct hydrocarbon utilization in microtubular solid oxide fuel cells. <i>Journal of the Ceramic Society of Japan</i> , <b>2015</b> , 123, 213-216	1	7
13	Development Of Microtubular Solid Oxide Fuel Cells Using Hydrocarbon Fuels. <i>Ceramic Engineering and Science Proceedings</i> , <b>2015</b> , 93-104	0.1	2
12	Effects of anode microstructures on durability of microtubular solid oxide fuel cells during internal steam reforming of methane. <i>Electrochemistry Communications</i> , <b>2014</b> , 49, 34-37	5.1	10
11	Evaluation of micro flat-tube solid-oxide fuel cell modules using simple gas heating apparatus. <i>Journal of Power Sources</i> , <b>2014</b> , 272, 730-734	8.9	6
10	Reduction in ohmic contact resistance at interface between Gd-doped CeO <sub>2</sub> interlayer and Sc <sub>2</sub> O <sub>3</sub> -stabilized ZrO <sub>2</sub> electrolyte in SOFCs to improve performance. <i>Solid State Ionics</i> , <b>2014</b> , 258, 38-44	3.3	10
9	Improved Effect of Anode-Additive PrBaInOx and Gd-doped BaCeO <sub>3</sub> on the Electrochemical Performance of Solid Oxide Fuel Cells. <i>ECS Transactions</i> , <b>2014</b> , 58, 35-49	1	
8	Proton-Conducting Solid Oxide Fuel Cells with Yttrium-Doped Barium Zirconate for Direct Methane Operation. <i>Journal of the Electrochemical Society</i> , <b>2013</b> , 160, F597-F607	3.9	27
7	Conductivity of New Electrolyte Material Pr <sub>1-x</sub> M <sub>1+x</sub> InO <sub>4</sub> (M=Ba,Sr) with Related Perovskite Structure for Solid Oxide Fuel Cells. <i>ECS Transactions</i> , <b>2013</b> , 50, 3-14	1	5
6	Power Generation Characteristics of Pulse Jet Rechargeable Direct Carbon Fuel Cells at Different Isooctane Fuel Supply Frequency. <i>ECS Transactions</i> , <b>2012</b> , 41, 57-67	1	2
5	Electrochemical Behaviors of Nickel/Yttria-Stabilized Zirconia Anodes with Distribution Controlled Yttrium-Doped Barium Zirconate by Ink-jet Technique. <i>Journal of the Electrochemical Society</i> , <b>2012</b> , 159, F360-F367	3.9	14
4	Effect of Yttrium-Doped Barium Zirconate on Reactions in Electrochemically Active Zone of Nickel/Yttria-Stabilized Zirconia Anodes. <i>Journal of the Electrochemical Society</i> , <b>2011</b> , 158, B1341	3.9	19
3	Highly dispersed anodes for solid oxide fuel cells using NiO/YSZ/BZY triple-phase composite powders prepared by spray pyrolysis. <i>Solid State Ionics</i> , <b>2011</b> , 193, 43-51	3.3	20
2	Microstructure Control Using Impregnation of LSM in a Thin Porous Electrolyte Layer. <i>ECS Transactions</i> , <b>2007</b> , 7, 1119-1128	1	
1	Evaluation of the Long Term Stability of LSM/ScSZ Composite Powder Materials for SOFC Cathodes. <i>Ceramic Transactions</i> , 317-323	0.1	