Joon Hyung Shim

List of Publications by Year
in descending order

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77 papers	2,546 citations	201385 27 h-index	205818 48 g-index
78 all docs	78 docs citations	78 times ranked	2447 citing authors

#	Article	IF	Citations
1	Computational Investigation of the Interfacial Stability of Lithium Chloride Solid Electrolytes in All-Solid-State Lithium Batteries. ACS Applied Materials & Interfaces, 2022, 14, 1241-1248.	4.0	20
2	<scp>Highâ€performance</scp> protonic ceramic fuel cells with <scp>electrodeâ€electrolyte</scp> composite cathode functional layers. International Journal of Energy Research, 2022, 46, 6553-6561.	2.2	12
3	Improved strontium segregation suppression of lanthanum strontium cobalt oxide cathode via chemical etching and atomic layer deposition. International Journal of Energy Research, 2022, 46, 12467-12475.	2.2	2
4	Atomic layer deposited Pt/Cu bimetallic catalysts for use in highâ€performance fuel cell cathodes. International Journal of Energy Research, 2022, 46, 17180-17188.	2.2	4
5	Inkjet Printing of Silica Aerogel for Fabrication of 2-D Patterned Thermal Insulation Layers. International Journal of Precision Engineering and Manufacturing - Green Technology, 2021, 8, 445-451.	2.7	10
6	Surface Treatment of Pt Cathode Using Ceria Infiltration for High Performance Polymer Electrolyte Membrane Fuel Cells. International Journal of Precision Engineering and Manufacturing - Green Technology, 2021, 8, 509-518.	2.7	6
7	Highâ€“performance protonic ceramic fuel cells with a PrBa0.5Sr0.5Co1.5Fe0.5O5+Î´ cathode with palladiumâ€“rich interface coating. Journal of Power Sources, 2021, 482, 229043.	4.0	23
8	Materials design of sodium chloride solid electrolytes Na₃MCl₆ for all-solid-state sodium-ion batteries. Journal of Materials Chemistry A, 2021, 9, 23037-23045.	5.2	23
9	Material Design Strategy for Halide Solid Electrolytes Li₃MX₆ (X = Cl, Br, and) Tj ETQq1 1 0.784314 rgBT /Ov	3.2	62
10	Cyclic Thermal Effects on Devices of Twoâ€Dimensional Layered Semiconducting Materials. Advanced Electronic Materials, 2021, 7, 2100348.	2.6	4
11	Direct Measurement of Ion Diffusivity in Oxide Thin Film by Using Isotope Tracers and Secondary Ion Mass Spectrometry. International Journal of Precision Engineering and Manufacturing - Green Technology, 2020, 7, 405-410.	2.7	0
12	Evaluating mechanical properties of 100nm-thick atomic layer deposited Al2O3 as a free-standing film. Scripta Materialia, 2020, 187, 256-261.	2.6	9
13	Thermal analysis of a 1-kW hydrogen-fueled solid oxide fuel cell stack by three-dimensional numerical simulation. Energy Conversion and Management, 2020, 222, 113213.	4.4	21
14	Coke-Free Oxidation of Methanol in Solid Oxide Fuel Cells with Heterogeneous Nickelâ€“Palladium Catalysts Prepared by Atomic Layer Deposition. ACS Sustainable Chemistry and Engineering, 2020, 8, 10529-10535.	3.2	18
15	Lanthanum strontium cobaltite-infiltrated lanthanum strontium cobalt ferrite cathodes fabricated by inkjet printing for high-performance solid oxide fuel cells. Journal of Alloys and Compounds, 2020, 843, 155806.	2.8	16
16	Theoretical Design of Lithium Chloride Superionic Conductors for All-Solid-State High-Voltage Lithium-Ion Batteries. ACS Applied Materials & Interfaces, 2020, 12, 34806-34814.	4.0	68
17	Inkjet Printing for Manufacturing Solid Oxide Fuel Cells. ACS Energy Letters, 2020, 5, 1586-1592.	8.8	36
18	Protonic ceramic fuel cells with slurry-spin coated BaZr0.2Ce0.6Y0.1Yb0.1O3-Î´ thin-film electrolytes. Journal of Power Sources, 2020, 465, 228254.	4.0	23

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19	Fabrication of yttria-stabilized zirconia aerogel for high-performance thermal barrier coating. Journal of Alloys and Compounds, 2019, 806, 1430-1434.	2.8	20
20	Effects of atomic layer deposition conditions on the formation of thin ZnO films and their photocatalytic characteristics. Ceramics International, 2019, 45, 18823-18830.	2.3	31
21	Atomic Layer Deposition for Surface Engineering of Solid Oxide Fuel Cell Electrodes. International Journal of Precision Engineering and Manufacturing - Green Technology, 2019, 6, 629-646.	2.7	27
22	La0.6Sr0.4Co0.2Fe0.8O3-Î´ cathode surface-treated with La2NiO4+Î´ by aerosol-assisted chemical vapor deposition for high performance solid oxide fuel cells. Ceramics International, 2019, 45, 12366-12371.	2.3	10
23	Highly Active Oxygen Evolution on Carbon Fiber Paper Coated with Atomic-Layer-Deposited Cobalt Oxide. ACS Applied Materials & Interfaces, 2019, 11, 10608-10615.	4.0	12
24	Nanoscale Surface and Interface Engineering of Solid Oxide Fuel Cells by Atomic Layer Deposition. International Journal of Precision Engineering and Manufacturing - Green Technology, 2019, 6, 611-628.	2.7	22
25	Profitable Production of Stable Electrical Power Using Wind-battery Hybrid Power Systems: A Case Study from Mt. Taegi, South Korea. International Journal of Precision Engineering and Manufacturing - Green Technology, 2019, 6, 919-930.	2.7	3
26	Direct Alcoholâ€Fueled Lowâ€Temperature Solid Oxide Fuel Cells: A Review. Energy Technology, 2019, 7, 5-19.	1.8	32
27	Evaluation of atomic layer deposited alumina as a protective layer for domestic silver articles: Anti-corrosion test in artificial sweat. Applied Surface Science, 2018, 441, 718-723.	3.1	15
28	Ceramics breakthrough. Nature Energy, 2018, 3, 168-169.	19.8	40
29	Three-dimensional thermal stress analysis of the re-oxidized Ni-YSZ anode functional layer in solid oxide fuel cells. Journal of Alloys and Compounds, 2018, 752, 148-154.	2.8	18
30	3D Evaluation of Porous Zeolite Absorbents Using FIB-SEM Tomography. International Journal of Precision Engineering and Manufacturing - Green Technology, 2018, 5, 195-199.	2.7	8
31	Nanoporous silver cathode surface-treated by aerosol-assisted chemical vapor deposition of gadolinia-doped ceria for intermediate-temperature solid oxide fuel cells. Journal of Power Sources, 2018, 402, 246-251.	4.0	9
32	Surface Tuning of Solid Oxide Fuel Cell Cathode by Atomic Layer Deposition. Advanced Energy Materials, 2018, 8, 1802506.	10.2	48
33	Ag surface-coated with nano-YSZ as an alternative to Pt catalyst for low-temperature solid oxide fuel cells. Journal of Alloys and Compounds, 2018, 769, 545-551.	2.8	11
34	Novel Conductive Filament Metalâ€“Interlayerâ€“Semiconductor Contact Structure for Ultralow Contact Resistance Achievement. ACS Applied Materials & Interfaces, 2018, 10, 26378-26386.	4.0	5
35	Highâ€Performance Protonic Ceramic Fuel Cells with 1 Âµm Thick Y:Ba(Ce, Zr)O₃ Electrolytes. Advanced Energy Materials, 2018, 8, 1801315.	10.2	79
36	Compositional optimization of gadolinia-doped ceria treatment for enhanced oxygen reduction kinetics in low-temperature solid oxide fuel cells. Thin Solid Films, 2017, 624, 95-100.	0.8	6

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37	Demonstrating the potential of yttrium-doped barium zirconate electrolyte for high-performance fuel cells. Nature Communications, 2017, 8, 14553.	5.8	218
38	High Performance Anode-Supported Solid Oxide Fuel Cells with Thin Film Yttria-Stabilized Zirconia Membrane Prepared by Aerosol-Assisted Chemical Vapor Deposition. Journal of the Electrochemical Society, 2017, 164, F484-F490.	1.3	19
39	Mechanism of Cathodic Performance Enhancement by a Few-Nanometer-Thick Oxide Overcoat on Porous Pt Cathodes of Solid Oxide Fuel Cells. ACS Omega, 2017, 2, 806-813.	1.6	19
40	Fermi-Level Unpinning Technique with Excellent Thermal Stability for n-Type Germanium. ACS Applied Materials & Interfaces, 2017, 9, 35988-35997.	4.0	14
41	Fabrication of Lanthanum Strontium Cobalt Ferriteâ€“Gadolinium-Doped Ceria Composite Cathodes Using a Low-Price Inkjet Printer. ACS Applied Materials & Interfaces, 2017, 9, 39347-39356.	4.0	25
42	Highâ€Performance Silver Cathode Surface Treated with Scandiaâ€Stabilized Zirconia Nanoparticles for Intermediate Temperature Solid Oxide Fuel Cells. Advanced Energy Materials, 2017, 7, 1601956.	10.2	32
43	Effective Schottky Barrier Height Lowering of Metal/n-Ge with a TiO₂/GeO₂ Interlayer Stack. ACS Applied Materials & Interfaces, 2016, 8, 35419-35425.	4.0	37
44	High-performance thin-film protonic ceramic fuel cells fabricated on anode supports with a non-proton-conducting ceramic matrix. Journal of Materials Chemistry A, 2016, 4, 6395-6403.	5.2	52
45	Nanoporous silver cathode surface treated by atomic layer deposition of CeO_xfor low-temperature solid oxide fuel cells. Nanotechnology, 2016, 27, 185403.	1.3	32
46	High-Performance Protonic Ceramic Fuel Cells with Thin-Film Yttrium-Doped Barium Cerateâ€“Zirconate Electrolytes on Compositionally Gradient Anodes. ACS Applied Materials & Interfaces, 2016, 8, 9097-9103.	4.0	43
47	Slurry spin coating of thin film yttria stabilized zirconia/gadolinia doped ceria bi-layer electrolytes for solid oxide fuel cells. Journal of Power Sources, 2016, 327, 401-407.	4.0	57
48	Chemical Protection of Polycarbonate Surfaces by Atomic Layer Deposition of Alumina with Oxygen Plasma Pretreatment. Advanced Materials Interfaces, 2016, 3, 1600340.	1.9	6
49	Bimetallic Nickel/Ruthenium Catalysts Synthesized by Atomic Layer Deposition for Low-Temperature Direct Methanol Solid Oxide Fuel Cells. ACS Applied Materials & Interfaces, 2016, 8, 30090-30098.	4.0	31
50	Fabrication of lanthanum strontium cobalt ferrite (LSCF) cathodes for high performance solid oxide fuel cells using a low price commercial inkjet printer. Journal of Power Sources, 2016, 306, 503-509.	4.0	52
51	Nano-granulization of gadolinia-doped ceria electrolyte surface by aerosol-assisted chemical vapor deposition for low-temperature solid oxide fuel cells. Journal of Power Sources, 2016, 301, 72-77.	4.0	21
52	Characterization of ZnO film grown on polycarbonate by atomic layer deposition at low temperature. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2015, 33, .	0.9	4
53	Platinumâ€“Ruthenium Heterogeneous Catalytic Anodes Prepared by Atomic Layer Deposition for Use in Direct Methanol Solid Oxide Fuel Cells. ACS Catalysis, 2015, 5, 1914-1921.	5.5	48
54	Performance Degradation of Lanthanum Strontium Cobaltite after Surface Modification. Journal of the Electrochemical Society, 2015, 162, F622-F626.	1.3	27

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55	Nanoporous silver cathodes surface-treated by atomic layer deposition of Y:ZrO2 for high-performance low-temperature solid oxide fuel cells. Journal of Power Sources, 2015, 295, 175-181.	4.0	48
56	Resistive switching characteristics of polycrystalline SrTiO3 films. Applied Physics Letters, 2014, 104, .	1.5	15
57	MEMS-based thin-film solid-oxide fuel cells. MRS Bulletin, 2014, 39, 798-804.	1.7	39
58	Proton incorporation in yttria-stabilized zirconia during atomic layer deposition. International Journal of Hydrogen Energy, 2014, 39, 2621-2627.	3.8	11
59	Micro ceramic fuel cells with multilayered yttrium-doped barium cerate and zirconate thin film electrolytes. Journal of Power Sources, 2014, 248, 1163-1169.	4.0	33
60	Separation of interlayer resistance in multilayer MoS2 field-effect transistors. Applied Physics Letters, 2014, 104, .	1.5	46
61	Evaluation of porous platinum, nickel, and lanthanum strontium cobaltite as electrode materials for low-temperature solid oxide fuel cells. International Journal of Hydrogen Energy, 2014, 39, 17828-17835.	3.8	23
62	Evaluation of batteries for wind-hybrid systems in South Korean islands. International Journal of Precision Engineering and Manufacturing, 2014, 15, 761-768.	1.1	2
63	Catalyst-free growth of readily detachable nanographene on alumina. Journal of Materials Chemistry C, 2013, 1, 6438.	2.7	10
64	Atomic layer deposition of thin-film ceramic electrolytes for high-performance fuel cells. Journal of Materials Chemistry A, 2013, 1, 12695.	5.2	88
65	Economic feasibility of a PV system for grid-connected semiconductor facilities in South Korea. International Journal of Precision Engineering and Manufacturing, 2013, 14, 2033-2041.	1.1	12
66	Low-temperature atomic layer deposition of Al2O3 on blown polyethylene films with plasma-treated surfaces. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2013, 31, .	0.9	7
67	Estimation of Singaporeâ€™s hourly solar radiation using hybrid-Markov transition matrices method. International Journal of Precision Engineering and Manufacturing, 2013, 14, 323-327.	1.1	6
68	Patterned Silver Nanomesh Cathode for Low-Temperature Solid Oxide Fuel Cells. Journal of the Electrochemical Society, 2012, 159, B541-B545.	1.3	17
69	Improved oxygen surface exchange kinetics at grain boundaries in nanocrystalline yttria-stabilized zirconia. MRS Communications, 2012, 2, 107-111.	0.8	15
70	Reduction of residual thermal stress on anode-supported SOFCs using porous aid layers. International Journal of Precision Engineering and Manufacturing, 2012, 13, 2149-2154.	1.1	3
71	Comparative performance analysis of silicon nanowire tunnel FETs and MOSFETs on plastic substrates in flexible logic circuit applications. Physica Status Solidi (A) Applications and Materials Science, 2012, 209, 1350-1358.	0.8	11
72	Economic and environmental analysis of a wind-hybrid power system with desalination in Hong-do, South Korea. International Journal of Precision Engineering and Manufacturing, 2012, 13, 623-630.	1.1	22

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73	Catalysts with Pt Surface Coating by Atomic Layer Deposition for Solid Oxide Fuel Cells. Journal of the Electrochemical Society, 2010, 157, B793.	1.3	48
74	Intermediate-Temperature Ceramic Fuel Cells with Thin Film Yttrium-Doped Barium Zirconate Electrolytes. Chemistry of Materials, 2009, 21, 3290-3296.	3.2	148
75	Proton conduction in thin film yttrium-doped barium zirconate. Applied Physics Letters, 2008, 92, .	1.5	56
76	Atomic Layer Deposition of Yttria-Stabilized Zirconia for Solid Oxide Fuel Cells. Chemistry of Materials, 2007, 19, 3850-3854.	3.2	395
77	Stabilization of platinum catalyst surfaceâ€treated by atomic layer deposition of cobalt for polymer electrolyte membrane fuel cells. International Journal of Energy Research, 0, , .	2.2	0