Kazuhisa Sato

List of Publications by Year in Descending Order

120 papers	1,661 citations	21 h-index	37 g-index
133 ext. papers	1,784 ext. citations	2.5 avg, IF	4.2 L-index

#	Paper	IF	Citations
120	Effects of temperature and hydrogen concentration during reduction on deformation behavior of NiO- yttria stabilized zirconia used in solid oxide fuel cells. *Journal of Power Sources*, **2022**, 535, 231384	8.9	0
119	Development of dental inspection method: nondestructive evaluation of a dentin-adhesive interface by acoustic emission. *Journal of Prosthodontic Research*, **2021**, 65, 438-442	4.3	0
118	Effect of pinholes in electrolyte on re-oxidation tolerance of anode-supported solid oxide fuel cells. *Fuel Cells*, **2021**, 21, 398-407	2.9	1
117	Relationship between microstructure and deformation of porous Ni-based cermets under redox cycling. *SN Applied Sciences*, **2021**, 3, 1	1.8	1
116	Influences of Ni content and porosity on mechanical properties of Ni⁇SZ composites under solid oxide fuel cell operating conditions. *Journal of Materials Science*, **2020**, 55, 8679-8693	4.3	3
115	X-Ray stress measurement of the electrolyte for anode-supported SOFCs by the cos □method. *The Proceedings of Mechanical Engineering Congress Japan*, **2019**, 2019, J03101	0	
114	Effects of temperatures and carbon dioxide nanobubbles on superior electric storage for anodically oxidized films of AlY10 amorphous alloy. *AIP Advances*, **2019**, 9, 095202	1.5	5
113	Anisotropy of Fracture Toughness of Stabilized Zirconia Investigated by Nano-Identation Method. *Materials Transactions*, **2018**, 59, 23-26	1.3	1
112	Determination of the interfacial fracture energy in SOFC electrode/electrolyte interfaces by using modified four-point bending method. *The Proceedings of Mechanical Engineering Congress Japan*, **2018**, 2018, J0310202	0	
111	Electrochemical Degradation Caused by Mechanical Damage in Silicon Negative Electrodes. *ECS Transactions*, **2017**, 75, 31-37	1	
110	Parallel Large-Scale Molecular Dynamics Simulation Opens New Perspective to Clarify the Effect of a Porous Structure on the Sintering Process of Ni/YSZ Multiparticles. *ACS Applied Materials & Interfaces*, **2017**, 9, 31816-31824	9.5	18
109	Mechanical Strength Evaluation of YSZ, GDC and LSCF under SOFC Operating Conditions. *ECS Transactions*, **2017**, 78, 2181-2190	1	1
108	Evaluation of Mechanical Damages in SOFCs during Start/Stop Operation by Using Acoustic Emission Technique. *ECS Transactions*, **2017**, 78, 2355-2363	1	4
107	Investigation into Mechanical Damages of SOFCs under Redox Cycle Operation. *The Proceedings of Mechanical Engineering Congress Japan*, **2017**, 2017, J0620102	0	
106	Mechanical Degradation and Electrochemical Properties Variation in Electrode Materials for Lithium-Ion Batteries. *The Proceedings of Mechanical Engineering Congress Japan*, **2017**, 2017, J0620103	0	
105	Estimation of micro-size defects in electrolyte thin-film by X-ray stress measurement for anode-supported solid oxide fuel cells. *Mechanical Engineering Journal*, **2016**, 3, 16-00177-16-00177	0.5	2
104	Investigation of mechanical damage of SOFC caused by electrochemical oxidation using in-situ acoustic emission and electrochemical technique **2016**,		2

103	Multi-nanoparticle model simulations of the porosity effect on sintering processes in Ni/YSZ and Ni/ScSZ by the molecular dynamics method. *Journal of Materials Chemistry A*, **2015**, 3, 21518-21527	13	15
102	OS15-2 Determination of Fracture Properties in Ion Conducting Ceramics under Simulated Operating Conditions for Solid Oxide Fuel Cells(Durability and reliability of next-generation energy systems 1,OS15 Durability and reliability of next-generation energy systems,APPLICATIONS). *The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian*	0	
101	Communication: different behavior of Young□s modulus and fracture strength of CeO2: density functional theory calculations. *Journal of Chemical Physics*, **2014**, 140, 121102	3.9	12
100	Mechanical Analysis to Improve Reliability and Durability of Solid Oxide Fuel Cells. *Materials Science Forum*, **2014**, 783-786, 1704-1707	0.4	
99	Crystal structure and thermal expansion behavior of oxygen stoichiometric lanthanum strontium manganite at high temperature. *Solid State Ionics*, **2014**, 256, 83-88	3.3	12
98	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	1.2	1
97	Molecular Dynamics Simulation of Ni Nanoparticles Sintering Process in Ni/YSZ Multi-Nanoparticle System. *Journal of Physical Chemistry C*, **2013**, 117, 9663-9672	3.8	42
96	Theoretical Study on the Effect of Three-Dimensional Porous Structure on the Sintering of Nickel Nanoparticles in the Ni/YSZ Anode. *ECS Transactions*, **2013**, 57, 2459-2464	1	3
95	J061023 Effect of Uniaxial strain on conductivities and non-stoichiometry change of oxygen ion and mixed conductors. *The Proceedings of Mechanical Engineering Congress Japan*, **2013**, 2013, _J061023-1-_J061023-2	0	
94	J061011 Evaluation of mechanical properties of Ni/NiO-YSZ under high temperature/redox cycle. *The Proceedings of Mechanical Engineering Congress Japan*, **2013**, 2013, _J061011-1-_J061011-2	0	
93	A comparative study of NiO□e0.9Gd0.1O1.95 nanocomposite powders synthesized by hydroxide and oxalate co-precipitation methods. *Ceramics International*, **2012**, 38, 85-92	5.1	17
92	J056045 Molecular Dynamics Simulation of Dopant Effects on Sintering Process in Solid Oxide Fuel Cell Anode. *The Proceedings of Mechanical Engineering Congress Japan*, **2012**, 2012, _J056045-1-_J056045-3	0	
91	178 Effect of temperature on the mechanical properties of Ni/NiO-YSZ cermets for SOFC anodes. *The Proceedings of Conference of Tohoku Branch*, **2012**, 2012.47, 162-163	0	
90	Mining of Co-occurring Clusters for Damage Pattern Extraction of a Fuel Cell. *Transactions of the Japanese Society for Artificial Intelligence*, **2012**, 27, 121-132	0.7	1
89	Co-occurring Cluster Mining for Damage Patterns Analysis of a Fuel Cell. *Lecture Notes in Computer Science*, **2012**, 49-60	0.9	2
88	J056011 Information Technique for Improvement of Reliability on Solid Electrochemical Devices. *The Proceedings of Mechanical Engineering Congress Japan*, **2012**, 2012, _J056011-1-_J056011-3	0	
87	214 Dimensional Behavior of Ni-YSZ Cermets during Redox Cycling. *The Proceedings of Conference of Tohoku Branch*, **2012**, 2012.47, 234-235	0	
86	Electrical Conductivity and Oxygen Diffusivity of Perovskite-Type Solid Solution La0.6Sr0.4Co1-yFeyO3-□(y=0.2, 0.4, 0.5, 0.6, 0.8). *ECS Transactions*, **2011**, 35, 1899-1907	1	21

85	Oxygen Nonstoichiometry of Perovskite-type La0.6Sr0.4Co1-yFeyO3-□(y=0, 0.2, 0.4, 0.5, 0.6, 0.8, 1) SOFC Cathode Materials. *ECS Transactions*, **2011**, 35, 1881-1890	1	8
84	Synthesis of La0.8Sr0.2Co0.8Fe0.2O3Nanopowders and Their Application in Solid Oxide Fuel Cells. *IOP Conference Series: Materials Science and Engineering*, **2011**, 18, 132002	0.4	
83	Mechanical Properties Evaluation Method for Non-Stoichiometric Materials under High Temperature and Oxidizing/Reducing Conditions. *Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A*, **2011**, 77, 1357-1366		3
82	Visualization of Damage Progress in Solid Oxide Fuel Cells. *Journal of Environment and Engineering*, **2011**, 6, 499-511		6
81	Elastic moduli of Ce0.9Gd0.1O2 □at high temperatures under controlled atmospheres. *Solid State Ionics*, **2011**, 198, 32-38	3.3	28
80	Elastic modulus and internal friction of SOFC electrolytes at high temperatures under controlled atmospheres. *Journal of Power Sources*, **2011**, 196, 7989-7993	8.9	60
79	Simple and rapid preparation of Ce0.9Gd0.1O1.95 electrolyte films for anode-supported solid oxide fuel cells. *Surface and Coatings Technology*, **2011**, 205, 2813-2817	4.4	5
78	Electrical conductivity and chemical diffusion in Perovskite-type proton conductors in H2□H2O gas mixtures. *Solid State Ionics*, **2011**, 192, 76-82	3.3	7
77	Thermal and chemical lattice expansibility of La0.6Sr0.4Co1 □yFeyO3 □(y = 0.2, 0.4, 0.6 and 0.8). *Solid State Ionics*, **2011**, 186, 37-43	3.3	73
76	Ionic Conductivity in Uniaxial Micro Strain/Stress Fields of Yttria-Stabilized Zirconia. *Japanese Journal of Applied Physics*, **2011**, 50, 055803	1.4	2
75	Multiscale Simulation of Electro-Chemo-Mechanical Coupling Behavior of PEN Structure under SOFC Operation. *ECS Transactions*, **2011**, 35, 923-933	1	13
74	Cooperative Investigations on Degradation of Cathode Materials in Segment-In-Series Cells by MHI. *ECS Transactions*, **2011**, 35, 2191-2200	1	9
73	Effect of Redox Cycling on Mechanical Properties of Ni-YSZ Cermets for SOFC Anodes. *ECS Transactions*, **2011**, 35, 1473-1482	1	5
72	In situ Observation of the Deformation and Mechanical Damage of SOFC Cell/Stack. *ECS Transactions*, **2011**, 35, 225-229	1	2
71	High-Temperature Protonic Conduction in LaFeO[sub 3]□SrFeO[sub 3]□SrZrO[sub 3] Solid Solutions. *Journal of the Electrochemical Society*, **2011**, 158, B180	3.9	3
70	Mechanical Properties of Ce0.9Gd0.1O2-□at High Temperatures under Controlled Atmospheres. *ECS Transactions*, **2011**, 35, 1145-1149	1	3
69	Co-precipitation synthesis and characterization of NiO-Ce0.8Sm0.2O1.9 nanocomposite powders: effect of precipitation agents. *Journal of Nanoscience and Nanotechnology*, **2011**, 11, 2336-43	1.3	1
68	Synthesis of La0.8Sr0.2Co0.8Fe0.2O3 Nanopowders and Their Application in Solid Oxide Fuel Cells. *Journal of Fuel Cell Science and Technology*, **2011**, 8,		2

67	Ionic Conductivity in Uniaxial Micro Strain/Stress Fields of Yttria-Stabilized Zirconia. *Japanese Journal of Applied Physics*, **2011**, 50, 055803	1.4	6
66	Extraction of Essential Events with Application to Damage Evaluation on Fuel Cells. *Smart Innovation, Systems and Technologies*, **2011**, 89-108	0.5	1
65	Kullback-Leibler Divergence Based Kernel SOM for Visualization of Damage Process on Fuel Cells **2010**,		8
64	Development of In-Situ Mechanical Testing Method for SOFC Components **2010**,		2
63	Visualization of Damage Progress on Solid Oxide Fuel Cell. *Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A*, **2010**, 76, 223-232		1
62	Thermally-induced and chemically-induced structural changes in layered perovskite-type oxides Nd2 □kSrxNiO4 + □(x = 0, 0.2, 0.4). *Solid State Ionics*, **2010**, 181, 402-411	3.3	30
61	Improvement of electrochemical performance of anode-supported SOFCs by NiO□Ce0.9Gd0.1O1.95 nanocomposite powders. *Solid State Ionics*, **2010**, 181, 1238-1243	3.3	17
60	Defect structure analysis of proton-oxide ion mixed conductor BaCe0.9Nd0.1O3□*Solid State Ionics*, **2010**, 181, 1336-1343	3.3	8
59	Electrical conductivity, Seebeck coefficient, and defect structure of oxygen nonstoichiometric Nd2□SrxNiO4+□*Materials Chemistry and Physics*, **2010**, 122, 250-258	4.4	26
58	A simple, rapid spray method for preparing anode-supported solid oxide fuel cells with GDC electrolyte thin films. *Journal of Membrane Science*, **2010**, 350, 1-4	9.6	11
57	Effect of thickness of Gd0.1Ce0.9O1.95 electrolyte films on electrical performance of anode-supported solid oxide fuel cells. *Journal of Power Sources*, **2010**, 195, 5487-5492	8.9	24
56	Fracture process of nonstoichiometric oxide based solid oxide fuel cell under oxidizing/reducing gradient conditions. *Journal of Power Sources*, **2010**, 195, 5481-5486	8.9	21
55	Reaction kinetics on platinum electrode / yttrium-doped barium cerate interface under H2□H2O atmosphere. *Solid State Ionics*, **2010**, 181, 240-248	3.3	13
54	Structural analysis of La2□SrxNiO4+□by high temperature X-ray diffraction. *Solid State Ionics*, **2010**, 181, 292-299	3.3	38
53	Electrical conduction and mass transport properties of SrZr0.99Fe0.01O3□*Solid State Ionics*, **2010**, 181, 868-873	3.3	3
52	Oxygen nonstoichiometry and thermo-chemical stability of La0.6Sr0.4Co1-yFeyO3-□(y = 0.2, 0.4, 0.6, 0.8). *Solid State Ionics*, **2010**, 181, 1713-1719	3.3	76
51	Carbon Deposition and Electrochemical Reaction of Anode for SOFC in Methane Containing Atmosphere. *ECS Transactions*, **2009**, 16, 213-218	1	4
50	Oxygen Nonstoichiometry and Defect Equilibrium in La2-xSrxNiO4+□*ECS Transactions*, **2009**, 16, 193-198	1	

49	Composite Cathode of Perovskite-Related Oxides, (La,Sr)CoO[sub 3][(La,Sr)[sub 2]CoO[sub 4]] for Solid Oxide Fuel Cells. *Electrochemical and Solid-State Letters*, **2009**, 12, B135		44
48	Oxygen Nonstoichiometry, Crystal Structure, and Mechanical Properties of La2NiO4+δ. *ECS Transactions*, **2009**, 25, 2573-2580	1	9
47	Preparation of Doped Ceria Electrolyte Films for SOFCs by Spray Coating Method. *Journal of Dispersion Science and Technology*, **2009**, 30, 241-245	1.5	11
46	Deformation and Fracture Characteristics of Zirconia and Ceria-Based Electrolytes for SOFCs under Reducing Atmospheres. *ECS Transactions*, **2009**, 25, 1565-1572	1	12
45	High-Temperature Defect and Crystal Structure of Perovskite Type Oxide Ion Conductor La0.8Sr0.2Ga0.8Mg0.15Co0.05O3-δ. *ECS Transactions*, **2009**, 25, 1701-1708	1	4
44	Detection of Degradation of Lithium-Ion Batteries with Acoustic Emission Technique. *ECS Transactions*, **2009**, 25, 163-167	1	11
43	Investigation of High Temperature Elastic Modulus and Internal Friction of SOFC Electrolytes Using Resonance Method. *ECS Transactions*, **2009**, 25, 1673-1677	1	8
42	Design Concept for the High Temperature Photoelectronic Devices Using SrTiO[sub 3]. *Journal of the Electrochemical Society*, **2009**, 156, P107	3.9	
41	The Design Concept for High-Temperature Photo-Electronic Devices using SrTiO3. *ECS Transactions* , **2009**, 16, 459-469	1	
40	Classification of Mechanical Failure in SOFC and Strategy for Evaluation of Operational Margin. *ECS Transactions*, **2009**, 25, 467-472	1	8
39	Conductivity Variation of Yttria-Stabilized Zirconia Under Stress. *ECS Transactions*, **2009**, 16, 125-132	1	4
38	High-Temperature Gravimetric Study on the Kinetics of the Formation of SrTiO3 by Solid State Reaction of SrCO3 and TiO2. *ECS Transactions*, **2009**, 16, 205-210	1	2
37	Conductivities and Seebeck Coefficients of donor-doped-SrTiO3 Oxide Ceramics. *ECS Transactions*, **2009**, 25, 2631-2638	1	4
36	Anode-Supported SOFCs with Electrolyte Thin Films Prepared by Spray Coating. *Materials Science Forum*, **2009**, 631-632, 319-324	0.4	
35	Effect of Y2O3 addition on the conductivity and elastic modulus of (CeO2)1 −x(YO1.5)x. *Solid State Ionics*, **2009**, 180, 1220-1225	3.3	18
34	Defect structure analysis of B-site doped perovskite-type proton conducting oxide BaCeO3 Part 1: The defect concentration of BaCe0.9M0.1O3−δ (M=Y and Yb). *Solid State Ionics*, **2009**, 180, 127-131	3.3	44
33	Oxygen nonstoichiometry and defect equilibrium in La2 −xSrxNiO4 + δ. *Solid State Ionics*, **2009**, 180, 368-376	3.3	94
32	Defect chemical and statistical thermodynamic studies on oxygen nonstoichiometric Nd2−xSrxNiO4+δ. *Solid State Ionics*, **2009**, 180, 1406-1413	3.3	16

31	Thermodynamic quantities and defect equilibrium in La2SrxNiO4+ *Journal of Solid State Chemistry*, **2009**, 182, 1121-1128	3.3	16
30	Oxygen nonstoichiometry and chemical stability of Nd2SrxNiO4+ *Journal of Solid State Chemistry*, **2009**, 182, 1533-1537	3.3	21
29	High Temperature Defect Equilibrium, Solid State Properties and Crystal Structure of La0.6Sr0.4Co1-yFeyO3- (y=0.2, 0.4, 0.6, 0.8) for Cathode of Solid Oxide Fuel Cells. *ECS Transactions* , **2009**, 25, 2375-2380	1	8
28	Electronic state of oxygen nonstoichiometric La(2-x)Sr(x)NiO(4+delta) at high temperatures. *Physical Chemistry Chemical Physics*, **2009**, 11, 3055-62	3.6	47
27	Synthesis of NiOCe0.9Gd0.1O1.95 nanocomposite powders for low-temperature solid oxide fuel cell anodes by co-precipitation. *Scripta Materialia*, **2009**, 60, 254-256	5.6	50
26	Electrical Conductivity and Thermoelectric Power of La2-xSrxNiO4+ *ECS Transactions*, **2009**, 16, 317-325	1	
25	S0305-3-1 Relationship between High Temperature Creep and Electrochemical Properties in CERIA-based Electrolytes. *The Proceedings of the JSME Annual Meeting*, **2009**, 2009.1, 233-234		
24	Growth Analysis of Neighbor Network for Evaluation of Damage Progress. *Lecture Notes in Computer Science*, **2009**, 933-940	0.9	2
23	Determination of the Reaction Zone in Gadolinia-Doped Ceria Anode for Solid Oxide Fuel Cell. *Journal of the Electrochemical Society*, **2008**, 155, B1244	3.9	42
22	Electrochemical Behaviors of Mixed Conducting Oxide Anodes for Solid Oxide Fuel Cell. *Journal of the Electrochemical Society*, **2008**, 155, B563	3.9	43
21	Electrical Properties of Nb-Doped SrTiO[sub 3] Ceramics with Excess TiO[sub 2] for SOFC Anodes and Interconnects. *Journal of the Electrochemical Society*, **2008**, 155, B16	3.9	13
20	Oxygen nonstoichiometry and defect structure analysis of B-site mixed perovskite-type oxide (La, Sr)(Cr, M)O3 (M=Ti, Mn and Fe). *Journal of Solid State Chemistry*, **2008**, 181, 3177-3184	3.3	80
19	Preparation of SDC electrolyte thin films on dense and porous substrates by modified sol gel route. *Materials Science and Engineering B: Solid-State Materials for Advanced Technology*, **2008**, 148, 73-76	3.1	20
18	Hydrogen permeability and electrical properties in oxide composites?. *Solid State Ionics*, **2008**, 178, 1663-1667	3.3	19
17	Enhancement of oxygen exchange at the hetero interface of (La,Sr)CoO3/(La,Sr)2CoO4 in composite ceramics. *Solid State Ionics*, **2008**, 178, 1843-1852	3.3	114
16	Slow relaxation kinetics of Sr(Zr, Y)O3 in wet atmosphere. *Solid State Ionics*, **2008**, 179, 851-854	3.3	11
15	Oxygen nonstoichiometry of the perovskite-type oxides BaCe0.9M0.1O3 (M=Y, Yb, Sm, Tb, and Nd). *Solid State Ionics*, **2008**, 179, 529-535	3.3	35
14	Defect structure analysis of B-site doped perovskite-type proton conducting oxide BaCeO3: Part 2: The electrical conductivity and diffusion coefficient of BaCe0.9Y0.1O3 *Solid State Ionics*, **2008**, 179, 2240-2247	3.3	72

13	Defect equilibrium and electron transport in the bulk of single crystal SrTi1 xNbxO3 (x = 0.01, 0.001, 0.0002). *Solid State Ionics*, **2008**, 179, 2335-2344	3.3	5
12	Surface reaction of hydrogen on a palladium alloy membrane under co-existence of H2O, CO, CO2 or CH4. *International Journal of Hydrogen Energy*, **2007**, 32, 4023-4029	6.7	37
11	Promotion of Oxygen Surface Reaction at the Hetero-Interface of (La,Sr)CoO3 / (La,Sr)2CoO4. *ECS Transactions*, **2007**, 7, 1055-1060	1	11
10	Microstructural Changes of Ni/YSZ Cermet under Repeated Redox Reaction in Environmental Scanning Electron Microscope (ESEM). *ECS Transactions*, **2007**, 7, 1373-1380	1	4
9	Electrode Performance at Hetero-interface of Perovskite-related Oxides, (La, Sr)CoO3-δ/ (La, Sr)2CoO4-δ*ECS Transactions*, **2007**, 7, 1287-1292	1	10
8	Electrochemical Behaviors of Mixed Conducting Oxide Anodes for SOFC. *ECS Transactions*, **2007**, 7, 1601-1607		
7	Combining Burst Extraction Method and Sequence-Based SOM for Evaluation of Fracture Dynamics in Solid Oxide Fuel Cell **2007**,		6
6	Mechanical Damage Evaluation of Solid Oxide Fuel Cells under Simulated Operating Conditions. *Journal of the Ceramic Society of Japan*, **2005**, 113, 562-564		17
5	Evaluation of Fracture Behavior of (CeO2)1-x(SmO1.5)x Based Solid Oxide Fuel Cell Laminates. *Funtai Oyobi Fummatsu Yakin/Journal of the Japan Society of Powder and Powder Metallurgy*, **2005**, 52, 836-839	0.2	
4	Evaluation of Elastic Property of (CeO2)1-x(YO1.5)x Ceramics. *Funtai Oyobi Fummatsu Yakin/Journal of the Japan Society of Powder and Powder Metallurgy*, **2005**, 52, 840-844	0.2	1
3	214 Prediction of Elastic Modulus of Ceria based Ceramic Composites for SOFCs by Molecular Dynamics. *The Proceedings of Conference of Tohoku Branch*, **2005**, 2005.40, 78-79	0	
2	Evaluation of the Effect of Rare-Earth Oxides Addition on Fracture Properties of Ceria Ceramics by Small Specimen Method. *Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A*, **2004**, 70, 321-326		1
1	213 Mechanical and Electrical properties of Ceria based Ceramics Electrolytes for Solid Oxide Fuel Cells under High Temperature Condition. *The Proceedings of Conference of Tohoku Branch*, **2004**, 2004.39, 70-71	0	