Takashi Nakamura

List of Publications by Year
in descending order

114 papers	2,351 citations	186265 28 h-index	233421 45 g-index
117 all docs	117 docs citations	117 times ranked	2421 citing authors

#	Article	IF	Citations
1	Development of General-Purpose Particle and Heavy Ion Transport Monte Carlo Code. Journal of Nuclear Science and Technology, 2002, 39, 1142-1151.	1.3	355
2	Development of General-Purpose Particle and Heavy Ion Transport Monte Carlo Code.. Journal of Nuclear Science and Technology, 2002, 39, 1142-1151.	1.3	143
3	From Liquid- to Solid-State Batteries: Ion Transfer Kinetics of Heteroionic Interfaces. Electrochemical Energy Reviews, 2020, 3, 221-238.	25.5	117
4	Oxygen nonstoichiometry and defect equilibrium in La2â^'Sr NiO4+. Solid State Ionics, 2009, 180, 368-376.	2.7	111
5	Guidelines for All-Solid-State Battery Design and Electrode Buffer Layers Based on Chemical Potential Profile Calculation. ACS Applied Materials & Interfaces, 2019, 11, 19968-19976.	8.0	77
6	Energy efficiency of ionic transport through proton conducting ceramic electrolytes for energy conversion applications. Journal of Materials Chemistry A, 2018, 6, 15771-15780.	10.3	55
7	Morphological Effect on Reaction Distribution Influenced by Binder Materials in Composite Electrodes for Sheet-type All-Solid-State Lithium-Ion Batteries with the Sulfide-based Solid Electrolyte. Journal of Physical Chemistry C, 2019, 123, 3292-3298.	3.1	53
8	Electronic state of oxygen nonstoichiometric La2â^'xSrxNiO4+Î´ at high temperatures. Physical Chemistry Chemical Physics, 2009, 11, 3055.	2.8	52
9	Bismuth and indium co-doping strategy for developing stable and efficient barium zirconate-based proton conductors for high-performance H-SOFCs. Journal of the European Ceramic Society, 2016, 36, 3423-3431.	5.7	52
10	Electrochemical Behaviors of Mixed Conducting Oxide Anodes for Solid Oxide Fuel Cell. Journal of the Electrochemical Society, 2008, 155, B563.	2.9	49
11	Determination of the Reaction Zone in Gadolinia-Doped Ceria Anode for Solid Oxide Fuel Cell. Journal of the Electrochemical Society, 2008, 155, B1244.	2.9	48
12	Defect chemical studies on oxygen release from the Li-rich cathode material Li_{1.2}Mn_{0.6}Ni_{0.2}O_{2â^'Î´}. Journal of Materials Chemistry A, 2019, 7, 5009-5019.	10.3	47
13	Oxygen defect engineering for the Li-rich cathode material Li_{1.2}Ni_{0.13}Co_{0.13}Mn_{0.54}O_{2â^'Î´}. Journal of Materials Chemistry A, 2021, 9, 3657-3667.	10.3	46
14	Composite Cathode of Perovskite-Related Oxides, (La,Sr)CoO[sub 3â^'Î´]â^•(La,Sr)[sub 2]CoO[sub 4â^'Î´], for Solid Oxide Fuel Cells. Electrochemical and Solid-State Letters, 2009, 12, B135.	2.2	45
15	Structural analysis of La2â^'Sr NiO4+ by high temperature X-ray diffraction. Solid State Ionics, 2010, 181, 292-299.	2.7	45
16	Effect of Cation Ordering on the Performance and Chemical Stability of Layered Double Perovskite Cathodes. Materials, 2018, 11, 196.	2.9	43
17	The effect of interstitial oxygen formation on the crystal lattice deformation in layered perovskite oxides for electrochemical devices. Journal of Materials Chemistry A, 2015, 3, 10471-10479.	10.3	40
18	Thermally-induced and chemically-induced structural changes in layered perovskite-type oxides Nd2â^'Sr NiO4+ (x= 0, 0.2, 0.4). Solid State Ionics, 2010, 181, 402-411.	2.7	39

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19	The crystal structure, oxygen nonstoichiometry and chemical stability of Ba0.5Sr0.5Co0.8Fe0.2O3â^Î´ (BSCF). Physical Chemistry Chemical Physics, 2014, 16, 7307.	2.8	38
20	Effect of Nb doping on the chemical stability of BSCF-based solid solutions. Solid State Ionics, 2014, 262, 719-723.	2.7	37
21	The determining factor for interstitial oxygen formation in Ruddlesdenâ€“Popper type La₂NiO₄-based oxides. Physical Chemistry Chemical Physics, 2016, 18, 1564-1569.	2.8	36
22	Visualization of Inhomogeneous Reaction Distribution in the Model LiCoO₂ Composite Electrode of Lithium Ion Batteries. Journal of Physical Chemistry C, 2017, 121, 2118-2124.	3.1	35
23	3D Operando Imaging and Quantification of Inhomogeneous Electrochemical Reactions in Composite Battery Electrodes. Journal of Physical Chemistry Letters, 2020, 11, 3629-3636.	4.6	35
24	La_{0.8}Sr_{0.2}Co_{1-x}Ni_xO_{3-Î´} as the Efficient Triple Conductor Air Electrode for Protonic Ceramic Cells. ACS Applied Energy Materials, 2021, 4, 554-563.	5.1	34
25	Lattice Oxygen Instability in Oxideâ€Based Intercalation Cathodes: A Case Study of Layered LiNi_{1/3}Co_{1/3}Mn_{1/3}O₂. Advanced Energy Materials, 2021, 11, 2101005.	19.5	34
26	Oxygen nonstoichiometry, the defect equilibrium model and thermodynamic quantities of the Ruddlesdenâ€“Popper oxide Sr₃Fe₂O_{7â^Î´}. Physical Chemistry Chemical Physics, 2015, 17, 7489-7497.	2.8	33
27	Raw Materials for Low-Activation Concrete Neutron Shields. Journal of Nuclear Science and Technology, 2002, 39, 1275-1280.	1.3	30
28	Electrical conductivity, Seebeck coefficient, and defect structure of oxygen nonstoichiometric Nd2â^'Sr NiO4+. Materials Chemistry and Physics, 2010, 122, 250-258.	4.0	30
29	Influence of Active Material Loading on Electrochemical Reactions in Composite Solid-State Battery Electrodes Revealed by Operando 3D CT-XANES Imaging. ACS Applied Energy Materials, 2020, 3, 7782-7793.	5.1	29
30	Impact of Oxygen Defects on Electrochemical Processes and Charge Compensation of Li-Rich Cathode Material Li_{1.2}Mn_{0.6}Ni_{0.2}O_{2â^Î´}. ACS Applied Energy Materials, 2020, 3, 9703-9713.	5.1	24
31	Oxygen nonstoichiometry and chemical stability of Nd2â^'Sr NiO4+. Journal of Solid State Chemistry, 2009, 182, 1533-1537.	2.9	22
32	Oxygen nonstoichiometry and thermodynamic quantities in the Ruddlesdenâ€“Popper oxides La Sr3â^'Fe2O7â^'. Solid State Ionics, 2016, 288, 298-302.	2.7	21
33	Operando Soft Xâ€ray Absorption Spectroscopic Study on a Solid Oxide Fuel Cell Cathode during Electrochemical Oxygen Reduction. ChemSusChem, 2017, 10, 2008-2014.	6.8	20
34	Evaluation of electrical conductivity and oxygen diffusivity of the typical Ruddlesden-Popper oxide Sr3Fe2O7-. Ceramics International, 2017, 43, 16264-16269.	4.8	18
35	Defect chemical and statistical thermodynamic studies on oxygen nonstoichiometric Nd2â^'Sr NiO4+. Solid State Ionics, 2009, 180, 1406-1413.	2.7	17
36	Thermodynamic quantities and defect equilibrium in La2â^'Sr NiO4+. Journal of Solid State Chemistry, 2009, 182, 1121-1128.	2.9	17

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37	Solvation Mechanism of Task-Specific Ionic Liquids in Water: A Combined Investigation Using Classical Molecular Dynamics and Density Functional Theory. Journal of Physical Chemistry B, 2015, 119, 12894-12904.	2.6	16
38	Influence of microstructures on conductivity in Tysonite-type fluoride ion conductors. Solid State Ionics, 2019, 338, 113-120.	2.7	16
39	Analysis of structural phase transition of Nd2NiO4+Î´ by scanning thermal measurement under controlled oxygen partial pressure. Thermochimica Acta, 2011, 523, 46-50.	2.7	15
40	Evaluation of electrochemical properties of LaNi0.6Fe0.4O3â¯ - Ce0.9Gd0.1O1.95 composite as air electrode for SOFC. Solid State Ionics, 2019, 332, 70-76.	2.7	15
41	Electromotive force measurements of LiCoO2 electrode on a lithium ion-conducting glass ceramics under mechanical stress. Solid State Ionics, 2016, 285, 75-78.	2.7	14
42	Operando Observation of Formation and Annihilation of Inhomogeneous Reaction Distribution in a Composite Electrode for Lithiumâ€ion Batteries. Batteries and Supercaps, 2019, 2, 688-694.	4.7	14
43	Thermodynamic Analysis Enables Quantitative Evaluation of Lattice Oxygen Stability in Li-Ion Battery Cathodes. ACS Energy Letters, 2022, 7, 1687-1693.	17.4	14
44	Interstitial Oxygen and Dopant Atoms Arrangement in Tin-Doped Indium Oxide. Materials Transactions, 2007, 48, 666-669.	1.2	13
45	Effect of Mechanical Stress on Lithium Chemical Potential in Positive Electrodes and Solid Electrolytes for Lithium Ion Batteries. Electrochemistry, 2015, 83, 894-897.	1.4	13
46	Visualization of the reaction distribution in a composite cathode for an all-solid-state lithium-ion battery. Journal of the Ceramic Society of Japan, 2017, 125, 299-302.	1.1	13
47	Chemically-induced expansion of Zr0.2Ce0.8O2â¯Î´. Solid State Ionics, 2014, 261, 1-4.	2.7	12
48	Oxygen Nonstoichiometry and Thermodynamic Explanation of Large Oxygenâ€Deficient Ruddlesdenâ€“Popper Oxides La_xSr_{3â¯x}Fe₂O_{7â¯Î´}. Journal of the American Ceramic Society, 2016, 99, 3792-3801.	3.8	12
49	Theoretical study on temperature effect of electronic structure and spin state in LaCoO3 by using density functional theory. Solid State Ionics, 2016, 285, 195-201.	2.7	12
50	Promotion of Oxygen Surface Reaction at the Hetero-Interface of (La,Sr)CoO3 / (La,Sr)2CoO4. ECS Transactions, 2007, 7, 1055-1060.	0.5	11
51	Evaluation of the effective reaction zone in a composite cathode for lithium ion batteries. Solid State Ionics, 2014, 262, 66-69.	2.7	11
52	Electrode Performance at Hetero-interface of Perovskite-related Oxides, (La, Sr)CoO3-Î´ / (La, Sr)2CoO4-Î´. ECS Transactions, 2007, 7, 1287-1292.	0.5	10
53	Oxygen reduction reaction process of LaNi0.6Fe0.4O3â¯ film â€“ porous Ce0.9Gd0.1O1.95 heterostructure electrode. Solid State Ionics, 2017, 312, 80-87.	2.7	10
54	Oxygen Nonstoichiometry, Crystal Structure, and Mechanical Properties of La2NiO4+Î´. ECS Transactions, 2009, 25, 2573-2580.	0.5	9

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55	Loop antenna with a branch wire for circular polarization. Electronics and Communications in Japan, 1987, 70, 110-117.	0.1	8
56	Correlation between Tritium and152Eu Induced in Various Types of Concrete by Thermal Neutron Irradiation. Journal of Nuclear Science and Technology, 2002, 39, 215-225.	1.3	8
57	Elution of Hexavalent Chromium from Molten Sewage Sludge Slag: Influence of Sample Basicity and Cooling Rate. Industrial & Engineering Chemistry Research, 2013, 52, 3903-3909.	3.7	8
58	Theoretical evaluation on solubility of synthesized task specific ionic liquids in water. Journal of Molecular Liquids, 2014, 200, 232-237.	4.9	8
59	Analysis of structural phase transition behavior of Ln2NiO4+ (Ln: Nd, Pr) with variation of oxygen content. Solid State Ionics, 2014, 262, 724-727.	2.7	8
60	Development of in situ soft X-ray absorption spectroscopic technique under high temperature and controlled atmosphere. Solid State Ionics, 2014, 262, 911-913.	2.7	8
61	High-valence-state manganate(<scp>v</scp>) Ba₃Mn₂O₈ as an efficient anode of a proton-conducting solid oxide steam electrolyzer. Inorganic Chemistry Frontiers, 2019, 6, 1587-1597.	6.0	8
62	Tailoring the chemical stability of cobalt-rich perovskite mixed conductor. Solid State Ionics, 2016, 288, 2-5.	2.7	7
63	(Invited) Triple Phase Boundary Reaction in a Mixed-Conducting SOFC Cathode. ECS Transactions, 2017, 77, 41-47.	0.5	7
64	Preparation of Metaettringite from Ettringite and Its Performance for Boron Removal from Boric Acid Solution. Materials Transactions, 2017, 58, 1761-1767.	1.2	7
65	Direct Evaluation of Oxygen Chemical Potential Distribution in an SOFC Cathode by In Situ X-Ray Absorption Spectroscopy. ECS Transactions, 2013, 57, 1925-1932.	0.5	6
66	Oxygen Nonstoichiometry and Electrochemical Properties of LaNiO_{3-Î´}. ECS Transactions, 2015, 66, 177-183.	0.5	6
67	In-situ Simultaneous Soft X-ray Absorption and Emission Spectroscopy under Controlled Atmosphere and Temperature. Electrochemistry, 2016, 84, 793-796.	1.4	6
68	Experimental Evaluation of Influence of Stress on Li Chemical Potential and Phase Equilibrium in Two-phase Battery Electrode Materials. Electrochemistry, 2021, 89, 355-362.	1.4	6
69	Reducible and non-reducible defect clusters in tin-doped indium oxide. Solid State Communications, 2010, 150, 18-21.	1.9	5
70	Electrochemical Study of LaNi_{0.6}Fe_{0.4}O_{3-Î´}Film Electrode. Journal of the Electrochemical Society, 2015, 162, F1445-F1450.	2.9	5
71	Oxygen nonstoichiometry and transport properties of LaNi0.6Co0.4O3â^'. Solid State Ionics, 2016, 292, 52-58.	2.7	5
72	Defect chemistry and thermodynamic properties of proton dissolution into BaZr 0.9 Y 0.1 O 3â^'Î´. Solid State Ionics, 2017, 303, 12-15.	2.7	5

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73	Electrochemical performance of LaNi0.6Co0.4O3-Î´â€“Ce0.9Gd0.1O1.95 composite electrode and evaluation of its effective reaction length. Journal of Solid State Electrochemistry, 2018, 22, 3955-3963.	2.5	5
74	Vâ€“V Dimerization and Magnetic State of Cobalt Ions in Ilmenite-Type CoVO₃. Inorganic Chemistry, 2022, 61, 7841-7846.	4.0	5
75	Response Function Measurements of the Self-TOF Neutron Detector for Neutrons up to 800 MeV. Journal of Nuclear Science and Technology, 2001, 38, 8-14.	1.3	4
76	Theoretical Modeling of Oxygen and Water Adsorptionon Indium Oxide (111) Surface. ACS Symposium Series, 2015, , 137-149.	0.5	4
77	Mechanism of Chromium Poisoning in SOFC Cathode Investigated by Using Pattern Thin Film Model Electrode. ECS Transactions, 2017, 78, 965-970.	0.5	4
78	The influence of crystal orientation on the change in Li chemical potential of LiCoO2 under mechanical stress. Solid State Ionics, 2017, 299, 8-12.	2.7	4
79	Raw Materials for Low-Activation Concrete Neutron Shields.. Journal of Nuclear Science and Technology, 2002, 39, 1275-1280.	1.3	4
80	Oxygen Nonstoichiometry of Ce0.6La0.4O2-Â. ECS Transactions, 2013, 57, 1125-1133.	0.5	3
81	Structural Changes of Ni/YSZ Cermet for Solid Oxide Fuel Cells in Hydrocarbon Gas Containing Atmospheres. ECS Transactions, 2013, 57, 1539-1544.	0.5	3
82	Electronic conduction mechanism and defect chemical model of LaNi0.4Fe0.6O3â˜. Solid State Ionics, 2017, 310, 148-153.	2.7	3
83	Contribution of Triple-Phase Boundary Reaction in Cathodic Reaction of Solid Oxide Fuel Cell. ECS Transactions, 2017, 78, 847-853.	0.5	3
84	Effect of post-deposition annealing in oxygen atmosphere on LiCoMnO4 thin films for 5â€Ⅴ lithium batteries. Thin Solid Films, 2019, 686, 137433.	1.8	3
85	Response Function Measurements of the Self-TOF Neutron Detector for Neutrons up to 800 MeV.. Journal of Nuclear Science and Technology, 2001, 38, 8-14.	1.3	3
86	Projectile Dependency of Radioactivities of Spallation Products Induced in Copper. Journal of Nuclear Science and Technology, 2002, 39, 1179-1182.	1.3	2
87	Electronic Properties and Oxygen Nonstoichiometry of Mixed-conducting Oxide La1-ÏŠSrÏŠCoO3-Î´ Thin Films at High Temperature. ECS Transactions, 2009, 16, 311-316.	0.5	2
88	Electrical Conductivity and Thermoelectric Power of La2-xSrxNiO4+Î´. ECS Transactions, 2009, 16, 317-325.	0.5	2
89	Oxygen Nonstoichiometry and Electrochemical Properties in a Thin Film of Nickel Substituted Lanthanum Cobaltite for SOFCs. ECS Transactions, 2013, 57, 1893-1899.	0.5	2
90	Electronic Structures of LaCoO3-Based Oxides Studied by Soft X-ray Absorption Spectroscopy under Controlled Temperatures and Oxygen Partial Pressures. ECS Transactions, 2013, 57, 2051-2056.	0.5	2

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91	Investigation of rate-determining step of LaNi0.6Co0.4O3-Î´ film electrode. Journal of Solid State Electrochemistry, 2018, 22, 2227-2235.	2.5	2
92	Correlation between Tritium and 152Eu Induced in Various Types of Concrete by Thermal Neutron Irradiation.. Journal of Nuclear Science and Technology, 2002, 39, 215-225.	1.3	2
93	High Energy Neutron Activation Cross Sections. Journal of Nuclear Science and Technology, 2002, 39, 1392-1395.	1.3	1
94	The Effect of Cation Substitution on Chemical Stability of Ba0.5Sr0.5Co0.8Fe0.2O3-Â-Based Mixed Conductors. ECS Transactions, 2013, 57, 2041-2049.	0.5	1
95	Evaluation of High-temperature Electronic and Electrochemical Properties of the Strained La1^|^minus;xSrxCoO3^|^minus;^|^delta; Films Prepared by a Pulsed Laser Deposition Technique. Electrochemistry, 2014, 82, 884-890.	1.4	1
96	(Invited) Determination of Effective Reaction Area in a Mixed-Conducting SOFC Cathode. ECS Transactions, 2015, 66, 129-135.	0.5	1
97	Quantitative Evaluation of Electrochemically Active Area in an SOFC Cathode by Oxygen Isotopic Exchange Measurements of a Model Patterned Electrode. ECS Transactions, 2015, 68, 623-630.	0.5	1
98	Chemically-induced structural deformation of layered perovskite oxides. , 2016, , .		1
99	Materials Properties for the Simulation of Electro-Chemo-Mechanical Coupling Behavior of SOFC. ECS Transactions, 2017, 78, 2309-2316.	0.5	1
100	Nonstoichiometry and the Origin of Electrochemical Properties of Functional Oxides for Energy Conversion and Storage Technologies. Electrochemistry, 2017, 85, 552-558.	1.4	1
101	Evaluation of the Electronic and Local Structure of Mn in Proton-Conducting Oxide, Ca(Zr,Mn)O_{3â^Î´}, To Elucidate a Direct Hydrogen Dissolution Reaction. Journal of Physical Chemistry C, 2019, 123, 16034-16045.	3.1	1
102	A design of wide-bandpass filter using transmission lines and lumped capacitances. Electronics and Communications in Japan, Part III: Fundamental Electronic Science (English Translation of Denshi) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 2	0.1	0
103	Superdirective cascaded dipole array. Electronics and Communications in Japan, 1992, 75, 80-88.	0.1	0
104	Development of Heavy Ion Transport Monte Carlo Code. Journal of Nuclear Science and Technology, 2002, 39, 1013-1016.	1.3	0
105	Helium Production Due to Neutron Streaming through Small Circular Ducts in a Fusion Reactor Blanket by Analytical Fitting from Monte Carlo Calculation Results. Fusion Science and Technology, 2003, 43, 559-568.	1.1	0
106	Electrochemical Behaviors of Mixed Conducting Oxide Anodes for SOFC. ECS Transactions, 2007, 7, 1601-1607.	0.5	0
107	Oxygen Nonstoichiometry and Defect Equilibrium in La_{2-x}Sr_xNiO_{4+Î´}. ECS Transactions, 2009, 16, 193-198.	0.5	0
108	Influence of Surface/Interface on the Performance of MIEC Cathode for SOFC. ECS Transactions, 2014, 61, 37-46.	0.5	0

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109	Evaluation of Li chemical potential of mechanically stressed LiCoO<inf>2</inf>. , 2016, , .		0
110	About Special Issue â€œExperiences in Criticality Accident of JCOâ€• Japanese Journal of Health Physics, 2000, 35, 3-3.	0.1	0
111	Outline of a Practical Manual on Shielding Calculation of Radiation Facilities. Japanese Journal of Health Physics, 2001, 36, 3-5.	0.1	0
112	Development of a Thermal Neutron Reference Field Using a Graphite Pile at the High Energy Accelerator Organization.. Japanese Journal of Health Physics, 2002, 37, 118-127.	0.1	0
113	In Situ Evaluation of the Influence of Interstitial Oxygen on the Elastic Modulus of La2NiO4. Metals, 2021, 11, 1889.	2.3	0
114	High-temperature ionic logic gates composed of an ionic rectifying solidâ€“electrolyte interface. RSC Advances, 2022, 12, 18501-18506.	3.6	0