Joongmyeon Bae

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/2259823/publications.pdf

Version: 2024-02-01

119 papers	3,283 citations	172457 29 h-index	175258 52 g-index
119 all docs	119 docs citations	119 times ranked	2421 citing authors

#	Article	IF	Citations
1	Electrochemical performance of solid oxide electrolysis cell electrodes under high-temperature coelectrolysis of steam and carbon dioxide. Journal of Power Sources, 2011, 196, 7161-7168.	7.8	161
2	Advanced Electrochemical Properties of LnBa[sub 0.5]Sr[sub 0.5]Co[sub 2]O[sub 5+Î´] (Ln=Pr, Sm, and) Tj ETQq0 0 0 rgBT /Overlock 10	2.9	151
3	Performance comparison of autothermal reforming for liquid hydrocarbons, gasoline and diesel for fuel cell applications. Journal of Power Sources, 2006, 163, 538-546.	7.8	139
4	Electrochemical Investigation of Composite Cathodes with SmBa_{0.5}Sr_{0.5}Co₂O_{5+Î´} Cathodes for Intermediate Temperature-Operating Solid Oxide Fuel Cell. Chemistry of Materials, 2010, 22, 883-892.	6.7	115
5	Structural, thermal and electrochemical properties of layered perovskite SmBaCo2O5+d, a potential cathode material for intermediate-temperature solid oxide fuel cells. Journal of Power Sources, 2009, 194, 704-711.	7.8	111
6	Autothermal reforming study of diesel for fuel cell application. Journal of Power Sources, 2006, 159, 1283-1290.	7.8	106
7	Fast performance degradation of SOFC caused by cathode delamination in long-term testing. International Journal of Hydrogen Energy, 2010, 35, 8670-8677.	7.1	99
8	Effects of ethylene on carbon formation in diesel autothermal reforming. International Journal of Hydrogen Energy, 2008, 33, 4780-4788.	7.1	98
9	Performance of solid oxide electrolysis cells based on composite La0.8Sr0.2MnO3â¯Î´ â€“ yttria stabilized zirconia and Ba0.5Sr0.5Co0.8Fe0.2O3â¯Î´ oxygen electrodes. International Journal of Hydrogen Energy, 2010, 35, 3958-3966.	7.1	92
10	Liquid fuel processing for hydrogen production: A review. International Journal of Hydrogen Energy, 2016, 41, 19990-20022.	7.1	89
11	Visualization of flooding in a single cell and stacks by using a newly-designed transparent PEMFC. International Journal of Hydrogen Energy, 2012, 37, 422-435.	7.1	82
12	Suppression of ethylene-induced carbon deposition in diesel autothermal reforming. International Journal of Hydrogen Energy, 2009, 34, 1844-1851.	7.1	72
13	Characteristics of ABO3 and A2BO4 (A Sm, Sr; B Co, Fe, Ni) samarium oxide system as cathode materials for intermediate temperature-operating solid oxide fuel cell. Solid State Ionics, 2008, 179, 1570-1574.	2.7	65
14	Development of a high-energy-density portable/mobile hydrogen energy storage system incorporating an electrolyzer, a metal hydride and a fuel cell. Applied Energy, 2020, 259, 114175.	10.1	62
15	A Simple Descriptor to Rapidly Screen CO Oxidation Activity on Rare-Earth Metal-Doped CeO2: From Experiment to First-Principles. ACS Applied Materials & Interfaces, 2017, 9, 15449-15458.	8.0	59
16	Cathode reaction mechanism of porous-structured Sm0.5Sr0.5CoO3â¯Î´ and Sm0.5Sr0.5CoO3â¯Î´/Sm0.2Ce0.8O1.9 for solid oxide fuel cells. Journal of Power Sources, 2009, 193, 431-440.	7.8	55
17	Performance of solid oxide electrolysis cell having bi-layered electrolyte during steam electrolysis and carbon dioxide electrolysis. Current Applied Physics, 2011, 11, S223-S228.	2.4	52
18	Performance improvement of diesel autothermal reformer by applying ultrasonic injector for effective fuel delivery. Journal of Power Sources, 2007, 172, 845-852.	7.8	51

#	Article	IF	Citations
19	Pt/CeO2 catalyst synthesized by combustion method for dehydrogenation of perhydro-dibenzyltoluene as liquid organic hydrogen carrier: Effect of pore size and metal dispersion. International Journal of Hydrogen Energy, 2021, 46, 5520-5529.	7.1	49
20	Oxidation-resistant thin film coating on ferritic stainless steel by sputtering for solid oxide fuel cells. Thin Solid Films, 2008, 516, 6432-6437.	1.8	48
21	Performance of SOFC coupled with n-C4H10 autothermal reformer: Carbon deposition and development of anode structure. International Journal of Hydrogen Energy, 2010, 35, 12346-12358.	7.1	48
22	Fabrication and characterization of metal-supported solid oxide fuel cells. Journal of Power Sources, 2008, 176, 62-69.	7.8	47
23	Effect of unsintered gadolinium-doped ceria buffer layer on performance of metal-supported solid oxide fuel cells using unsintered barium strontium cobalt ferrite cathode. Journal of Power Sources, 2010, 195, 6420-6427.	7.8	47
24	Electrochemical performance of unsintered Ba0.5Sr0.5Co0.8Fe0.2O3â˜', La0.6Sr0.4Co0.8Fe0.2O3â˜', and La0.8Sr0.2MnO3â˜' cathodes for metal-supported solid oxide fuel cells. International Journal of Hydrogen Energy, 2011, 36, 3138-3146.	7.1	45
25	Self-sustained operation of a kWe-class kerosene-reforming processor for solid oxide fuel cells. Journal of Power Sources, 2009, 192, 360-366.	7.8	43
26	Improved configuration of supported nickel catalysts in a steam reformer for effective hydrogen production from methane. Journal of Power Sources, 2008, 180, 506-515.	7.8	40
27	Performance analysis of cobalt-based cathode materials for solid oxide fuel cell. Solid State Ionics, 2008, 179, 1490-1496.	2.7	40
28	Niâ€"Me/Ce0.9Gd0.1O2â˜'x (Me: Rh, Pt and Ru) catalysts for diesel pre-reforming. International Journal of Hydrogen Energy, 2015, 40, 3207-3216.	7.1	36
29	Diesel autothermal reforming with hydrogen peroxide for low-oxygen environments. Applied Energy, 2015, 156, 99-106.	10.1	35
30	Fabrication of solid oxide fuel cells (SOFCs) by solvent-controlled co-tape casting technique. International Journal of Hydrogen Energy, 2017, 42, 1648-1660.	7.1	32
31	Long-term performance of anode-supported SOFC integrated with metal interconnect by joining process. International Journal of Hydrogen Energy, 2010, 35, 4285-4291.	7.1	30
32	Comparative energetic studies on liquid organic hydrogen carrier: A net energy analysis. Renewable and Sustainable Energy Reviews, 2021, 150, 111447.	16.4	30
33	Small stack performance of intermediate temperature-operating solid oxide fuel cells using stainless steel interconnects and anode-supported single cell. Journal of Power Sources, 2007, 172, 100-107.	7.8	29
34	Structural and electrochemical properties of Pr0.3Sr0.7Co0.3Fe0.7O3â˜' cathode for IT-SOFC. International Journal of Hydrogen Energy, 2009, 34, 6852-6860.	7.1	29
35	The micro-reactor testing of catalysts and fuel delivery apparatuses for diesel autothermal reforming. Catalysis Today, 2008, 136, 249-257.	4.4	28
36	Study of activity and effectiveness factor of noble metal catalysts for waterâ€"gas shift reaction. International Journal of Hydrogen Energy, 2009, 34, 870-876.	7.1	28

#	Article	IF	Citations
37	Characterization of electrochemical reaction and thermo-fluid flow in metal-supported solid oxide fuel cell stacks with various manifold designs. International Journal of Hydrogen Energy, 2012, 37, 1717-1730.	7.1	28
38	Analysis of chemical, electrochemical reactions and thermo-fluid flow in methane-feed internal reforming SOFCs: Part I â€“ Modeling and effect of gas concentrations. International Journal of Hydrogen Energy, 2012, 37, 8512-8531.	7.1	28
39	Evaluation of metal-supported solid oxide fuel cells (MS-SOFCs) fabricated at low temperature (â¼1,000ÂºC) using wet chemical coating processes and a catalyst wet impregnation method. International Journal of Hydrogen Energy, 2018, 43, 3786-3796.	7.1	28
40	A diesel fuel processor for stable operation of solid oxide fuel cells system: I. Introduction to post-reforming for the diesel fuel processor. Catalysis Today, 2010, 156, 49-57.	4.4	27
41	A diesel fuel processor for stable operation of solid oxide fuel cells system: II. Integrated diesel fuel processor for the operation of solid oxide fuel cells. International Journal of Hydrogen Energy, 2012, 37, 9228-9236.	7.1	24
42	Development of a self-sustaining kWe-class integrated diesel fuel processing system for solid oxide fuel cells. International Journal of Hydrogen Energy, 2011, 36, 10302-10310.	7.1	23
43	Analysis of chemical, electrochemical reactions and thermo-fluid flow in methane-feed internal reforming SOFCs: Part II-temperature effect. International Journal of Hydrogen Energy, 2012, 37, 8532-8555.	7.1	23
44	A diesel-driven, metal-based solid oxide fuel cell. Journal of Power Sources, 2014, 250, 98-104.	7.8	23
45	Metal-supported solid oxide fuel cells with barium-containing in-situ cathodes. Solid State Ionics, 2011, 192, 387-393.	2.7	22
46	Performance analysis of Cu, Sn and Rh impregnated NiO/CGO91 anode for butane internal reforming SOFC at intermediate temperature. Renewable Energy, 2015, 83, 483-490.	8.9	22
47	Anodic behavior of 8Y2O3â€“ZrO2/NiO cermet using an anode-supported electrode. International Journal of Hydrogen Energy, 2011, 36, 689-705.	7.1	21
48	A novel solâ€“gel coating method for fabricating dense layers on porous surfaces particularly for metal-supported SOFC electrolyte. International Journal of Hydrogen Energy, 2017, 42, 6220-6230.	7.1	21
49	Evaluation of Ag-doped (MnCo)3O4 spinel as a solid oxide fuel cell metallic interconnect coating material. International Journal of Hydrogen Energy, 2017, 42, 29511-29517.	7.1	21
50	Development of a thermally self-sustaining kWe-class diesel reformer using hydrogen peroxide for hydrogen production in low-oxygen environments. Journal of Power Sources, 2016, 326, 341-348.	7.8	20
51	Connected evaluation of polymer electrolyte membrane fuel cell with dehydrogenation reactor of liquid organic hydrogen carrier. International Journal of Hydrogen Energy, 2020, 45, 13398-13405.	7.1	20
52	La0.8Sr0.2Cr0.95Ru0.05O3â¯x and Sm0.8Ba0.2Cr0.95Ru0.05O3â¯x as partial oxidation catalysts for diesel. International Journal of Hydrogen Energy, 2014, 39, 4938-4946.	7.1	19
53	Long-term durability of La0.75Sr0.25Cr0.5Mn0.5Oâ¯3 as a fuel electrode of solid oxide electrolysis cells for co-electrolysis. Journal of CO2 Utilization, 2019, 31, 192-197.	6.8	19
54	Electrochemical simulation using material properties of a ceramic electrode and electrolyte. Current Applied Physics, 2011, 11, S219-S222.	2.4	18

#	Article	IF	Citations
55	Characteristics of nano La0.6Sr0.4Co0.2Fe0.8O3â˜Î´-infiltrated La0.8Sr0.2Ga0.8Mg0.2O3â˜Î´ scaffold cathode for enhanced oxygen reduction. International Journal of Hydrogen Energy, 2013, 38, 13399-13407.	7.1	18
56	Investigation of electrospun Ba0.5Sr0.5Co0.8Fe0.2O3â˜Î´-Gd0.1Ce0.9O1.95 cathodes for enhanced interfacial adhesion. International Journal of Hydrogen Energy, 2018, 43, 21535-21546.	7.1	18
57	Deep-learning- and reinforcement-learning-based profitable strategy of a grid-level energy storage system for the smart grid. Journal of Energy Storage, 2021, 41, 102868.	8.1	18
58	Interconnect-integrated solid oxide fuel cell with high temperature sinter-joining process. International Journal of Hydrogen Energy, 2010, 35, 11878-11889.	7.1	17
59	Cathodic behavior of La0.8Sr0.2Co1â˜xMnxO3â˜Î´ perovskite oxide on YSZ electrolyte for intermediate temperature-operating solid oxide fuel cells. Solid State Ionics, 2008, 179, 1465-1469.	2.7	16
60	The current density and temperature distributions of anode-supported flat-tube solid oxide fuel cells affected by various channel designs. International Journal of Hydrogen Energy, 2011, 36, 9936-9944.	7.1	16
61	A numerical study on the heat and mass transfer characteristics of metal-supported solid oxide fuel cells. International Journal of Hydrogen Energy, 2011, 36, 3167-3178.	7.1	16
62	A numerical study on anode thickness and channel diameter of anode-supported flat-tube solid oxide fuel cells. Renewable Energy, 2012, 42, 180-185.	8.9	16
63	Pressurized diesel fuel processing using hydrogen peroxide for the fuel cell power unit in low-oxygen environments. Journal of Power Sources, 2018, 380, 37-45.	7.8	16
64	Thermal stability characteristics of high-power, large-capacity, reserve thermal batteries with pure Li and Li(Si) anodes. Electrochimica Acta, 2020, 353, 136612.	5.2	16
65	Effects of low hydrocarbons on the solid oxide fuel cell anode. Journal of Solid State Electrochemistry, 2010, 14, 1793-1800.	2.5	15
66	Effect of calcination temperature on electrochemical properties of cathodes for solid oxide fuel cells. Solid State Ionics, 2011, 192, 595-598.	2.7	15
67	Negative Effects of Dopants on Copperâ€“Ceria Catalysts for CO Preferential Oxidation Under the Presence of CO2 and H2O. Catalysis Letters, 2017, 147, 2987-3003.	2.6	15
68	Reliable sealing design of metal-based solid oxide fuel cell stacks for transportation applications. International Journal of Hydrogen Energy, 2019, 44, 30280-30292.	7.1	15
69	Evaluation of the net water transport through electrolytes in Proton Exchange Membrane Fuel Cell. Journal of Power Sources, 2009, 191, 390-399.	7.8	14
70	Scalable fabrication process of thin-film solid oxide fuel cells with an anode functional layer design and a sputtered electrolyte. International Journal of Hydrogen Energy, 2020, 45, 33980-33992.	7.1	14
71	Highly active and stable catalyst with exsolved PtRu alloy nanoparticles for hydrogen production via commercial diesel reforming. Applied Catalysis B: Environmental, 2022, 316, 121645.	20.2	14
72	Heat flux analysis of a cylindrical steam reformer by a modified Nusselt number. International Journal of Hydrogen Energy, 2009, 34, 1828-1834.	7.1	13

#	Article	IF	Citations
73	Effects of infiltrated Sr and Mn doped LaCrO3 on porous La0.8Sr0.2Ga0.8Mg0.2O3-Î´ scaffolds used as anodes in solid oxide fuel cells. Solid State Ionics, 2013, 249-250, 26-33.	2.7	13
74	Autothermal reforming of dimethyl ether with CGO-based precious metal catalysts. Journal of Power Sources, 2016, 307, 351-357.	7.8	13
75	Pre-reforming of higher hydrocarbons contained associated gas using a pressurized reactor with a Ni 19.5 -Ru 0.05 /CGO catalyst. Chemical Engineering Science, 2017, 168, 15-22.	3.8	13
76	Electrochemical properties and durability of in-situ composite cathodes with SmBa0.5Sr0.5Co2O5+Î´ for metal supported solid oxide fuel cells. International Journal of Hydrogen Energy, 2017, 42, 1212-1220.	7.1	13
77	Rapid start-up strategy of 1 kWe diesel reformer by solid oxide fuel cell integration. International Journal of Hydrogen Energy, 2021, 46, 26575-26581.	7.1	13
78	Start-up strategy and operational tests of gasoline fuel processor for auxiliary power unit. International Journal of Hydrogen Energy, 2015, 40, 4101-4110.	7.1	12
79	Development and evaluation of a 3-cell stack of metal-based solid oxide fuel cells fabricated via a sinter-joining method for auxiliary power unit applications. International Journal of Hydrogen Energy, 2018, 43, 16215-16229.	7.1	11
80	Development of a PrBaMn2O5+Î´-La0.8Sr0.2Ga0.85Mg0.15O3-Î´ composite electrode by scaffold infiltration for reversible solid oxide fuel cell applications. International Journal of Hydrogen Energy, 2020, 45, 1748-1758.	7.1	11
81	Numerical Analysis of a Steam Reformer Coupled With a Combustion Burner. Journal of Fuel Cell Science and Technology, 2010, 7, .	0.8	10
82	Electrochemical analysis of Pr0.3Sr0.7CoxB(1â^'x)O3â^'Î´ (B=Fe, Mn; x=0, 0.3, 0.5, 0.7, and 1) as cathode materials for intermediate temperature SOFCs. Solid State Ionics, 2015, 272, 45-52.	2.7	10
83	Start-up strategy of a diesel reformer using the decomposition heat of hydrogen peroxide for subsea applications. Journal of Power Sources, 2020, 448, 227465.	7.8	10
84	Investigation of gas-phase reactions in the mixing region for hydrocarbon autothermal reforming applications. International Journal of Hydrogen Energy, 2012, 37, 7545-7553.	7.1	8
85	Exhaust gas fuel reforming for hydrogen production with CGO-based precious metal catalysts. Chemical Engineering Science, 2017, 163, 206-214.	3.8	8
86	Numerical Analysis of the Heat and Mass Transfer Characteristics in an Autothermal Methane Reformer. Journal of Fuel Cell Science and Technology, 2010, 7, .	0.8	7
87	Coupled transport and kinetics in the mixing region for hydrocarbon autothermal reforming applications. International Journal of Hydrogen Energy, 2013, 38, 16140-16151.	7.1	7
88	Development and Evaluation of 3-Layer Metal Supported Solid Oxide Fuel Cell Short Stack. ECS Transactions, 2017, 78, 2045-2050.	0.5	7
89	On-site hydrogen production using heavy naphtha by maximizing the hydrogen output of a membrane reactor system. Journal of Power Sources, 2021, 508, 230332.	7.8	7
90	Kinetic modeling of diesel autothermal reforming for fuel cell auxiliary power units. Chemical Engineering Journal, 2021, 424, 130564.	12.7	7

#	Article	IF	Citations
91	Computational analysis of operating temperature, hydrogen flow rate and anode thickness in anode-supported flat-tube solid oxide fuel cells. Renewable Energy, 2013, 54, 63-69.	8.9	6
92	Fabrication and operation of a 6ÂkWe class interconnector-type anode-supported tubular solid oxide fuel cell stack. International Journal of Hydrogen Energy, 2014, 39, 12884-12893.	7.1	6
93	Influence of the start-up rate on the electrochemical impedance of a low-temperature solid oxide fuel cell fabricated by reactive sputtering. Thin Solid Films, 2019, 689, 137445.	1.8	5
94	Thermal design of a hydrogen storage system using La(Ce)Ni5. International Journal of Hydrogen Energy, 2020, 45, 8742-8749.	7.1	5
95	Metal-supported Solid Oxide Fuel Cell with Diesel Reformer. ECS Transactions, 2009, 25, 711-718.	0.5	4
96	Fabrication of multi-layered solid oxide fuel cells using a sheet joining process. International Journal of Hydrogen Energy, 2009, 34, 6861-6868.	7.1	4
97	Parallel Manifold Effects on the Heat and Mass Transfer Characteristics of Metal-Supported Solid Oxide Fuel Cell Stacks. Journal of Fuel Cell Science and Technology, 2011, 8, .	0.8	4
98	Three-Dimensional Numerical Analysis of Solid Oxide Electrolysis Cells Steam Electrolysis Operation for Hydrogen Production. Journal of Fuel Cell Science and Technology, 2015, 12, .	0.8	4
99	Effect of effective areas on ionic conductivity in dense composite material composed of ionic and electronic conductors for solid oxide fuel cells. Solid State Ionics, 2008, 179, 2031-2036.	2.7	3
100	Electrochemical Property of Cr-containing Cathode Materials for Metal-supported Solid Oxide Fuel Cell. ECS Transactions, 2009, 25, 2909-2914.	0.5	3
101	The Tests of 1â€‚kWe Diesel Reformer and Solid Oxide Fuel Cell System. Journal of Fuel Cell Science and Technology, 2010, 7, .	0.8	3
102	Numerical analysis of a 20-kW e biogas steam reformer in PEMFC applications. International Journal of Hydrogen Energy, 2014, 39, 19485-19493.	7.1	3
103	Fabrication of Metal-Supported Solid Oxide Fuel Cells by Sinter-Joining Method with Silver Bonding Layer. ECS Transactions, 2017, 78, 2039-2044.	0.5	3
104	Fuel Processor Lifetime and Reliability in Solid Oxide Fuel Cells. , 2017, , 145-171.		3
105	Application of electroless plating process for multiscale Ni-La0.8Sr0.2Ga0.8Mg0.2O3-ÏƒÂ SOFC anode fabrication. International Journal of Hydrogen Energy, 2018, 43, 6400-6405.	7.1	3
106	La 0.8 Sr 0.2 Co 1 â^' x Mn x O 3 Cathode and Its Application to Metal-Supported Solid Oxide Fuel Cells. Journal of Fuel Cell Science and Technology, 2010, 7, .	0.8	2
107	Numerical Simulation of Operating Parameters in a Methane Fueled Steam Reforming Reactor. Journal of Fuel Cell Science and Technology, 2011, 8, .	0.8	2
108	Development of Thin-Film Solid Oxide Fuel Cells Supported on Anode/Metal Substrates. ECS Transactions, 2019, 91, 931-939.	0.5	2

#	Article	IF	Citations
109	Design of 20 Nm3/h Class Liquid Organic Hydrogen Carrier System Integrated with Electrolyzer and Fuel Cell. ECS Transactions, 2020, 96, 149-156.	0.5	2
110	Electrochemical Investigation of LSGMC-Composite Cathodes on LSGM-Substrate. ECS Transactions, 2008, 13, 165-180.	0.5	1
111	Effect of Anode-Off Gas Recirculation at Solid Oxide Fuel Cell System. , 2008, , .		1
112	Preparatory Tests for 1kW Diesel-Powered SOFC Systems. , 2008, , .		1
113	Numerical Analysis of Heat and Mass Transfer in Metal-Supported Solid Oxide Fuel Cells. , 2010, , .		1
114	Oxygen Reduction Mechanism at Sm0.5Sr0.5CoO3âˆ'Î´/Sm0.2Ce0.8O1.9 Composite Cathode for Solid Oxide Fuel Cell. , 2008, , .		0
115	The effect of time-periodic heat flux oscillations in the steam reformer. Current Applied Physics, 2010, 10, S77-S80.	2.4	0
116	Performance Analysis of Butane Direct Internal Reforming SOFC at Intermediate Temperature. , 2010, , .		0
117	3-Dimensional Numerical Analysis of Solid Oxide Electrolysis Cells (SOEC) Steam Electrolysis Operation for Hydrogen Production. , 2014, , .		0
118	Structural and electrochemical properties of interconnect integrated solid oxide fuel cell. Materials Research Bulletin, 2016, 82, 126-129.	5.2	0
119	Study on Possibility of Diesel Reforming with Hydrogen Peroxide in Low-Oxygen Environments. Korean Chemical Engineering Research, 2015, 53, 584-589.	0.2	0