

Gyeong Man Choi

List of Publications by Year in descending order

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91
papers

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172457

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docs citations

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times ranked

3417
citing authors

#	ARTICLE	IF	CITATIONS
1	Processing thin but robust electrolytes for solid-state batteries. <i>Nature Energy</i> , 2021, 6, 227-239.	39.5	328
2	Solid-State Li-Metal Batteries: Challenges and Horizons of Oxide and Sulfide Solid Electrolytes and Their Interfaces. <i>Advanced Energy Materials</i> , 2021, 11, .	19.5	312
3	The CO and H ₂ gas selectivity of CuO-doped SnO ₂ -ZnO composite gas sensor. <i>Sensors and Actuators B: Chemical</i> , 2002, 87, 464-470.	7.8	132
4	Defect Structure and Electrical Properties of Single-Crystal Ba _{0.03} Sr _{0.97} TiO ₃ . <i>Journal of the American Ceramic Society</i> , 1988, 71, 201-205.	3.8	130
5	Lattice strain-enhanced exsolution of nanoparticles in thin films. <i>Nature Communications</i> , 2019, 10, 1471.	12.8	114
6	All ceramic cathode composite design and manufacturing towards low interfacial resistance for garnet-based solid-state lithium batteries. <i>Energy and Environmental Science</i> , 2020, 13, 4930-4945.	30.8	108
7	Oxygen permeation of BSCF membrane with varying thickness and surface coating. <i>Journal of Membrane Science</i> , 2010, 346, 353-360.	8.2	96
8	Facet-Dependent <i>in Situ</i> Growth of Nanoparticles in Epitaxial Thin Films: The Role of Interfacial Energy. <i>Journal of the American Chemical Society</i> , 2019, 141, 7509-7517.	13.7	89
9	Title is missing!. , 1999, 3, 361-369.		84
10	Stability of LSCF electrode with GDC interlayer in YSZ-based solid oxide electrolysis cell. <i>Solid State Ionics</i> , 2014, 262, 303-306.	2.7	81
11	Lithium-film ceramics for solid-state lithionic devices. <i>Nature Reviews Materials</i> , 2021, 6, 313-331.	48.7	80
12	Performance of La-doped strontium titanate (LST) anode on LaGaO ₃ -based SOFC. <i>Solid State Ionics</i> , 2009, 180, 867-871.	2.7	78
13	Switchable Photovoltaic Effects in Hexagonal Manganite Thin Films Having Narrow Band Gaps. <i>Chemistry of Materials</i> , 2015, 27, 7425-7432.	6.7	67
14	Effect of milling methods on performance of Ni-Y ₂ O ₃ -stabilized ZrO ₂ anode for solid oxide fuel cell. <i>Journal of Power Sources</i> , 2008, 176, 96-101.	7.8	64
15	Mixed ionic and electronic conductivity of [(ZrO ₂) _{0.92} (Y ₂ O ₃) _{0.08}] _{1-x} Y _x (MnO _{1.5}) _y . <i>Solid State Ionics</i> , 2000, 130, 157-168.	2.7	52
16	Selective CO Gas Detection of Zn ₂ SnO ₄ Gas Sensor. , 2002, 8, 249-255.		52
17	Composition Dependence of the Electrical Conductivity of ZnO-CuO Ceramic Composite. <i>Journal of the American Ceramic Society</i> , 1998, 81, 695-699.	3.8	51
18	Ex-solution of Ni nanoparticles in a La _{0.2} Sr _{0.8} Ti _{1-x} Ni _x O ₃ alternative anode for solid oxide fuel cell. <i>Solid State Ionics</i> , 2014, 262, 345-348.	2.7	47

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19	Humidity Response Characteristics of Barium Titanate. <i>Journal of the American Ceramic Society</i> , 1993, 76, 766-768.	3.8	46
20	Electrical conductivity of CeO ₂ -doped YSZ. <i>Solid State Ionics</i> , 2000, 135, 653-661.	2.7	44
21	Lithium-Battery Anode Gains Additional Functionality for Neuromorphic Computing through Metal-Insulator Phase Separation. <i>Advanced Materials</i> , 2020, 32, e1907465.	21.0	43
22	La _{0.6} Sr _{0.4} Cr _{0.8} Co _{0.2} O ₃ Perovskite Decorated with Exsolved Co Nanoparticles for Stable CO ₂ Splitting and Syngas Production. <i>ACS Applied Energy Materials</i> , 2020, 3, 4569-4579.	5.1	41
23	Polarization and stability of La ₂ NiO ₄ + δ in comparison with La _{0.6} Sr _{0.4} Co _{0.2} Fe _{0.8} O ₃ + δ as air electrode of solid oxide electrolysis cell. <i>International Journal of Hydrogen Energy</i> , 2016, 41, 14498-14506.	7.1	40
24	The effect of alumina and Cu addition on the electrical properties and the SOFC performance of Gd-doped CeO ₂ electrolyte. <i>Solid State Ionics</i> , 2009, 180, 886-890.	2.7	38
25	Low-temperature fabrication of protonic ceramic fuel cells with BaZr _{0.8} Y _{0.2} O ₃ + δ electrolytes coated by aerosol deposition method. <i>International Journal of Hydrogen Energy</i> , 2015, 40, 2775-2784.	7.1	38
26	Mixed Ionic and Electronic Conduction in YSZ-NiO Composite. <i>Journal of the Electrochemical Society</i> , 1999, 146, 883-889.	2.9	37
27	Selective Gas Detection of SnO ₂ -TiO ₂ Gas Sensors. <i>Journal of Electroceramics</i> , 2004, 13, 707-713.	2.0	37
28	Stainless steel-supported solid oxide fuel cell with La _{0.2} Sr _{0.8} Ti _{0.9} Ni _{0.1} O ₃ + δ /yttria-stabilized zirconia composite anode. <i>Journal of Power Sources</i> , 2016, 324, 288-293.	7.8	36
29	Micro solid oxide fuel cell fabricated on porous stainless steel: a new strategy for enhanced thermal cycling ability. <i>Scientific Reports</i> , 2016, 6, 22443.	3.3	35
30	Phase characterization and electrical conductivity of LaSr(GaMg) _{1-x} MnxO ₃ system. <i>Solid State Ionics</i> , 2002, 148, 557-565.	2.7	31
31	Oxygen permeability of gadolinium-doped ceria at high temperature. <i>Journal of the European Ceramic Society</i> , 2004, 24, 1313-1317.	5.7	30
32	A novel solid oxide electrolysis cell (SOEC) to separate anodic from cathodic polarization under high electrolysis current. <i>International Journal of Hydrogen Energy</i> , 2015, 40, 9032-9038.	7.1	29
33	High-throughput roll-to-roll fabrication of flexible thermochromic coatings for smart windows with VO ₂ nanoparticles. <i>Journal of Materials Chemistry C</i> , 2018, 6, 3451-3458.	5.5	29
34	Fabrication and characterization of Ni-supported solid oxide fuel cell. <i>Solid State Ionics</i> , 2009, 180, 792-795.	2.7	28
35	Effect of anode firing on the performance of lanthanum and nickel co-doped SrTiO ₃ (La _{0.2} Sr _{0.8} Ti _{0.9} Ni _{0.1} O ₃ + δ) anode of solid oxide fuel cell. <i>Journal of Power Sources</i> , 2015, 293, 684-691.	7.8	28
36	Electrical Conduction in Aluminum Nitride. <i>Journal of the American Ceramic Society</i> , 1993, 76, 957-960.	3.8	27

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37	Thick-film electrolyte (thickness <math>< 20\frac{1}{4}\mu\text{m}</math>)-supported solid oxide fuel cells. Journal of Power Sources, 2008, 180, 195-198.	7.8	27
38	Electrical conductivity of Gd-doped ceria film fabricated by aerosol deposition method. Solid State Ionics, 2013, 236, 16-21.	2.7	27
39	Toward Controlling Filament Size and Location for Resistive Switches via Nanoparticle Exsolution at Oxide Interfaces. Small, 2020, 16, e2003224.	10.0	27
40	The effect of cation nonstoichiometry on the electrical conductivity of CaZrO ₃ . Journal of the European Ceramic Society, 2005, 25, 2609-2612.	5.7	26
41	The effect of alumina addition on the electrical conductivity of Gd-doped ceria. Journal of Electroceramics, 2006, 17, 793-798.	2.0	25
42	Effect of electrolyte thickness on the performance of anode-supported ceria cells. Solid State Ionics, 2010, 181, 1702-1706.	2.7	25
43	Flexible solid oxide fuel cells supported on thin and porous metal. International Journal of Hydrogen Energy, 2016, 41, 9577-9584.	7.1	25
44	Cathodic properties of La _{0.9} Sr _{0.1} MnO ₃ electrode for fuel cells based on LaGaO ₃ solid electrolyte. Journal of the European Ceramic Society, 2004, 24, 1359-1363.	5.7	24
45	Micro-solid oxide fuel cell using thick-film ceria. Solid State Ionics, 2009, 180, 839-842.	2.7	24
46	An Investigation of Chemo-Mechanical Phenomena and Li Metal Penetration in All-Solid-State Lithium Metal Batteries Using In Situ Optical Curvature Measurements. Advanced Energy Materials, 2022, 12, .	19.5	24
47	Effect of Ce _{0.43} Zr _{0.43} Gd _{0.1} Y _{0.04} O _{2-δ} contact layer on stability of interface between GDC interlayer and YSZ electrolyte in solid oxide electrolysis cell. Journal of Power Sources, 2015, 284, 617-622.	7.8	23
48	Partial electronic conductivity of Sr and Mg doped LaGaO ₃ . Solid State Ionics, 2002, 154-155, 481-486.	2.7	22
49	The effect of cation nonstoichiometry on the electrical conductivity of acceptor-doped CaZrO ₃ . Solid State Ionics, 2006, 177, 3099-3103.	2.7	22
50	Novel modification of anode microstructure for proton-conducting solid oxide fuel cells with BaZr _{0.8} Y _{0.2} O _{3-δ} electrolytes. Journal of Power Sources, 2015, 285, 431-438.	7.8	22
51	Electrical conductivity of scandia-stabilized zirconia thin film. Solid State Ionics, 2008, 179, 1209-1213.	2.7	20
52	Electrochemical performance and stability of La _{0.2} Sr _{0.8} Ti _{0.9} Ni _{0.1} O _{3-δ} and La _{0.2} Sr _{0.8} Ti _{0.9} Ni _{0.1} O _{3-δ} -Gd _{0.2} Ce _{0.8} O _{2-δ} anode with anode interlayer in H ₂ and CH ₄ . Electrochimica Acta, 2015, 182, 39-46.	5.2	19
53	Er _{0.4} Bi _{1.6} O _{3-δ} / La _{0.8} Sr _{0.2} MnO _{3-δ} nano-composite as a low-temperature firing cathode of solid oxide fuel cell. Journal of Power Sources, 2017, 344, 218-222.	7.8	19
54	Thermal cycling and electrochemical characteristics of solid oxide fuel cell supported on stainless steel with a new 3-phase composite anode. Journal of Power Sources, 2017, 354, 74-84.	7.8	17

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55	Effect of Ni doping on the phase stability and conductivity of scandia-stabilized zirconia. Solid State Ionics, 2009, 180, 252-256.	2.7	16
56	Enhanced power density of metal-supported solid oxide fuel cell with a two-step firing process. Solid State Ionics, 2011, 192, 519-522.	2.7	16
57	GdBaCo ₂ O _{5+x} cathode for anode-supported ceria SOFCs. Solid State Ionics, 2011, 192, 527-530.	2.7	16
58	Non-Ohmic Current-Voltage and Impedance Characteristics of Electroadsorptive Zn ₂ SnO ₄ . Journal of the Electrochemical Society, 2001, 148, G307.	2.9	15
59	Micro-solid oxide fuel cell supported on a porous metallic Ni/stainless-steel bi-layer. Journal of Power Sources, 2014, 249, 79-83.	7.8	15
60	Effects of Fabrication Conditions on the Crystallinity, Barium Deficiency, and Conductivity of BaZr _{0.8} Y _{0.2} O ₃ Films Grown by Pulsed Laser Deposition. Fuel Cells, 2015, 15, 408-415.	2.4	14
61	The effect of mixed conductivity on the cathodic overpotential of LaGaO ₃ -based fuel cell. Solid State Ionics, 2004, 175, 145-149.	2.7	13
62	Effect of Gd-doped ceria interlayer on the stability of solid oxide electrolysis cell. Solid State Ionics, 2016, 295, 25-31.	2.7	13
63	Y _{0.08} Sr _{0.88} TiO ₃ –CeO ₂ composite as a diffusion barrier layer for stainless-steel supported solid oxide fuel cell. Journal of Power Sources, 2016, 307, 385-390.	7.8	13
64	The effects of LSM coating on 444 stainless steel as SOFC interconnect. Journal of Electroceramics, 2009, 22, 67-72.	2.0	12
65	Electrical conductivity of Gd-doped ceria film at low temperatures (300–500 Å°C). Solid State Ionics, 2014, 262, 411-415.	2.7	12
66	High energy and long cycles. Nature Energy, 2020, 5, 278-279.	39.5	12
67	Oxygen permeation in Sr- and Mg-doped LaAlO ₃ and Gd-doped CeO ₂ at high temperature. Solid State Ionics, 2004, 175, 399-403.	2.7	11
68	Oxygen permeation characteristics of zirconia with surface modification. Solid State Ionics, 2006, 177, 2261-2267.	2.7	11
69	Electrochemical Deoxidation of Molten Steel with Application of an Oxygen Permeable Membrane. ISIJ International, 2007, 47, 689-698.	1.4	11
70	Effects of Dopants on the Complex Impedance and Dielectric Properties of Aluminum Nitride. Journal of the American Ceramic Society, 1992, 75, 3145-3148.	3.8	10
71	Impedance spectroscopy of acceptor-doped CaZrO ₃ with cation nonstoichiometry. Journal of Electroceramics, 2006, 17, 1091-1095.	2.0	8
72	Effects of anode firing temperature on the performance of the lanthanum-gallate thick-film-supported SOFC. Solid State Ionics, 2011, 192, 523-526.	2.7	8

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73	Solid State Batteries: Solidâ€State Liâ€Metal Batteries: Challenges and Horizons of Oxide and Sulfide Solid Electrolytes and Their Interfaces (Adv. Energy Mater. 1/2021). Advanced Energy Materials, 2021, 11, 2170002.	19.5	8
74	Cathodic overpotential of La _{0.6} Sr _{0.4} CoO ₃ and its composite cathodes LSCâ€LSGM on LaGaO ₃ -based fuel cell. Journal of the European Ceramic Society, 2007, 27, 4211-4214.	5.7	7
75	Oxidation of porous stainless-steel coated with donor-doped SrTiO ₃ in anodic atmosphere of solid oxide fuel cell. Journal of Power Sources, 2017, 360, 488-494.	7.8	7
76	Phase stability and oxygen non-stoichiometry of Gd-doped ceria during sintering in reducing atmosphere. Journal of Electroceramics, 2015, 35, 68-74.	2.0	6
77	Oxygen exchange and transport properties of yttria-stabilized zirconia coated with LaCrO ₃ . Journal of Electroceramics, 2006, 17, 781-786.	2.0	5
78	The effect of reduction atmosphere on the LaGaO ₃ -based solid oxide fuel cell. Journal of the European Ceramic Society, 2005, 25, 2655-2659.	5.7	4
79	The effect of Co addition on the electrical conductivity of Sr- and Mg-doped LaAlO ₃ . Journal of Electroceramics, 2006, 17, 787-791.	2.0	4
80	Oxygen-permeating zirconia membrane: The effect of thickness and surface coating. Journal of the European Ceramic Society, 2007, 27, 4219-4222.	5.7	4
81	Acceptor-doped ceria deposited on a porous Ni film as a possible micro-SOFC electrolyte. Journal of Electroceramics, 2013, 31, 238-244.	2.0	4
82	Electrical conductivity of RF-sputtered Gd-doped ceria film measured in across-plane mode. Solid State Ionics, 2017, 309, 58-62.	2.7	4
83	Redox stability of La _{0.2} Sr _{0.7} Ti _{0.9} Ni _{0.1} O _{3-δ} (LSTN)-Gd _{0.2} Ce _{0.8} O _{2-δ} (GDC) composite anode. International Journal of Hydrogen Energy, 2017, 42, 28559-28566.	7.1	4
84	Impedance Spectra for a 2-D Conductor-Insulator Composite by Computer Simulation. , 1998, 2, 57-66.		3
85	The effect of transition-metal addition on the non-equilibrium E.M.F.-type gas sensor. Journal of Electroceramics, 2006, 17, 1019-1022.	2.0	3
86	Rapid Thermal-Cycling Test Using Thick-Film Electrolyte-Supported Solid Oxide Fuel Cells. Electrochemical and Solid-State Letters, 2010, 13, B17.	2.2	3
87	Zirconia as a high temperature oxygen-permeating membrane: The effect of GDC and LaCrO ₃ surface coating. Solid State Ionics, 2008, 179, 1372-1376.	2.7	2
88	Electrical conductivity of the Al-stabilized La ₂ /3TiO ₃ . Journal of Electroceramics, 2008, 20, 127-132.	2.0	2
89	THE EFFECT OF SINTERING ON THE ELECTRICAL CONDUCTIVITY OF LITHIUM LANTHANUM TITANATES. , 2000, , .		0
90	Electrical Conductivity of Ionic and Electronic Mixture. Materials Research Society Symposia Proceedings, 2001, 699, 961.	0.1	0

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91	PHASE CHARACTERIZATION AND ELECTRICAL PROPERTIES OF LSM-LSGM SYSTEM. , 2000, , .		0