Helfried NÃ¤fe

List of Publications by Year
in descending order

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88	1,135	430874	454955
papers	citations	18 h-index	30 g-index

91	91	91	785
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Synthesis and characterization of (La1-xMx)2Mo2O9-Î´; M=Ca2+, Sr2+ or Ba2+. Journal of the European Ceramic Society, 2004, 24, 129-137.	5.7	106
2	Ionic conductivity of ThO2- and ZrO2-based electrolytes between 300 and 2000 Kâ˜†. Solid State Ionics, 1984, 13, 255-263.	2.7	85
3	The effect of doping and processing conditions on properties of La1âˆ’xSrxGa1âˆ’yMgyO3âˆ’Î±. Journal of the European Ceramic Society, 2001, 21, 2311-2317.	5.7	50
4	The equilibrium between Na-Î²- and Na-Î²â€²â€²-alumina as a function of the phase composition. Electrochimica Acta, 2000, 45, 1631-1638.	5.2	40
5	On the relationships between structure, oxygen stoichiometry and ionic conductivity of CaTi1âˆ’xFexO3âˆ’Î´ (x=0.05, 0.20, 0.40, 0.60). Solid State Ionics, 2003, 156, 371-381.	2.7	40
6	On the electronic and ionic transport properties of La2Mo2O9. Materials Research Bulletin, 2003, 38, 1965-1977.	5.2	38
7	Currentâ€Voltage Relation and Charge Distribution in Mixed Ionicâ€Electronic Solid Conductors. Journal of the Electrochemical Society, 1997, 144, 3922-3929.	2.9	36
8	Phase evolution on heat treatment of sodium silicate water glass. Journal of Non-Crystalline Solids, 2008, 354, 896-900.	3.1	36
9	Conductivity of Alkali Carbonates, Carbonate-Based Composite Electrolytes and IT-SOFC. ECS Journal of Solid State Science and Technology, 2014, 3, N7-N14.	1.8	36
10	Mechanical Properties of Solid-State-Synthesized Strontium- and Magnesium-Doped Lanthanum Gallate. Journal of the American Ceramic Society, 1998, 81, 3104-3108.	3.8	35
11	Relationship between the ionic and electronic partial conductivities of co-doped LSGM ceramics from oxygen partial pressure dependence of the total conductivity. Journal of Solid State Electrochemistry, 2006, 10, 479-487.	2.5	33
12	How to check the validity of Nernst's law in a potentiometric solid electrolyte galvanic cell. Solid State Ionics, 1998, 113-115, 205-217.	2.7	29
13	CO2 sensor based on a solid state oxygen concentration cell. Sensors and Actuators B: Chemical, 2000, 69, 46-50.	7.8	27
14	Macro- and microstress analysis in sol-gel derived Pb(ZrxTi1âˆ’x)O3 thin films. Journal of Applied Physics, 1999, 85, 8023-8031.	2.5	26
15	Thermodynamic Stability and Electronic Conductivity of Naâ€betaâ€Alumina. Journal of the Electrochemical Society, 1996, 143, 943-948.	2.9	23
16	Electronic Conductivity of Polycrystalline Naâ€Î²â€Alumina at High Temperatures. Journal of the Electrochemical Society, 1994, 141, 2779-2783.	2.9	20
17	High-vacuum tight, liquid sodium resistant joint between ThO2 ceramic and metal. Journal of Nuclear Materials, 1990, 175, 67-77.	2.7	19
18	Conclusions on the electronic conductivity of Na-Î²-alumina from the behaviour of a potentiometric CO2 sensor comprising Na-Î²-alumina as electrolyte. Solid State Ionics, 1994, 68, 249-255.	2.7	19

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19	Characterization of the electronic charge carriers in TZP. Solid State Ionics, 1992, 53-56, 853-858.	2.7	18
20	Solid electrolyte galvanic cell under load. Journal of Applied Electrochemistry, 2001, 31, 1235-1241.	2.9	18
21	Synthesis of gadolinium aluminate powder through citrate gel route. Journal of Alloys and Compounds, 2010, 502, 396-400.	5.5	18
22	On the defect electron conduction parameter of Naî—¸beta-alumina. Solid State Ionics, 1994, 74, 275-278.	2.7	17
23	The feasibility of a potentiometric CO2 sensor based on Na-beta-alumina in the light of the electronic conductivity of the electrolyte. Sensors and Actuators B: Chemical, 1994, 21, 79-82.	7.8	16
24	On the Electrode Reaction of the Auâ€‰|â€‰â€‰COâ€‰2â€‰,â€‰â€‰Oâ€‰2â€‰,â€‰Me2â€‰COâ€‰3 (Me = Li, Na, K)|Y Electrode. Journal of the Electrochemical Society, 1997, 144, 915-922.	2.9	16
25	Electronic conductivity of MgO-doped Na-beta-alumina?a re-evaluation. Solid State Ionics, 1996, 86-88, 773-778.	2.7	15
26	Measurement of Gibbs energy of formation of LaGaO3 using a composition-graded solid electrolyte. Journal of Materials Research, 2000, 15, 2836-2843.	2.6	14
27	Thermodynamic Characterization of the Eutectic Phase Mixture NaNbO₃/Na₃NbO₄. II: Solidâ€State Electrochemical Investigation. Journal of the American Ceramic Society, 2007, 90, 3227-3232.	3.8	13
28	Electrochemical CO₂Separation through an Alkali-Carbonate-Based Membrane. ECS Journal of Solid State Science and Technology, 2014, 3, N23-N29.	1.8	13
29	Na-Modified Cubic Zirconia?Link Between Sodium Zirconate and Zirconia in the Na2O?ZrO2Phase Diagram. Journal of the American Ceramic Society, 2007, 90, 1597-1602.	3.8	12
30	Thermodynamic conditions at the interface between Na-beta-alumina and stabilized zirconia in a bi-electrolyte galvanic cell. Solid State Ionics, 1996, 93, 117-123.	2.7	11
31	Revision of the data on the standard Gibbs free energy of formation of sodium zirconate. Journal of Chemical Thermodynamics, 2007, 39, 22-27.	2.0	11
32	Potentiometric solid-state CO2 sensor and the role of electronic conductivity of the electrolyte. Sensors and Actuators B: Chemical, 2005, 105, 119-123.	7.8	10
33	Conductivity enhancement in carbonate-based composite electrolytes: an ongoing illusion. Ionics, 2016, 22, 297-299.	2.4	10
34	Determination of the p-electronic conduction parameter of NASICON by potentiometric measurements. Electrochimica Acta, 2004, 49, 2691-2696.	5.2	9
35	Synthesis and Structural Characterization of a Metastable Mullite-Like Alumina Phase. Journal of the American Ceramic Society, 2005, 88, 1740-1746.	3.8	9
36	Cause of â€œMulti-Ionic Conductionâ€•and â€œIonic Conductivity Enhancementâ€•in Carbonate-Based Composite Electrolytes. Electrochimica Acta, 2017, 248, 250-257.	5.2	9

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37	Relationship between the sodium oxide activity of ceramic Na-(Î² + Î²â€³)-alumina and the sodium activity in the ambience of the material. International Journal of Materials Research, 2003, 94, 962-966.	0.8	9
38	Electronic conductivity of a solid oxide electrolyte in the low temperature rangeâ˜†. Solid State Ionics, 1993, 59, 5-15.	2.7	8
39	Mixed Ionic-Electronic Conduction of Na-Beta-Alumina Under the Conditions of a Potentiometric CO2 Sensor. Materials Research Society Symposia Proceedings, 1998, 548, 521.	0.1	8
40	Thermodynamic Stability of Potassium-beta-Alumina. Journal of the American Ceramic Society, 2005, 88, 2894-2896.	3.8	8
41	Molten Alkali Carbonate as an Effective Oxygen Electrode for a Solid Oxide Electrolyte Galvanic Cell. ECS Journal of Solid State Science and Technology, 2014, 3, N102-N106.	1.8	8
42	Thermodynamic characterization of microwave sintered sodium beta alumina by a potentiometric technique. Electrochemistry Communications, 2003, 5, 426-430.	4.7	7
43	Identification of the reaction mechanism of the Pt,O2/La(Sr)Ga(Mg)O3â^' electrode system. Electrochimica Acta, 2004, 49, 2435-2441.	5.2	7
44	Determination of the potassium activity in the heterogeneous phase system K-beta-Al2O3/borate glass, MeO/Me. Journal of Chemical Thermodynamics, 2005, 37, 1-5.	2.0	7
45	Thermodynamic Characterization of the Eutectic Phase Mixture NaNbO₃/Na₃NbO_{4.} I: Literature Survey. Journal of the American Ceramic Society, 2007, 90, 3224-3226.	3.8	7
46	Thermodynamics of cementite layer formation. Acta Materialia, 2009, 57, 4074-4080.	7.9	7
47	Electronic conductivity of polycrystalline Na Î²-alumina at high temperatures. II. Determination of excess electron conductivity by permeation technique. Solid State Ionics, 1994, 67, 271-275.	2.7	6
48	Polarizedâ€Cell Measurements on Yttriaâ€Stabilized Zirconia Using an Anodically Blocked Electrode. Journal of the Electrochemical Society, 1999, 146, 2034-2037.	2.9	6
49	On the thermodynamic activity of Na2O in Naâ€“beta-alumina. Materials Research Bulletin, 2002, 37, 1063-1069.	5.2	6
50	Phase Equilibrium Investigations on Na-K-(beta+beta")-Alumina. Journal of the American Ceramic Society, 2005, 88, 2897-2901.	3.8	6
51	Zeolite based hydrocarbon sensorâ€”Re-interpretation of the principle of functioning. Electrochimica Acta, 2007, 52, 8167-8172.	5.2	6
52	Transference number of a solid electrolyte, electrode polarization and the â€œmodified emf methodâ€. Electrochimica Acta, 2011, 56, 9004-9010.	5.2	6
53	Metastable Nanocrystalline Zirconia in Light of the Nucleation Theory. Journal of Physical Chemistry C, 2016, 120, 10523-10529.	3.1	6
54	Nanoscale effect on the oxygen ionic conductivity of zirconia/ceria heterostructures. Ionics, 2018, 24, 763-767.	2.4	6

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55	Structure and topography of YBa2Cu3Ox. Physica C: Superconductivity and Its Applications, 1988, 153-155, 988-989.	1.2	5
56	Indication of bivariance in the phase system sodium zirconate/zirconia. Journal of Chemical Thermodynamics, 2007, 39, 972-977.	2.0	5
57	Texture in Naâ€“Î²-Al2O3 due to microwave processing. Materials Chemistry and Physics, 2008, 112, 16-19.	4.0	5
58	Relationship between the partial molar and molar quantity of a thermodynamic state function in a multicomponent mixture â€“ revisited. Journal of Chemical Thermodynamics, 2013, 61, 138-145.	2.0	5
59	The relationship between the Raoultian and Henrian activity of a solute. Zeitschrift Fur Elektrotechnik Und Elektrochemie, 1994, 98, 1281-1286.	0.9	4
60	On the behavior of a dense indium oxide/yttria-stabilized zirconia electrode. Solid State Ionics, 1999, 120, 13-25.	2.7	4
61	A low cost synthesis process for vitreous NaAlSi3O8 using sodium zeolite. Journal of Non-Crystalline Solids, 2003, 331, 177-183.	3.1	4
62	Comment on â€œElectronic conductivity of Na-Î²â€³-alumina ceramics at high temperaturesâ€•by M. Fritz, M.R. Barbosa, G. Staikov, W.J. Lorenz, M. SteinbrÃ¼ck, R. KnÃ¶dler. Solid State Ionics, 1994, 68, 335-337.	2.7	3
63	Electrochemical Determination of the Oxygen Solubility of Liquid Silicon and the Role of the Electron Conduction of the Electrolyte. Journal of the Electrochemical Society, 1999, 146, 1130-1133.	2.9	3
64	Characterization of the conduction properties of a solid electrolyte by short-circuiting a potentiometric galvanic cell. Journal of Solid State Electrochemistry, 2005, 9, 616-620.	2.5	3
65	Oxygen permeation studies on La0.8Sr0.2Ga0.75Mg0.15Co0.10O3Â±Î´. Ionics, 2006, 12, 191-198.	2.4	3
66	Comments on â€œIonic transport in (nano)composites for fuel cells, Int. J. Hydrogen Energy 41 (2016) 7666â€“7675â€• International Journal of Hydrogen Energy, 2017, 42, 24587-24589.	7.1	3
67	Thermoelectric power studies on MgO-stabilized Î²â€³-alumina. Journal of Solid State Electrochemistry, 2002, 6, 259-264.	2.5	2
68	An alternative approach to characterize the equilibrium in a biphasic Î±-Al2O3/Na-Î²-alumina mixture as a function of sodium activity. Electrochimica Acta, 2003, 48, 3535-3540.	5.2	2
69	Voltage of a solid electrolyte galvanic cell in terms of the activity of the mobile species of the electrolyte. Electrochimica Acta, 2007, 52, 7409-7411.	5.2	2
70	Electrochemical approaches to thermodynamic characterization of ternary alkali compounds: A review. Solid State Ionics, 2008, 179, 1731-1735.	2.7	2
71	Effect of electrode polarisation on the determination of electronic conduction properties of an oxide ion conductor. Electrochimica Acta, 2010, 55, 8766-8770.	5.2	2
72	Study on phase evolution of GdAl1â˜'Ga O3 system. Journal of Alloys and Compounds, 2010, 492, 325-330.	5.5	2

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73	Oxygen sensor for low temperature applications. Electrochimica Acta, 2011, 56, 1686-1689.	5.2	2
74	Resistive Switching: A Solid-State Electrochemical Phenomenon. ECS Journal of Solid State Science and Technology, 2013, 2, P423-P431.	1.8	2
75	Characterization of the Phase Mixture Comprising Sodium Hafnate and Hafnia. Zeitschrift Fur Anorganische Und Allgemeine Chemie, 2014, 640, 1987-1995.	1.2	2
76	Mesoscopically enhanced ion conductionâ€”claim without evidence. Ionics, 2019, 25, 891-895.	2.4	2
77	Comments on "Enhanced ionic conductivity of yttria-stabilized ZrO2 with natural CuFe-oxide mineral heterogeneous composite for low temperature solid oxide fuel cells, Int. J. Hydrogen Energy 42 (2017) 17495â€“17503". International Journal of Hydrogen Energy, 2019, 44, 27958-27961.	7.1	2
78	Thermodynamic Characterization of Reference Electrode Systems for Galvanic Cells Comprising Alkali Ion Conducting Solid Electrolytes. ECS Transactions, 2009, 16, 517-527.	0.5	1
79	Reply to â€œComments on â€˜Thermodynamics of cementite layer formationâ€™â€• Scripta Materialia, 2010, 63, 351-353.	5.2	1
80	Information content of the voltage vs. current curve of a solid oxide fuel cell. Electrochimica Acta, 2019, 294, 365-375.	5.2	1
81	Chemical Potential vs. Gibbs Free Energy Relationship by Redlich and Kister and the Redlich-Kister Polynomial. International Journal of Thermodynamics, 2014, 17, 250.	1.0	1
82	Title is missing!. Russian Journal of Electrochemistry, 2003, 39, 557-562.	0.9	0
83	Comment on â€˜Thermodynamics and Phase Stability in the Siâ€“O Systemâ€™ by S.M. Schnurre, J. GrÃ¶bner, R. Schmid-Fetzer [J. Non-Cryst. Solids 336 (2004) 1â€“25]. Journal of Non-Crystalline Solids, 2006, 352, 2913.	3.1	0
84	Mixed Protonic-Electronic Conduction in "alpha-Al2O3": An Alternative Hypothesis. Journal of the American Ceramic Society, 2006, 89, 210-215.	3.8	0
85	Crosstalk Effect in Electrochemical Impedance of Micro-Patterned Pt Electrodes on YSZ Thin Film. ECS Transactions, 2006, 2, 21-28.	0.5	0
86	Uphill CO 2 Permeation through an Alkali-Carbonate-Based Composite Membrane. Electrochimica Acta, 2015, 178, 571-573.	5.2	0
87	Low temperature ion conductivitity of a solid oxide electrolyte: the role of electrode polarization. , 1992, , 253-258.		0
88	Relationship between the sodium oxide activity of ceramic (Na-Î² + Î²^{â€³})-alumina and the sodium activity in the ambience of the material. International Journal of Materials Research, 2022, 94, 962-966.	0.3	0