Bhupendra Singh

List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	Polybenzimidazole-Based High-Temperature Polymer Electrolyte Membrane Fuel Cells: New Insights and Recent Progress. Electrochemical Energy Reviews, 2020, 3, 793-845.	25.5	92
2	Performance of La0.1Sr0.9Co0.8Fe0.2O3â^' and La0.1Sr0.9Co0.8Fe0.2O3â^'–Ce0.9Gd0.1O2 oxygen electrodes with Ce0.9Gd0.1O2 barrier layer in reversible solid oxide fuel cells. Journal of Power Sources, 2013, 239, 361-373.	5 7.8	78
3	Studies on Ionic Conductivity of Sr ²⁺ -Doped CeP ₂ O ₇ Electrolyte in Humid Atmosphere. Journal of Physical Chemistry C, 2013, 117, 2653-2661.	3.1	43
4	Effect of humidification on the performance of intermediate-temperature proton conducting ceramic fuel cells with ceramic composite cathodes. Journal of Power Sources, 2013, 232, 224-233.	7.8	37
5	Investigations on Electrochemical Performance of a Proton-Conducting Ceramic-Electrolyte Fuel Cell with La _{0.8} Sr _{0.2} MnO ₃ Cathode. Journal of the Electrochemical Society, 2015, 162, F547-F554.	2.9	34
6	Influence of Different Side-groups and Cross-links on Phosphoric Acid Doped Radel-based Polysulfone Membranes for High Temperature Polymer Electrolyte Fuel Cells. Electrochimica Acta, 2017, 224, 306-313.	5.2	32
7	Electrochemical hydrogen charge and discharge properties of La0.1Sr0.9Co1â^'Fe O3â^' (y= 0, 0.2, 1) electrodes in alkaline electrolyte solution. Electrochimica Acta, 2013, 102, 393-399.	5.2	31
8	Steam/CO ₂ Co-Electrolysis Performance of Reversible Solid Oxide Cell with La _{0.6} Sr _{0.4} Co _{0.2} Fe _{0.8} O _{3-δ} -Gd _{0.1} C Electrode. Journal of the Electrochemical Society, 2015, 162, F54-F59.	Cæ 9 ub>0	.931sub>O<
9	Library of electrocatalytic sites in nano-structured domains: Electrocatalysis of hydrogen peroxide. Biosensors and Bioelectronics, 2008, 24, 842-848.	10.1	30
10	Structural and electrical properties of novel phosphate based composite electrolyte for low-temperature fuel cells. Composites Part B: Engineering, 2020, 202, 108405.	12.0	29
11	Electrical Behavior of CeP2O7Electrolyte for the Application in Low-Temperature Proton-Conducting Ceramic Electrolyte Fuel Cells. Journal of the Electrochemical Society, 2012, 159, F819-F825.	2.9	25
12	La2NiO4+δ as oxygen electrode in reversible solid oxide cells. Ceramics International, 2015, 41, 6448-6454.	4.8	25
13	Investigation of Oxygen Reduction Reaction on La _{0.1} Sr _{0.9} Co _{0.8} Fe _{0.2} O _{3-î´} Electrode by Electrochemical Impedance Spectroscopy. Journal of the Electrochemical Society, 2015, 162, F728-F735.	2.9	22
14	Mathematical Model to Study Vanadium Ion Crossover in an All-Vanadium Redox Flow Battery. ACS Sustainable Chemistry and Engineering, 2021, 9, 5377-5387.	6.7	21
15	Ionic Conductivity of Gd ³⁺ Doped Cerium Pyrophosphate Electrolytes with Core-Shell Structure. Journal of the Electrochemical Society, 2014, 161, F464-F472.	2.9	20
16	Effect of MnO doping in tetravalent metal pyrophosphate (MP2O7; M=Ce, Sn, Zr) electrolytes. Ceramics International, 2016, 42, 2983-2989.	4.8	20
17	Investigations on Defect Equilibrium, Thermodynamic Quantities, and Transport Properties of La _{0.5} Sr _{0.5} FeO _{3-Î} . Journal of the Electrochemical Society, 2019, 166, F180-F189.	2.9	20
18	A thermodynamically stable La2NiO4+Î′/ Gd0.1Ce0.9O1.95 bilayer oxygen transport membrane in membrane-assisted water splitting for hydrogen production. Ceramics International, 2013, 39, 3893-3899.	4.8	19

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19	Study of Hydration/Dehydration Kinetics of SOFC Cathode Material Ba _{0.5} Sr _{0.5} Stocsub>0.5Co _{0.8} Fe _{0.2} O _{3-δ} by Electrical Conductivity Relaxation Technique. Journal of the Electrochemical Society, 2013, 160, F764-F768.	2.9	19
20	Effectiveness of Protonic Conduction in Ba _{0.5} Sr _{0.5} Co _{0.8} Fe _{0.2} O _{3â^î^} Cathode in Intermediate Temperature Proton-Conducting Ceramic-Electrolyte Fuel Cell. Journal of the Electrochemical Society, 2014, 161, F754-F760.	2.9	18
21	Synthesis and characterization of Fe3O4/Polythiophene hybrid nanocomposites for electroanalytical application. Materials Chemistry and Physics, 2018, 205, 462-469.	4.0	18
22	Advancements in spontaneous microbial desalination technology for sustainable water purification and simultaneous power generation: A review. Journal of Environmental Management, 2021, 297, 113374.	7.8	18
23	Electrical conductivity of M2+-doped (M = Mg, Ca, Sr, Ba) cerium pyrophosphate-based composite electrolytes for low-temperature proton conducting electrolyte fuel cells. Journal of Alloys and Compounds, 2013, 578, 279-285.	5.5	17
24	lonic conductivity of Mn2+ doped dense tin pyrophosphate electrolytes synthesized by a new co-precipitation method. Journal of the European Ceramic Society, 2014, 34, 2967-2976.	5.7	16
25	Hydrogen separation by dual functional cermet membranes with self-repairing capability against the damage by H2S. Journal of Membrane Science, 2013, 428, 46-51.	8.2	15
26	Charge and Mass Transport Properties of BaCe _{0.45} Zr _{0.4} Y _{0.15} O _{3-δ} . Journal of the Electrochemical Society, 2014, 161, F710-F716.	2.9	15
27	Fast ionic conduction in tetravalent metal pyrophosphate-alkali carbonate composites: New potential electrolytes for intermediate-temperature fuel cells. Journal of Power Sources, 2017, 345, 176-181.	7.8	15
28	High temperature polymer electrolyte membrane fuel cells with Polybenzimidazole-Ce0.9Gd0.1P2O7 and polybenzimidazole-Ce0.9Gd0.1P2O7-graphite oxide composite electrolytes. Journal of Power Sources, 2018, 401, 149-157.	7.8	15
29	Conductivity Relaxation in Mixed Perovskite-Type Oxide Ba3Ca1.18Nb1.82O8.73upon Oxidation/Reduction and Hydration/Dehydration. Journal of the Electrochemical Society, 2013, 160, F623-F628.	2.9	14
30	Mn2+-Doped CeP2O7Composite Electrolytes for Application in Low Temperature Proton-Conducting Ceramic Electrolyte Fuel Cells. Journal of the Electrochemical Society, 2014, 161, F133-F138.	2.9	14
31	Correlation between defect structure and electrochemical properties of mixed conducting La0.1Sr0.9Co0.8Fe0.2O3â~'. Acta Materialia, 2014, 65, 373-382.	7.9	12
32	Thermodynamic Quantities and Defect Chemical Properties of La0.8Sr0.2FeO3-δ. Journal of the Electrochemical Society, 2018, 165, F641-F651.	2.9	12
33	Chemically sensitized ormosil-modified electrodes—Studies on the enhancement of selectivity in electrochemical oxidation of hydrogen peroxide. Sensors and Actuators B: Chemical, 2007, 122, 30-41.	7.8	11
34	Dense composite electrolytes of Gd3+-doped cerium phosphates for low-temperature proton-conducting ceramic-electrolyte fuel cells. Ceramics International, 2015, 41, 4814-4821.	4.8	11
35	Charge and mass transport properties of La2Ni0.95Al0.05O4.025+. Journal of Alloys and Compounds, 2014, 589, 572-578.	5.5	10
36	Fabrication of Dense Cerium Pyrophosphate-Polystyrene Composite for Application as Low-Temperature Proton-Conducting Electrolytes. Journal of the Electrochemical Society, 2015, 162, F1159-F1164.	2.9	10

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37	Effect of partial substitution of Sn4+ by M4+ (M=Si, ti, and Ce) on sinterability and ionic conductivity of SnP2O7. Ceramics International, 2015, 41, 3339-3343.	4.8	10
38	Partial Conductivities and Chemical Diffusivities of Multi-Ion Transporting BaZr _x Ce _{0.85-x} Y _{0.15} O _{3-δ} (x = 0, 0.2, 0.4 and 0.6). Journal of the Electrochemical Society, 2014, 161, F991-F1001.	2.9	9
39	Fabrication of dense Ce0.9Mg0.1P2O7-PmOn composites by microwave heating for application as electrolyte in intermediate-temperature fuel cells. Ceramics International, 2018, 44, 6170-6175.	4.8	9
40	Controlled synthesis and magnetic properties of nickel phosphide and bimetallic iron–nickel phosphide nanorods. Journal of Nanoparticle Research, 2012, 14, 1.	1.9	8
41	Surface exchange kinetics and chemical diffusivities of BaZr0.2Ce0.65Y0.15O3â~δ by electrical conductivity relaxation. Journal of Alloys and Compounds, 2014, 610, 301-307.	5.5	8
42	Oxygen permeation through dense La0.1Sr0.9Co0.8Fe0.2O3â^î^rperovskite membranes: Catalytic effect of porous La0.1Sr0.9Co0.8Fe0.2O3â^îr layers. Ceramics International, 2015, 41, 7446-7452.	4.8	8
43	Study of electrochemical hydrogen charge/discharge properties of FePO4 for application as negative electrodes in hydrogen batteries. Ceramics International, 2013, 39, 6559-6568.	4.8	7
44	Comparative study of an experimental Portland cement and ProRoot MTA by electrochemical impedance spectroscopy. Ceramics International, 2014, 40, 1741-1746.	4.8	7
45	Electrical Behavior and Stability of K ₂ HPO ₄ -KH ₅ (PO ₄) ₂ -Ce _{0.9} Gd <sub Electrolytes for Intermediate Temperature Proton-Conducting Fuel Cells. Journal of the Electrochemical Society. 2016. 163. F225-F229.</sub 	>0,1 <td>»≻P_{2<}</td>	»≻P _{2<}
46	Locating Shunt Currents in a Multistack System of All-Vanadium Redox Flow Batteries. ACS Sustainable Chemistry and Engineering, 2021, 9, 4648-4659.	6.7	7
47	Investigation on Hydration Process and Biocompatibility of Calcium Silicate-Based Experimental Portland Cements. Journal of the Korean Ceramic Society, 2019, 56, 403-411.	2.3	7
48	Oxygen Nonstoichiometry and Thermodynamic Quantities of <scp><scp>La</scp></scp> ₂ <scp><scp>Ni</scp>0.95<scp>Al</scp>Journal of the American Ceramic Society, 2014, 97, 1489-1496.</scp>)æ s ub>0.	0 5 <s< td=""></s<>
49	Sintering and electrical behavior of ZrP2O7–CeP2O7 solid solutions Zr1-xCexP2O7; x = 0–0.2 and (Zr0.92Y0.08)1-yCeyP2O7; y = 0–0.1 for application as electrolyte in intermediate temperature fuel ce lonics, 2019, 25, 155-162.	l 12. 4	6
50	Synthesis and characterization of MnO-doped titanium pyrophosphates (Ti1-x Mn x P2O7; xÂ=Â0–0.2) for intermediate-temperature proton-conducting ceramic-electrolyte fuel cells. Ionics, 2017, 23, 1675-1684.	2.4	5
51	Spatial distribution of oxygen chemical potential under potential gradients and performance of solid oxide fuel cells with Ce0.9Gd0.1O2â^δelectrolyte. Solid State Ionics, 2018, 324, 150-156.	2.7	5
52	A new solution phase synthesis of cerium(IV) pyrophosphate compounds of different morphologies using cerium(III) precursor. Journal of Alloys and Compounds, 2019, 793, 686-694.	5.5	5
53	Improved functional response of spark plasma sintered hydroxyapatite based functionally graded materials: An impedance spectroscopy perspective. Ceramics International, 2019, 45, 6673-6683.	4.8	5
54	Defect chemistry of highly defective La0.1Sr0.9Co0.8Fe0.2O3â^´Î´ by considering oxygen interstitials: Effect of hole degeneracy. Solid State Ionics, 2020, 347, 115251.	2.7	5

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55	Defect Structure, Transport Properties, and Chemical Expansion in Ba0.95La0.05FeO3– δ. Journal of the Electrochemical Society, 2021, 168, 034511.	2.9	5
56	Determination of isothermal mass and charge transport properties of La 2 NiO 4+δ by ion-blocking cell method. Ceramics International, 2014, 40, 16785-16790.	4.8	4
57	Physicochemical and electrochemical behaviours of manganese oxide electrodes for supercapacitor application. Journal of Energy Storage, 2020, 28, 101228.	8.1	4
58	Characteristics of Graphite Felt Electrodes Treated by Atmospheric Pressure Plasma Jets for an All-Vanadium Redox Flow Battery. Materials, 2021, 14, 3847.	2.9	4
59	Investigation of Effect of Al3+-Doping on Mass/Charge Transport Properties of La2NiO4+Îby Blocking Cell Method. Journal of the Electrochemical Society, 2016, 163, F1302-F1307.	2.9	3
60	Defect Chemistry of Highly Defective La0.1Sr0.9Co0.8Fe0.2O3-Î'by Considering Oxygen Interstitials. Journal of the Electrochemical Society, 2016, 163, F1588-F1595.	2.9	3
61	Study of mass transport kinetics in co-doped Ba0.9Sr0.1Ce0.85Y0.15O3â~δ by electrical conductivity relaxation. Solid State Ionics, 2016, 289, 9-16.	2.7	3
62	Cerium Pyrophosphate-based Proton-conducting Ceramic Electrolytes for Low Temperature Fuel Cells. Journal of the Korean Ceramic Society, 2014, 51, 248-259.	2.3	3
63	Study of Oxygen Nonstoichiometry and Transport in Y0.08Sr0.92Fe0.1Ti0.9O3-Îfor Application as SOFC Anode. Journal of the Electrochemical Society, 2013, 160, F1048-F1054.	2.9	2
64	Phase, microstructure, and wear behavior of Al ₂ O ₃ -reinforced Fe–Si alloy-based metal matrix nanocomposites. Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications, 2020, 234, 467-480.	1.1	2
65	Proton-Conducting Ce0.9Mn0.1P2O7 Composite Electrolytes for Low Temperature Ceramic Electrolyte Fuel Cells. ECS Transactions, 2014, 61, 353-360.	0.5	1
66	Oxygen Reduction Properties of La0.1Sr0.9Co0.8Fe0.2O3-Â Cathode for SOFC Using Electrochemical Method. ECS Transactions, 2014, 61, 347-352.	0.5	1
67	lsothermal Charge Transport Properties of La _{0.1} Sr _{0.9} Co _{0.8} Fe _{0.2} O _{3-î´} by Blocking Cell Method. Journal of the Electrochemical Society, 2017, 164, F400-F404.	2.9	1
68	Lithium Ion Conductivity and Thermodynamic Activity of Li ₂ 0 in Li _{0.23} La _{0.61} TiO ₃ . Chemistry Letters, 2018, 47, 1032-1035.	1.3	1
69	Pd-YSZ cermet membranes with self-repairing capability in extreme H2S conditions. Ceramics International, 2017, 43, 2291-2296.	4.8	0
70	Mixed ionic-electronic conducting (MIEC) oxide ceramics for electrochemical applications. , 2022, , 201-230.		0