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List of Publications by Year in descending order

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62
papers

2,018
citations

279798

23
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243625

44
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64
all docs

64
docs citations

64
times ranked

2324
citing authors

#	ARTICLE	IF	CITATIONS
1	Evolution of the electrochemical interface in high-temperature fuel cells and electrolyzers. <i>Nature Energy</i> , 2016, 1, .	39.5	557
2	Chemical Expansion: Implications for Electrochemical Energy Storage and Conversion Devices. <i>Annual Review of Materials Research</i> , 2014, 44, 205-239.	9.3	188
3	Size of oxide vacancies in fluorite and perovskite structured oxides. <i>Journal of Electroceramics</i> , 2015, 34, 100-107.	2.0	81
4	Enhanced mass diffusion phenomena in highly defective doped ceria. <i>Acta Materialia</i> , 2013, 61, 6290-6300.	7.9	67
5	Alkaline electrolysis cell at high temperature and pressure of 250°C and 42 bar. <i>Journal of Power Sources</i> , 2013, 229, 22-31.	7.8	59
6	Understanding degradation of solid oxide electrolysis cells through modeling of electrochemical potential profiles. <i>Electrochimica Acta</i> , 2016, 189, 265-282.	5.2	58
7	Electrical conductivity measurements of aqueous and immobilized potassium hydroxide. <i>International Journal of Hydrogen Energy</i> , 2012, 37, 16505-16514.	7.1	54
8	Defect Chemistry and Thermomechanical Properties of $Ce_{0.8}Pr_xTb_{0.2-x}O_{2-x}$. <i>Journal of the Electrochemical Society</i> , 2010, 157, B299.	2.9	49
9	Accelerated creep in solid oxide fuel cell anode supports during reduction. <i>Journal of Power Sources</i> , 2016, 323, 78-89.	7.8	49
10	Evaluation of thin film ceria membranes for syngas membrane reactors—Preparation, characterization and testing. <i>Journal of Membrane Science</i> , 2011, 378, 51-60.	8.2	48
11	Infiltration of ionic-, electronic- and mixed-conducting nano particles into $La_{0.75}Sr_{0.25}MnO_{3-\delta}Y_{0.16}Zr_{0.84}O_2$ cathodes—A comparative study of performance enhancement and stability at different temperatures. <i>Journal of Power Sources</i> , 2013, 228, 170-177.	7.8	46
12	An Ag based brazing system with a tunable thermal expansion for the use as sealant for solid oxide cells. <i>Journal of Power Sources</i> , 2016, 315, 339-350.	7.8	46
13	Polysulfone-polyvinylpyrrolidone blend membranes as electrolytes in alkaline water electrolysis. <i>Journal of Membrane Science</i> , 2020, 598, 117674.	8.2	44
14	Oxygen Nonstoichiometry and Defect Chemistry Modeling of $Ce_{0.8}Pr_{0.2}O_{2-x}$. <i>Journal of the Electrochemical Society</i> , 2010, 157, B481.	2.9	41
15	Densification and grain growth during early-stage sintering of $Ce_{0.9}Gd_{0.1}O_{1.95-x}$ in a reducing atmosphere. <i>Acta Materialia</i> , 2010, 58, 3860-3866.	7.9	38
16	Characterization of impregnated GDC nano structures and their functionality in LSM based cathodes. <i>Solid State Ionics</i> , 2012, 224, 21-31.	2.7	38
17	A three dimensional multiphysics model of a solid oxide electrochemical cell: A tool for understanding degradation. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 11913-11931.	7.1	38
18	Design and optimization of porous ceramic supports for asymmetric ceria-based oxygen transport membranes. <i>Journal of Membrane Science</i> , 2016, 513, 85-94.	8.2	31

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19	Experimental determination of the Onsager coefficients of transport for Ce _{0.8} Pr _{0.2} O ₂ . Physical Chemistry Chemical Physics, 2010, 12, 9637.	2.8	30
20	Electronic conductivity of Ce _{0.9} Gd _{0.1} O _{1.95} and Ce _{0.8} Pr _{0.2} O ₂ : Hebbâ€“Wagner polarisation in the case of redox active dopants and interference. Physical Chemistry Chemical Physics, 2011, 13, 21558.	2.8	29
21	Thermoneutral Operation of Solid Oxide Electrolysis Cells in Potentiostatic Mode. ECS Transactions, 2017, 78, 3077-3088.	0.5	27
22	Oxygen Permeation in Thin, Dense Ce _{0.9} Gd _{0.1} O _{1.95} Membranes II. Experimental Determination. Journal of the Electrochemical Society, 2011, 158, F73-F83.	2.9	26
23	Kinetics of CO/CO ₂ and H ₂ /H ₂ O reactions at Ni-based and ceria-based solid-oxide-cell electrodes. Faraday Discussions, 2015, 182, 75-95.	3.2	23
24	Ionic/Electronic Conductivity, Thermal/Chemical Expansion and Oxygen Permeation in Pr and Gd Co-Doped Ceria Pr _x Gd _{0.1} Ce _{0.9-x} O _{1.95} . Journal of the Electrochemical Society, 2017, 164, F1354-F1367.	2.9	23
25	Equilibrium and transient conductivity for gadolinium-doped ceria under large perturbations: II. Modeling. Solid State Ionics, 2014, 268, 198-207.	2.7	22
26	Current understanding of ceria surfaces for CO ₂ reduction in SOECs and future prospects â€“ A review. Solid State Ionics, 2022, 375, 115833.	2.7	22
27	Oxygen Permeation in Thin, Dense Ce _{0.9} Gd _{0.1} O _{1.95} Membranes I. Model Study. Journal of the Electrochemical Society, 2011, 158, F61.	2.9	21
28	Defining chemical expansion: the choice of units for the stoichiometric expansion coefficient. Physical Chemistry Chemical Physics, 2014, 16, 9229-9232.	2.8	19
29	High Temperature Alkaline Electrolysis Cells with Metal Foam Based Gas Diffusion Electrodes. Journal of the Electrochemical Society, 2016, 163, F3036-F3040.	2.9	19
30	Cobalt and molybdenum activated electrodes in foam based alkaline electrolysis cells at 150â€“250Â°C and 40Âbar. Journal of Power Sources, 2014, 255, 394-403.	7.8	15
31	Oxygen Evolution Activity and Chemical Stability of Ni and Fe Based Perovskites in Alkaline Media. Journal of the Electrochemical Society, 2018, 165, F827-F835.	2.9	15
32	Electrical conductivity of titanium pyrophosphate between 100 and 400Â°C: effect of sintering temperature and phosphorus content. Journal of Solid State Electrochemistry, 2014, 18, 39-47.	2.5	14
33	Phase Composition and Long-Term Conductivity of Acceptor Doped Ce(PO ₃) ₄ and CeP ₂ O ₇ with Variable P/Metal Ratio and of CeP ₂ O ₇ -KH ₂ PO ₄ Composite. Journal of the Electrochemical Society, 2013, 160, F798-F805.	2.9	13
34	TOF-SIMS characterization of impurity enrichment and redistribution in solid oxide electrolysis cells during operation. Dalton Transactions, 2014, 43, 14949-14958.	3.3	13
35	Need for In Operando Characterization of Electrochemical Interface Features. ECS Transactions, 2015, 66, 3-20.	0.5	13
36	Oxygen transport properties of tubular Ce _{0.9} Gd _{0.1} O _{1.95} -La _{0.6} Sr _{0.4} FeO ₃ composite asymmetric oxygen permeation membranes supported on magnesium oxide. Journal of Membrane Science, 2017, 523, 576-587.	8.2	13

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37	Equilibrium and transient conductivity for gadolinium-doped ceria under large perturbations: I. Experiments. Solid State Ionics, 2014, 265, 22-28.	2.7	12
38	CERIA AND ITS USE IN SOLID OXIDE CELLS AND OXYGEN MEMBRANES. Catalytic Science Series, 2013, , 623-782.	0.0	11
39	Fermi Potential across Working Solid Oxide Cells with Zirconia or Ceria Electrolytes. ECS Transactions, 2014, 61, 203-214.	0.5	11
40	Effect of Fe on high performing nanostructured Ni/Gd-doped ceria electrocatalysts. Solid State Ionics, 2019, 340, 115019.	2.7	10
41	Defect chemistry, thermomechanical and transport properties of $(RE_{2-x}Sr_x)_{0.98}(Fe_{0.8}Co_{0.2})_{1-y}Mg_yO_{4-\delta}$ (RE = La, Pr). Solid State Ionics, 2013, 232, 68-79.	2.7	9
42	Numerical simulation of kinetic demixing and decomposition in a $LaCoO_{3-\delta}$ oxygen membrane under an oxygen potential gradient. Journal of Membrane Science, 2018, 548, 526-539.	8.2	9
43	Enhanced reducibility and electronic conductivity of Nb or W doped $Ce_{0.9}Gd_{0.1}O_{1.95-\delta}$. Solid State Ionics, 2015, 269, 51-56.	2.7	8
44	Oxygen Nonstoichiometry and Defect Chemistry Modelling of $Ce_{0.8}Pr_xTb_{0.2-x}O_{2-\delta}$. ECS Transactions, 2008, 13, 347-359.	0.5	7
45	High temperature and pressure electrochemical test station. Review of Scientific Instruments, 2013, 84, 054101.	1.3	7
46	The Impact of Strong Cathodic Polarization on Ni YSZ Microelectrodes. Journal of the Electrochemical Society, 2018, 165, F253-F263.	2.9	7
47	Fast relaxation of stresses in solid oxide cells through reduction. Part I: Macro-stresses in the cell layers. International Journal of Hydrogen Energy, 2021, 46, 1548-1559.	7.1	7
48	In situ X-ray and neutron diffraction of the Ruddlesden-Popper compounds $(RE_{2-x}Sr_x)_{0.98}(Fe_{0.8}Co_{0.2})_{1-y}Mg_yO_{4-\delta}$ (RE=La, Pr): Structure and CO ₂ stability. Journal of Solid State Chemistry, 2013, 201, 164-171.	2.9	6
49	Composite $Fe \text{--} BaCe_{0.2}Zr_{0.6}Y_{0.2}O_{2.9}$ Anodes for Proton Conductor Fuel Cells. Journal of the Electrochemical Society, 2014, 161, F833-F837.	2.9	6
50	Electronic and Ionic Transport in $Ce_{0.8}Pr_xTb_{0.2-x}O_{2-\delta}$ and Evaluation of Performance as Oxygen Permeation Membranes. Journal of the Electrochemical Society, 2012, 159, E162-E170.	2.9	5
51	New Hypothesis for SOFC Ceramic Oxygen Electrode Mechanisms. ECS Transactions, 2016, 72, 93-103.	0.5	4
52	Determination of redox-active centers in praseodymium doped ceria by in situ-XANES spectroscopy. Chemical Physics Letters, 2012, 537, 80-83.	2.6	3
53	Reversible Hydrogen and Pd Hydride Reference Electrodes with Electrochemically Supplied H_2 for High Temperature and Pressure Electrochemistry. Journal of the Electrochemical Society, 2022, 169, 054534.	2.9	3
54	Phase Formation in the System $ZrO_2 \text{--} LaO_{1.5} \text{--} MnO_x$ in Air and $1/41$ Pa After 500 h of Annealing at 1200 \AA° and 1400 \AA° C. Journal of the American Ceramic Society, 2010, 93, 2884-2890.	3.8	2

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55	(Invited) Electronic and Ionic Transport in $\text{Ce}_{0.8}\text{Pr}_x\text{Tb}_{0.2-x}\text{O}_{2-\delta}$ and Evaluation of Performance as Oxygen Permeation Membranes. ECS Transactions, 2012, 45, 45-62.	0.5	1
56	Foam Based Gas Diffusion Electrodes for Reversible Alkaline Electrolysis Cells. ECS Transactions, 2014, 64, 1029-1038.	0.5	1
57	Development of high-temperature electrochemical TEM and its application on solid oxide electrolysis cells. Microscopy and Microanalysis, 2021, 27, 3138-3139.	0.4	0
58	(Invited) Roles of Electrochemistry in a Fully Renewable Energy Society. ECS Meeting Abstracts, 2020, MA2020-01, 1444-1444.	0.0	0
59	(Invited) Electrochemistry Meets Heterogeneous Catalysis for the Conversion of CO_2 and N_2 to Fuels and Chemicals. ECS Meeting Abstracts, 2020, MA2020-01, 1455-1455.	0.0	0
60	(Invited) Advanced Alkaline Electrolysis Cells for the Production of Sustainable Fuels and Chemicals. ECS Meeting Abstracts, 2020, MA2020-01, 1482-1482.	0.0	0
61	(Invited) Roles of Electrochemistry in a Fully Renewable Energy Society. ECS Meeting Abstracts, 2020, MA2020-02, 2533-2533.	0.0	0
62	Combining EIS with in Situ TEM in Characterizing Solid Oxide Cell Components. ECS Meeting Abstracts, 2021, MA2021-02, 1899-1899.	0.0	0