Bhupendra Singh

List of Publications by Year
in descending order

70 papers	1,030 citations	393982 19 h-index	500791 28 g-index
70 all docs	70 docs citations	70 times ranked	893 citing authors

#	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.	13.1	92
2	Performance of La0.1Sr0.9Co0.8Fe0.2O3âˆ’ and La0.1Sr0.9Co0.8Fe0.2O3âˆ’â€“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.	4.0	78
3	Studies on Ionic Conductivity of Sr²⁺-Doped CeP₂O₇ Electrolyte in Humid Atmosphere. Journal of Physical Chemistry C, 2013, 117, 2653-2661.	1.5	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.	4.0	37
5	Investigations on Electrochemical Performance of a Proton-Conducting Ceramic-Electrolyte Fuel Cell with La_{0.8}Sr_{0.2}MnO₃Cathode. Journal of the Electrochemical Society, 2015, 162, F547-F554.	1.3	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.	2.6	32
7	Electrochemical hydrogen charge and discharge properties of La0.1Sr0.9Co1âˆ’Fe O3âˆ’ (y= 0, 0.2, 1) electrodes in alkaline electrolyte solution. Electrochimica Acta, 2013, 102, 393-399.	2.6	31
8	Steam/CO₂Co-Electrolysis Performance of Reversible Solid Oxide Cell with La_{0.6}Sr_{0.4}Co_{0.2}Fe_{0.8}O_{3-Î´}-Gd_{0.1}Ce_{0.9}O<s Electrode. Journal of the Electrochemical Society, 2015, 162, F54-F59.	1.3	31
9	Library of electrocatalytic sites in nano-structured domains: Electrocatalysis of hydrogen peroxide. Biosensors and Bioelectronics, 2008, 24, 842-848.	5.3	30
10	Structural and electrical properties of novel phosphate based composite electrolyte for low-temperature fuel cells. Composites Part B: Engineering, 2020, 202, 108405.	5.9	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.	1.3	25
12	La2NiO4+Î´ as oxygen electrode in reversible solid oxide cells. Ceramics International, 2015, 41, 6448-6454.	2.3	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.	1.3	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.	3.2	21
15	Ionic Conductivity of Gd³⁺Doped Cerium Pyrophosphate Electrolytes with Core-Shell Structure. Journal of the Electrochemical Society, 2014, 161, F464-F472.	1.3	20
16	Effect of MnO doping in tetravalent metal pyrophosphate (MP2O7; M=Ce, Sn, Zr) electrolytes. Ceramics International, 2016, 42, 2983-2989.	2.3	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.	1.3	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.	2.3	19

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19	Study of Hydration/Dehydration Kinetics of SOFC Cathode Material Ba_{0.5}Sr_{0.5}Co_{0.8}Fe_{0.2}O_{3-Î´}by Electrical Conductivity Relaxation Technique. Journal of the Electrochemical Society, 2013, 160, F764-F768.	1.3	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.	1.3	18
21	Synthesis and characterization of Fe3O4/Polythiophene hybrid nanocomposites for electroanalytical application. Materials Chemistry and Physics, 2018, 205, 462-469.	2.0	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.	3.8	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.	2.8	17
24	Ionic 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.	2.8	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.	4.1	15
26	Charge and Mass Transport Properties of BaCe_{0.45}Zr_{0.4}Y_{0.15}O_{3-Î´}. Journal of the Electrochemical Society, 2014, 161, F710-F716.	1.3	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.	4.0	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.	4.0	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.	1.3	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.	1.3	14
31	Correlation between defect structure and electrochemical properties of mixed conducting La0.1Sr0.9Co0.8Fe0.2O3â^'. Acta Materialia, 2014, 65, 373-382.	3.8	12
32	Thermodynamic Quantities and Defect Chemical Properties of La0.8Sr0.2FeO3-Î´. Journal of the Electrochemical Society, 2018, 165, F641-F651.	1.3	12
33	Chemically sensitized ormosil-modified electrodesâ€"Studies on the enhancement of selectivity in electrochemical oxidation of hydrogen peroxide. Sensors and Actuators B: Chemical, 2007, 122, 30-41.	4.0	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.	2.3	11
35	Charge and mass transport properties of La2Ni0.95Al0.05O4.025+. Journal of Alloys and Compounds, 2014, 589, 572-578.	2.8	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.	1.3	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.	2.3	10
38	Partial Conductivities and Chemical Diffusivities of Multi-Ion Transporting BaZr_xCe_{0.85-x}Y_{0.15}O_{3-Î´}(x = 0, 0.2, 0.4 and 0.6). Journal of the Electrochemical Society, 2014, 161, F991-F1001.	1.3	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.	2.3	9
40	Controlled synthesis and magnetic properties of nickel phosphide and bimetallic ironâ€“nickel phosphide nanorods. Journal of Nanoparticle Research, 2012, 14, 1.	0.8	8
41	Surface exchange kinetics and chemical diffusivities of BaZr0.2Ce0.65Y0.15O3â ˆ’Î´ by electrical conductivity relaxation. Journal of Alloys and Compounds, 2014, 610, 301-307.	2.8	8
42	Oxygen permeation through dense La0.1Sr0.9Co0.8Fe0.2O3â ˆ’Î´ perovskite membranes: Catalytic effect of porous La0.1Sr0.9Co0.8Fe0.2O3â ˆ’Î´ layers. Ceramics International, 2015, 41, 7446-7452.	2.3	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.	2.3	7
44	Comparative study of an experimental Portland cement and ProRoot MTA by electrochemical impedance spectroscopy. Ceramics International, 2014, 40, 1741-1746.	2.3	7
45	Electrical Behavior and Stability of K₂HPO₄-KH₅(PO₄)₂-Ce_{0.9}Gd_{0.1}P<sub>2 Electrolytes for Intermediate Temperature Proton-Conducting Fuel Cells. Journal of the Electrochemical Society, 2016, 163, F225-F229.	1.3	7
46	Locating Shunt Currents in a Multistack System of All-Vanadium Redox Flow Batteries. ACS Sustainable Chemistry and Engineering, 2021, 9, 4648-4659.	3.2	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.	1.1	7
48	Oxygen Nonstoichiometry and Thermodynamic Quantities of <scp><scp>La</scp></scp>₂<scp><scp>Ni</scp></scp>_{0.95}<scp><scp>Al</scp></scp>_{0.05}<sc Journal of the American Ceramic Society, 2014, 97, 1489-1496.	1.9	6
49	Sintering and electrical behavior of ZrP2O7â€“CeP2O7 solid solutions Zr1-xCexP2O7; xâ€‰=â€‰0â€“0.2 and (Zr0.92Y0.08)1-yCeyP2O7; yâ€‰=â€‰0â€“0.1 for application as electrolyte in intermediate temperature fuel cells. Ionics, 2019, 25, 155-162.	1.2	6
50	Synthesis and characterization of MnO-doped titanium pyrophosphates (Ti1-x Mn x P2O7; xÂ=Â0â€“0.2) for intermediate-temperature proton-conducting ceramic-electrolyte fuel cells. Ionics, 2017, 23, 1675-1684.	1.2	5
51	Spatial distribution of oxygen chemical potential under potential gradients and performance of solid oxide fuel cells with Ce0.9Gd0.1O2â ˆ’Î´ electrolyte. Solid State Ionics, 2018, 324, 150-156.	1.3	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.	2.8	5
53	Improved functional response of spark plasma sintered hydroxyapatite based functionally graded materials: An impedance spectroscopy perspective. Ceramics International, 2019, 45, 6673-6683.	2.3	5
54	Defect chemistry of highly defective La0.1Sr0.9Co0.8Fe0.2O3â ˆ’Î´ by considering oxygen interstitials: Effect of hole degeneracy. Solid State Ionics, 2020, 347, 115251.	1.3	5

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55	Defect Structure, Transport Properties, and Chemical Expansion in Ba0.95La0.05FeO3â€“ Î´. Journal of the Electrochemical Society, 2021, 168, 034511.	1.3	5
56	Determination of isothermal mass and charge transport properties of La 2 NiO 4+Î´ by ion-blocking cell method. Ceramics International, 2014, 40, 16785-16790.	2.3	4
57	Physicochemical and electrochemical behaviours of manganese oxide electrodes for supercapacitor application. Journal of Energy Storage, 2020, 28, 101228.	3.9	4
58	Characteristics of Graphite Felt Electrodes Treated by Atmospheric Pressure Plasma Jets for an All-Vanadium Redox Flow Battery. Materials, 2021, 14, 3847.	1.3	4
59	Investigation of Effect of Al3+-Doping on Mass/Charge Transport Properties of La2NiO4+Î´by Blocking Cell Method. Journal of the Electrochemical Society, 2016, 163, F1302-F1307.	1.3	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.	1.3	3
61	Study of mass transport kinetics in co-doped Ba0.9Sr0.1Ce0.85Y0.15O3â^'Î´ by electrical conductivity relaxation. Solid State Ionics, 2016, 289, 9-16.	1.3	3
62	Cerium Pyrophosphate-based Proton-conducting Ceramic Electrolytes for Low Temperature Fuel Cells. Journal of the Korean Ceramic Society, 2014, 51, 248-259.	1.1	3
63	Study of Oxygen Nonstoichiometry and Transport in Y0.08Sr0.92Fe0.1Ti0.9O3-Î´for Application as SOFC Anode. Journal of the Electrochemical Society, 2013, 160, F1048-F1054.	1.3	2
64	Phase, microstructure, and wear behavior of Al₂O₃-reinforced Feâ€“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.	0.7	2
65	Proton-Conducting Ce0.9Mn0.1P2O7 Composite Electrolytes for Low Temperature Ceramic Electrolyte Fuel Cells. ECS Transactions, 2014, 61, 353-360.	0.3	1
66	Oxygen Reduction Properties of La0.1Sr0.9Co0.8Fe0.2O3-Â Cathode for SOFC Using Electrochemical Method. ECS Transactions, 2014, 61, 347-352.	0.3	1
67	Isothermal 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.	1.3	1
68	Lithium Ion Conductivity and Thermodynamic Activity of Li₂O in Li_{0.23}La_{0.61}TiO₃. Chemistry Letters, 2018, 47, 1032-1035.	0.7	1
69	Pd-YSZ cermet membranes with self-repairing capability in extreme H2S conditions. Ceramics International, 2017, 43, 2291-2296.	2.3	0
70	Mixed ionic-electronic conducting (MIEC) oxide ceramics for electrochemical applications. , 2022, , 201-230.		0