

Three-dimensional reconstruction of a solid-oxide fuel-

Nature Materials

5, 541-544

DOI: [10.1038/nmat1668](https://doi.org/10.1038/nmat1668)

Citation Report

#	ARTICLE	IF	CITATIONS
1	Northwestern team produces 3D images of fuel cells. Fuel Cells Bulletin, 2006, 2006, 9.	0.7	0
2	Anodes sliced with ions. Nature Materials, 2006, 5, 517-518.	13.3	4
3	Modeling of Solid-Oxide Fuel Cells. Zeitschrift Fur Physikalische Chemie, 2007, 221, 443-478.	1.4	64
4	Three-Dimensional Microstructural Characterization Using Focused Ion Beam Tomography. MRS Bulletin, 2007, 32, 408-416.	1.7	190
5	Three Dimensional Reconstruction of Solid Oxide Fuel Cell Electrodes Using Focused Ion Beam - Scanning Electron Microscopy. ECS Transactions, 2007, 7, 1879-1887.	0.3	16
6	Modeling of Solid Oxide Fuel Cell Anode Using Stochastic Reconsutruction and Lattice Boltzmann Method. 880-02 Nihon Kikai Gakkai RonbunshA« Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2007, 73, 2557-2564.	0.2	0
7	Eigenschaften. Nachrichten Aus Der Chemie, 2007, 55, 249-251.	0.0	0
8	Three-Dimensional Analysis of Solid Oxide Fuel Cells, Using Focused Ion Beam « Scanning Electron Microscopy. Microscopy and Microanalysis, 2007, 13, .	0.2	6
9	Three-Dimensional Reconstruction of Porous LSCF Cathodes. Electrochemical and Solid-State Letters, 2007, 10, B214.	2.2	167
10	Characterization and Quantification of Charge and Heat Transfer in a Solid Oxide Fuel Cell Anode. , 2007, , .		2
11	Applications of Nanomaterials to Hard Protective Coatings and Solid Oxide Fuel Cells. ECS Meeting Abstracts, 2007, , .	0.0	0
12	A review of AC impedance modeling and validation in SOFC diagnosis. Electrochimica Acta, 2007, 52, 8144-8164.	2.6	349
13	Lattice Boltzmann modeling of 2D gas transport in a solid oxide fuel cell anode. Journal of Power Sources, 2007, 164, 631-638.	4.0	102
14	Nucleation of nanometer-scale electrocatalyst particles in solid oxide fuel cell anodes. Journal of Power Sources, 2007, 166, 64-67.	4.0	143
15	Recent anode advances in solid oxide fuel cells. Journal of Power Sources, 2007, 171, 247-260.	4.0	518
16	Permeation porometry: Effect of probe diffusion in the condensate. Journal of Membrane Science, 2008, 313, 2-8.	4.1	16
17	Percolation modeling investigation of TPB formation in a solid oxide fuel cell electrode«electrolyte interface. Electrochimica Acta, 2008, 53, 3597-3609.	2.6	34
18	Carbon dioxide reduction on gadolinia-doped ceria cathodes. Solid State Ionics, 2008, 179, 647-660.	1.3	97

#	ARTICLE	IF	CITATIONS
19	Materials integrity in microsystems: a framework for a petascale predictive-science-based multiscale modeling and simulation system. <i>Computational Mechanics</i> , 2008, 42, 485-510.	2.2	21
20	Microstructure changes in the catalyst layers of PEM fuel cells induced by load cycling. <i>Journal of Power Sources</i> , 2008, 175, 699-711.	4.0	86
21	Microstructure changes in the catalyst layers of PEM fuel cells induced by load cycling. <i>Journal of Power Sources</i> , 2008, 175, 712-723.	4.0	45
22	Three-phase boundary length in solid-oxide fuel cells: A mathematical model. <i>Journal of Power Sources</i> , 2008, 178, 368-372.	4.0	99
23	Micro modeling of solid oxide fuel cell anode based on stochastic reconstruction. <i>Journal of Power Sources</i> , 2008, 184, 52-59.	4.0	124
24	Influence of pore formers on slurry composition and microstructure of tape cast supporting anodes for SOFCs. <i>Journal of the European Ceramic Society</i> , 2008, 28, 1221-1226.	2.8	125
25	NiO/YSZ nanoparticles obtained by new sol-gel route. <i>Chemical Engineering Journal</i> , 2008, 140, 586-592.	6.6	19
26	Effects of surface overpotential at the $\text{La}_{1-x}\text{Sr}_x\text{Co}_{1-y}\text{Fe}_y\text{O}_3$ -yttria stabilized zirconia interface in a model solid oxide fuel cell cathode. <i>International Journal of Hydrogen Energy</i> , 2008, 33, 6322-6326.	3.8	14
27	Importance of Anode Microstructure in Modeling Solid Oxide Fuel Cells. <i>Journal of the Electrochemical Society</i> , 2008, 155, B538.	1.3	43
28	The Hydrogen Fuel Alternative. <i>MRS Bulletin</i> , 2008, 33, 421-428.	1.7	250
29	Inverse opal ceria-zirconia: architectural engineering for heterogeneous catalysis. <i>Energy and Environmental Science</i> , 2008, 1, 484.	15.6	37
30	Solid Oxide Fuel Cell Ni-YSZ Anodes: Effect of Composition on Microstructure and Performance. <i>Electrochemical and Solid-State Letters</i> , 2008, 11, B181.	2.2	113
31	Physically Based Impedance Modeling of Ni/YSZ Cermet Anodes. <i>Journal of the Electrochemical Society</i> , 2008, 155, B937.	1.3	62
32	Physicochemical problems encountered in the development of oxygen-conducting oxide materials for new devices for chemical energy conversion. <i>Russian Chemical Bulletin</i> , 2008, 57, 1126-1137.	0.4	2
33	Microstructural Modeling of Solid Oxide Fuel Cell Anodes. <i>Industrial & Engineering Chemistry Research</i> , 2008, 47, 7693-7699.	1.8	74
34	Sub-micron resolution CT for failure analysis and process development. <i>Measurement Science and Technology</i> , 2008, 19, 094001.	1.4	94
35	Analysis of Complex Microstructures: Serial Sectioning and Phase-Field Simulations. <i>MRS Bulletin</i> , 2008, 33, 603-610.	1.7	17
36	Nanoscale Chemical Analysis and Imaging of Solid Oxide Cells. <i>Electrochemical and Solid-State Letters</i> , 2008, 11, B38.	2.2	34

#	ARTICLE	IF	CITATIONS
37	Nondestructive Reconstruction and Analysis of SOFC Anodes Using X-ray Computed Tomography at Sub-50nm Resolution. <i>Journal of the Electrochemical Society</i> , 2008, 155, B504.	1.3	186
38	3D Electrode Microstructure Reconstruction and Modelling. <i>ECS Meeting Abstracts</i> , 2009, , .	0.0	0
39	Probing Diffusion Kinetics with Secondary Ion Mass Spectrometry. <i>MRS Bulletin</i> , 2009, 34, 907-914.	1.7	75
40	Measurement and Modeling of the Impedance Characteristics of Porous La _{1-x} Sr _x CoO _{3-δ} Electrodes. <i>Journal of the Electrochemical Society</i> , 2009, 156, B513.	1.3	104
41	Characterization of SOFC Electrode Microstructure Using Nano-Scale X-ray Computed Tomography and Focused Ion Beam Techniques: a Comparative Study. <i>ECS Transactions</i> , 2009, 19, 51-57.	0.3	11
42	Three-phase Boundary Length Evaluation in Modeled Sintered Composite Solid Oxide Fuel Cell Electrodes. <i>ECS Transactions</i> , 2009, 25, 1185-1194.	0.3	3
43	Three-Dimensional Numerical Simulation of Ni-YSZ Anode Polarization Using Reconstructed Microstructure from FIB-SEM Images. <i>ECS Transactions</i> , 2009, 25, 1829-1836.	0.3	9
44	The morphology of topologically complex interfaces. <i>Scripta Materialia</i> , 2009, 60, 301-304.	2.6	12
45	Multifunctionality of three-dimensional self-assembled composite structure. <i>Scripta Materialia</i> , 2009, 61, 52-55.	2.6	50
46	Nickel-Zirconia Anode Degradation and Triple Phase Boundary Quantification from Microstructural Analysis. <i>Fuel Cells</i> , 2009, 9, 841-851.	1.5	185
47	The effect of current density and temperature on the degradation of nickel cermet electrodes by carbon monoxide in solid oxide fuel cells. <i>Chemical Engineering Science</i> , 2009, 64, 2291-2300.	1.9	29
48	An improved one-dimensional membrane-electrode assembly model to predict the performance of solid oxide fuel cell including the limiting current density. <i>Journal of Power Sources</i> , 2009, 186, 417-427.	4.0	66
49	Microstructural characterization of solid oxide fuel cell electrodes by image analysis technique. <i>Journal of Power Sources</i> , 2009, 194, 408-422.	4.0	50
50	A stochastic geometry based model for total triple phase boundary length in composite cathodes for solid oxide fuel cells. <i>Journal of Power Sources</i> , 2009, 194, 303-312.	4.0	22
51	Highly enhanced electrochemical performance of silicon-free platinum-yttria stabilized zirconia interfaces. <i>Journal of Electroceramics</i> , 2009, 22, 428-435.	0.8	45
52	Thermodynamics and Kinetics of the Interaction of Carbon and Sulfur with Solid Oxide fuel Cell Anodes. <i>Journal of the American Ceramic Society</i> , 2009, 92, 763-780.	1.9	79
53	3D reconstruction of a micro pipette tip. <i>Microelectronic Engineering</i> , 2009, 86, 868-870.	1.1	8
54	Transmission electron microtomography in polymer research. <i>Polymer</i> , 2009, 50, 1067-1087.	1.8	116

#	ARTICLE	IF	CITATIONS
55	Computation of TPB length, surface area and pore size from numerical reconstruction of composite solid oxide fuel cell electrodes. Journal of Power Sources, 2009, 189, 1051-1059.	4.0	156
56	Percolation theory to predict effective properties of solid oxide fuel-cell composite electrodes. Journal of Power Sources, 2009, 191, 240-252.	4.0	176
57	Microstructure and polarization characteristics of anode supported tubular solid oxide fuel cell with co-precipitated and mechanically mixed Ni-YSZ anodes. Journal of Power Sources, 2009, 193, 530-540.	4.0	39
58	3D reconstruction of SOFC anodes using a focused ion beam lift-out technique. Chemical Engineering Science, 2009, 64, 3928-3933.	1.9	169
59	Quantitative three-dimensional microstructure of a solid oxide fuel cell cathode. Electrochemistry Communications, 2009, 11, 1052-1056.	2.3	141
60	Three-Dimensional Analysis of Solid Oxide Fuel Cell Ni-YSZ Anode Interconnectivity. Microscopy and Microanalysis, 2009, 15, 71-77.	0.2	85
61	A novel pulse isotopic exchange technique for rapid determination of the oxygen surface exchange rate of oxide ion conductors. Physical Chemistry Chemical Physics, 2009, 11, 9640.	1.3	111
62	Quantitative study of interior nanostructure in hollow zinc oxide particles on the basis of nondestructive x-ray nanotomography. Applied Physics Letters, 2009, 95, 053108.	1.5	25
63	Toward Reproducible Three-Dimensional Microstructure Analysis of Granular Materials and Complex Suspensions. Microscopy and Microanalysis, 2009, 15, 130-146.	0.2	20
64	Multiple Length Scale Characterization of Doped Lanthanum Manganate Composite Cathodes. ECS Transactions, 2009, 16, 83-93.	0.3	4
65	MESOSCALE SIMULATIONS OF SHOCK INITIATION IN ENERGETIC MATERIALS CHARACTERIZED BY THREE-DIMENSIONAL NANOTOMOGRAPHY. AIP Conference Proceedings, 2009, , .	0.3	8
66	Sudden Deterioration in Performance During Discharge of Anode-supported Solid Oxide Fuel Cells. Electrochemistry, 2009, 77, 123-126.	0.6	12
67	Effects of Electrode Microstructure on Polarization Characteristics of SOFC Anode(Thermal) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 267 T Engineers Series B B-hen, 2009, 75, 323-330.	0.2	3
68	A Fractal Approach for Modeling SOFC Electrode Mass Transport. , 2009, , .		0
69	Correlation Between Microstructural and Electrochemical Characteristics during Redox Cycles for Niâ€“YSZ Anode of SOFCs. Journal of the Electrochemical Society, 2010, 157, B1747.	1.3	65
70	Connected Three-Phase Boundary Length Evaluation in Modeled Sintered Composite Solid Oxide Fuel Cell Electrodes. Journal of the Electrochemical Society, 2010, 157, B1326.	1.3	35
71	CFD analysis of a symmetrical planar SOFC with heterogeneous electrode properties. Electrochimica Acta, 2010, 55, 5263-5273.	2.6	45
72	Quantification of SOFC anode microstructure based on dual beam FIB-SEM technique. Journal of Power Sources, 2010, 195, 955-961.	4.0	374

#	ARTICLE	IF	CITATIONS
73	A particle-based model for predicting the effective conductivities of composite electrodes. Journal of Power Sources, 2010, 195, 6671-6679.	4.0	83
74	High accuracy interface characterization of three phase material systems in three dimensions. Journal of Power Sources, 2010, 195, 8168-8176.	4.0	21
75	Characterization of Complex Thermal Barrier Deposits Pore Microstructures by a Combination of Imaging, Scattering, and Intrusion Techniques. Journal of Thermal Spray Technology, 2010, 19, 178-189.	1.6	13
76	Effect of processing parameters on the microstructure and mechanical behavior of silica-calcium phosphate nanocomposite. Journal of Materials Science: Materials in Medicine, 2010, 21, 2087-2094.	1.7	12
77	Direct Internal Reformation and Mass Transport in the Solid Oxide Fuel Cell Anode: A Pore-scale Lattice Boltzmann Study with Detailed Reaction Kinetics. Fuel Cells, 2010, 10, 1143-1156.	1.5	14
78	3D Visualisation of PEMFC Electrode Structures Using FIB Nanotomography. Fuel Cells, 2010, 10, 966-972.	1.5	53
79	What Happens Inside a Fuel Cell? Developing an Experimental Functional Map of Fuel Cell Performance. ChemPhysChem, 2010, 11, 2714-2731.	1.0	44
80	Bicontinuous Macroporous Materials from Bijel Templates. Advanced Materials, 2010, 22, 4836-4841.	11.1	153
81	X-ray nano computerised tomography of SOFC electrodes using a focused ion beam sample-preparation technique. Journal of the European Ceramic Society, 2010, 30, 1809-1814.	2.8	97
82	Effect of composition of (La _{0.8} Sr _{0.2} MnO ₃ -Y ₂ O ₃ -stabilized ZrO ₂) cathodes: Correlating three-dimensional microstructure and polarization resistance. Journal of Power Sources, 2010, 195, 1829-1840.	4.0	139
83	Pore-scale investigation of mass transport and electrochemistry in a solid oxide fuel cell anode. Journal of Power Sources, 2010, 195, 2331-2345.	4.0	44
84	Microstructural analysis of a solid oxide fuel cell anode using focused ion beam techniques coupled with electrochemical simulation. Journal of Power Sources, 2010, 195, 4804-4810.	4.0	96
85	Effect of Fe substitution on the structure and properties of LnBaCo ₂ FeO ₅₊ (Ln = Nd and Gd) cathodes. Journal of Power Sources, 2010, 195, 6411-6419.	4.0	127
86	Combined micro-scale and macro-scale modeling of the composite electrode of a solid oxide fuel cell. Journal of Power Sources, 2010, 195, 6598-6610.	4.0	66
87	Modeling and comparison to literature data of composite solid oxide fuel cell electrode-electrolyte interface conductivity. Journal of Power Sources, 2010, 195, 7268-7277.	4.0	7
88	Characterization and analysis methods for the examination of the heterogeneous solid oxide fuel cell electrode microstructure. Part 1: Volumetric measurements of the heterogeneous structure. Journal of Power Sources, 2010, 195, 7930-7942.	4.0	45
89	Characterization and analysis methods for the examination of the heterogeneous solid oxide fuel cell electrode microstructure: Part 2. Quantitative measurement of the microstructure and contributions to transport losses. Journal of Power Sources, 2010, 195, 7943-7958.	4.0	39
90	Characterization of the 3-dimensional microstructure of a graphite negative electrode from a Li-ion battery. Electrochemistry Communications, 2010, 12, 374-377.	2.3	256

#	ARTICLE	IF	CITATIONS
91	Analysis of triple phase contact in Ni-YSZ microstructures using non-destructive X-ray tomography with synchrotron radiation. <i>Electrochemistry Communications</i> , 2010, 12, 1021-1024.	2.3	72
92	Three-dimensional random resistor-network model for solid oxide fuel cell composite electrodes. <i>Electrochimica Acta</i> , 2010, 55, 3944-3950.	2.6	31
93	3D chemical imaging based on a third-generation synchrotron source. <i>TrAC - Trends in Analytical Chemistry</i> , 2010, 29, 518-527.	5.8	44
94	Conductivity study of porous yttria-doped zirconia and strontia-doped lanthanum manganite bilayer film by glancing angle deposition. <i>Surface and Coatings Technology</i> , 2010, 205, 30-34.	2.2	5
95	A framework for automatic segmentation in three dimensions of microstructural tomography data. <i>Ultramicroscopy</i> , 2010, 110, 216-228.	0.8	50
96	The study of the reconstructed three-dimensional structure of a solid-oxide fuel-cell cathode by X-ray nanotomography. <i>Journal of Synchrotron Radiation</i> , 2010, 17, 782-785.	1.0	16
97	Characterization of dentine structure in three dimensions using FIB-SEM. <i>Journal of Microscopy</i> , 2010, 240, 1-5.	0.8	40
98	Measuring fundamental properties in operating solid oxide electrochemical cells by using in situ X-ray photoelectron spectroscopy. <i>Nature Materials</i> , 2010, 9, 944-949.	13.3	257
99	Analysis of the X-Ray Imaged Solid Oxide Fuel Cell Anode Microstructure. , 2010, , .		0
100	Estimation of Chemical and Transport Processes in Porous, Stoichiometric LSM Cathodes Using Steady-State Polarization and Impedance Modeling. <i>Journal of the Electrochemical Society</i> , 2010, 157, B1126.	1.3	9
101	Nickel- and Ruthenium-Doped Lanthanum Chromite Anodes: Effects of Nanoscale Metal Precipitation on Solid Oxide Fuel Cell Performance. <i>Journal of the Electrochemical Society</i> , 2010, 157, B279.	1.3	133
102	Mesopores inside electrode particles can change the Li-ion transport mechanism and diffusion-induced stress. <i>Journal of Materials Research</i> , 2010, 25, 1433-1440.	1.2	82
103	Performance Deterioration of Ni-YSZ Anode Induced by Electrochemically Generated Steam in Solid Oxide Fuel Cells. <i>Journal of the Electrochemical Society</i> , 2010, 157, B776.	1.3	154
104	Quantitative Analysis of Microstructural Change at the Interface Between (La,Sr)MnO ₃ Cathode and YSZ Electrolyte upon Discharge Operation. <i>Journal of the Electrochemical Society</i> , 2010, 157, B1790.	1.3	25
105	In Situ Spectroscopic Measurements of Local Potentials and Electrochemically Active Regions on Operating Solid Oxide Cells. <i>ECS Transactions</i> , 2010, 33, 19-24.	0.3	1
106	Numerical Assessment of SOFC Anode Polarization Based on Three-Dimensional Model Microstructure Reconstructed from FIB-SEM Images. <i>Journal of the Electrochemical Society</i> , 2010, 157, B665.	1.3	151
107	Quantitative Evaluation of Transport Properties of SOFC Porous Anode and Their Effect on the Power Generation Performance. , 2010, , .		1
108	Towards intelligent engineering of SOFC electrodes: a review of advanced microstructural characterisation techniques. <i>International Materials Reviews</i> , 2010, 55, 347-363.	9.4	92

#	ARTICLE	IF	CITATIONS
109	Nondestructive Nanoscale 3D Elemental Mapping and Analysis of a Solid Oxide Fuel Cell Anode. Journal of the Electrochemical Society, 2010, 157, B783.	1.3	116
110	Model anodes and anode models for understanding the mechanism of hydrogen oxidation in solid oxide fuel cells. Physical Chemistry Chemical Physics, 2010, 12, 13888.	1.3	133
111	3D-microstructure analysis of hydrated bentonite with cryo-stabilized pore water. Applied Clay Science, 2010, 47, 330-342.	2.6	84
112	Electrical Conductivity Relaxation Study of Solid Oxide Fuel Cell Cathodes using Epitaxial (001)-Oriented Strontium-Doped Lanthanum Manganite Thin Films. Materials Research Society Symposia Proceedings, 2010, 1255, 202.	0.1	3
114	Polymer sphere lithography for solid oxide fuel cells: a route to functional, well-defined electrode structures. Journal of Materials Chemistry, 2010, 20, 2190.	6.7	24
115	Nanofiber scaffold for cathode of solid oxide fuel cell. Energy and Environmental Science, 2011, 4, 417-420.	15.6	104
116	A reduced temperature solid oxide fuel cell with nanostructured anodes. Energy and Environmental Science, 2011, 4, 3951.	15.6	121
117	3D Imaging of Catalyst Support Corrosion in Polymer Electrolyte Fuel Cells. Journal of Physical Chemistry C, 2011, 115, 14236-14243.	1.5	188
118	Microstructural 3D Reconstruction and Performance Evaluation of LSCF Cathodes Obtained by Electrostatic Spray Deposition. Chemistry of Materials, 2011, 23, 5340-5348.	3.2	68
119	3D visualization and characterization of nano structured materials. , 2011, , .		1
120	Fabricationâ€“microstructureâ€“performance relationships of reversible solid oxide fuel cell electrodesâ€“review. Materials Science and Technology, 2011, 27, 1485-1497.	0.8	33
121	Reservoir-on-a-Chip (ROC): A new paradigm in reservoir engineering. Lab on A Chip, 2011, 11, 3785.	3.1	170
123	Modeling 3D Microstructure and Ion Transport in Porous Li-Ion Battery Electrodes. Journal of the Electrochemical Society, 2011, 158, A781.	1.3	130
124	Measuring oxygen reduction/evolution reactions on the nanoscale. Nature Chemistry, 2011, 3, 707-713.	6.6	233
125	Quantification of Microstructural and Transport Properties of Solid Oxide Fuel Cells From Three-Dimensional Physically Realistic Network Structures. , 2011, , .		0
126	Geometrical characterization of interconnected phase networks in three dimensions. Journal of Microscopy, 2011, 244, 45-58.	0.8	25
127	Crystallographic Characteristics of Grain Boundaries in Dense Yttria-Stabilized Zirconia. International Journal of Applied Ceramic Technology, 2011, 8, 1218-1228.	1.1	32
128	Microstructure and Connectivity Quantification of Complex Composite Solid Oxide Fuel Cell Electrode Threeâ€“Dimensional Networks. Journal of the American Ceramic Society, 2011, 94, 620-627.	1.9	26

#	ARTICLE	IF	CITATIONS
129	The Orientation Distributions of Lines, Surfaces, and Interfaces around Three-Phase Boundaries in Solid Oxide Fuel Cell Cathodes. <i>Journal of the American Ceramic Society</i> , 2011, 94, 4045-4051.	1.9	20
130	Synthesis of Flake-Shaped NiO Particles for High-Porosity Anode of Solid Oxide Fuel Cell. <i>Journal of the American Ceramic Society</i> , 2011, 94, 3666-3670.	1.9	3
131	Stress analysis of solid oxide fuel cell anode microstructure reconstructed from focused ion beam tomography. <i>Journal of Power Sources</i> , 2011, 196, 9018-9021.	4.0	32
132	Ni/YSZ anode Effect of pre-treatments on cell degradation and microstructures. <i>Journal of Power Sources</i> , 2011, 196, 8931-8941.	4.0	32
133	Percolation theory in SOFC composite electrodes: Effects of porosity and particle size distribution on effective properties. <i>Journal of Power Sources</i> , 2011, 196, 9429-9436.	4.0	65
134	Effect of Ni content in SOFC Ni-YSZ cermets: A three-dimensional study by FIB-SEM tomography. <i>Journal of Power Sources</i> , 2011, 196, 9989-9997.	4.0	81
135	Doubling the diffusivity measurement efficiency in solid oxide fuel cells (SOFCs) via a bi-sensor electrochemical cell. <i>Journal of Power Sources</i> , 2011, 196, 9985-9988.	4.0	15
136	Quantitative analysis of micro structural and conductivity evolution of Ni-YSZ anodes during thermal cycling based on nano-computed tomography. <i>Journal of Power Sources</i> , 2011, 196, 10601-10605.	4.0	54
137	Linking the microstructure, performance and durability of Ni-yttria-stabilized zirconia solid oxide fuel cell anodes using three-dimensional focused ion beam-scanning electron microscopy imaging. <i>Scripta Materialia</i> , 2011, 65, 67-72.	2.6	95
138	Rational SOFC material design: new advances and tools. <i>Materials Today</i> , 2011, 14, 534-546.	8.3	263
139	Investigation of the active thickness of solid oxide fuel cell electrodes using a 3D microstructure model. <i>Electrochimica Acta</i> , 2011, 56, 10809-10819.	2.6	53
140	Modeling diffusion limitation in solid-oxide fuel cells. <i>Electrochimica Acta</i> , 2011, 56, 9775-9782.	2.6	43
141	Vacuum-assisted electroless copper plating on Ni/(Sm,Ce)O ₂ anodes for intermediate temperature solid oxide fuel cells. <i>International Journal of Hydrogen Energy</i> , 2011, 36, 7661-7669.	3.8	19
142	Quantitative relationships between composition, particle size, triple phase boundary length and surface area in nickel-cermet anodes for Solid Oxide Fuel Cells. <i>Journal of Power Sources</i> , 2011, 196, 7076-7089.	4.0	131
143	Microstructure degradation of cermet anodes for solid oxide fuel cells: Quantification of nickel grain growth in dry and in humid atmospheres. <i>Journal of Power Sources</i> , 2011, 196, 1279-1294.	4.0	255
144	Direct three-dimensional reconstruction of a nanoporous catalyst layer for a polymer electrolyte fuel cell. <i>Journal of Power Sources</i> , 2011, 196, 2094-2097.	4.0	90
145	Random-packing model for solid oxide fuel cell electrodes with particle size distributions. <i>Journal of Power Sources</i> , 2011, 196, 1983-1991.	4.0	30
146	Studying the CO-CO ₂ characteristics of SOFC anodes by means of patterned Ni anodes. <i>Journal of Power Sources</i> , 2011, 196, 7217-7224.	4.0	46

#	ARTICLE	IF	CITATIONS
147	Focused ion beam-scanning electron microscopy on solid-oxide fuel-cell electrode: Image analysis and computing effective transport properties. <i>Journal of Power Sources</i> , 2011, 196, 3592-3603.	4.0	75
148	Factors affecting limiting current in solid oxide fuel cells or debunking the myth of anode diffusion polarization. <i>Journal of Power Sources</i> , 2011, 196, 4475-4482.	4.0	19
149	Influence of alumina impurities on microstructure of LSM-CeO ₂ composites. <i>Solid State Ionics</i> , 2011, 187, 68-77.	1.3	1
150	Effects of crystallographic orientation on the oxygen exchange rate of La _{0.7} Sr _{0.3} MnO ₃ thin films. <i>Solid State Ionics</i> , 2011, 194, 9-16.	1.3	41
151	Nano-morphology of a polymer electrolyte fuel cell catalyst layer—imaging, reconstruction and analysis. <i>Nano Research</i> , 2011, 4, 849-860.	5.8	90
152	Three-dimensional reconstruction of a nickel-alumina composite coating by FIB-SIMS. <i>Surface and Interface Analysis</i> , 2011, 43, 492-494.	0.8	4
153	An Electrolyte-Free Fuel Cell Constructed from One Homogenous Layer with Mixed Conductivity. <i>Advanced Functional Materials</i> , 2011, 21, 2465-2469.	7.8	143
154	Electrochemical Performance of a Ni and YSZ Composite Synthesised by Ultrasonic Spray Pyrolysis as an Anode for SOFCs. <i>Fuel Cells</i> , 2011, 11, 654-660.	1.5	4
155	Comparison of SOFC cathode microstructure quantified using X-ray nanotomography and focused ion beam-scanning electron microscopy. <i>Electrochemistry Communications</i> , 2011, 13, 586-589.	2.3	72
156	Evaluation of SOFC anode polarization simulation using three-dimensional microstructures reconstructed by FIB tomography. <i>Electrochimica Acta</i> , 2011, 56, 4015-4021.	2.6	132
157	Modelling the 3D microstructure and performance of solid oxide fuel cell electrodes: Computational parameters. <i>Electrochimica Acta</i> , 2011, 56, 5804-5814.	2.6	88
158	Three-dimensional reconstruction of a composite cathode for lithium-ion cells. <i>Electrochemistry Communications</i> , 2011, 13, 166-168.	2.3	132
159	A modeling study of porous composite microstructures for solid oxide fuel cell anodes. <i>Electrochimica Acta</i> , 2011, 56, 2792-2800.	2.6	24
160	Three phase boundaries and electrochemically active zones of lanthanum strontium vanadate-yttria-stabilized zirconia anodes in solid oxide fuel cells. <i>Electrochimica Acta</i> , 2011, 56, 5947-5953.	2.6	9
161	A solid oxide membrane electrolyzer for production of hydrogen and syn-gas from steam and hydrocarbon waste in a single step. <i>International Journal of Hydrogen Energy</i> , 2011, 36, 152-159.	3.8	12
162	A single-component fuel cell reactor. <i>International Journal of Hydrogen Energy</i> , 2011, 36, 8536-8541.	3.8	67
163	High resolution FIB-TEM and FIB-SEM characterization of electrode/electrolyte interfaces in solid oxide fuel cells materials. <i>International Journal of Hydrogen Energy</i> , 2011, 36, 9180-9188.	3.8	27
164	Understanding the micro structure of Berea Sandstone by the simultaneous use of micro-computed tomography (micro-CT) and focused ion beam-scanning electron microscopy (FIB-SEM). <i>Micron</i> , 2011, 42, 412-418.	1.1	123

#	ARTICLE	IF	CITATIONS
165	Measurement of three-dimensional microstructure in a LiCoO ₂ positive electrode. Journal of Power Sources, 2011, 196, 3443-3447.	4.0	195
166	Simulation of coarsening in three-phase solid oxide fuel cell anodes. Journal of Power Sources, 2011, 196, 1333-1337.	4.0	105
167	Preparation of fibrous Ni-coated-YSZ anodes for solid oxide fuel cells. Journal of Power Sources, 2011, 196, 1242-1247.	4.0	44
168	Microstructure of porous composite electrodes generated by the discrete element method. Journal of Power Sources, 2011, 196, 2046-2054.	4.0	39
169	Analysis of the three-dimensional microstructure of a solid-oxide fuel cell anode using nano X-ray tomography. Journal of Power Sources, 2011, 196, 1915-1919.	4.0	72
170	Reconstruction of porous electrodes by FIB/SEM for detailed microstructure modeling. Journal of Power Sources, 2011, 196, 7302-7307.	4.0	154
171	Impact of pore microstructure evolution on polarization resistance of Ni-Yttria-stabilized zirconia fuel cell anodes. Journal of Power Sources, 2011, 196, 2640-2643.	4.0	111
172	Percolation micro-model to predict the effective properties of the composite electrode with poly-dispersed particle sizes. Journal of Power Sources, 2011, 196, 3178-3185.	4.0	29
173	Three-dimensional numerical analysis of mixed ionic and electronic conducting cathode reconstructed by focused ion beam scanning electron microscope. Journal of Power Sources, 2011, 196, 3073-3082.	4.0	122
174	Quantitative evaluation of solid oxide fuel cell porous anode microstructure based on focused ion beam and scanning electron microscope technique and prediction of anode overpotentials. Journal of Power Sources, 2011, 196, 4555-4563.	4.0	132
175	Analytical investigations of varying cross section microstructures on charge transfer in solid oxide fuel cell electrodes. Journal of Power Sources, 2011, 196, 4695-4704.	4.0	28
176	3D Microstructural characterization of a solid oxide fuel cell anode reconstructed by focused ion beam tomography. Journal of Power Sources, 2011, 196, 7541-7549.	4.0	116
177	Single-component and three-component fuel cells. Journal of Power Sources, 2011, 196, 6362-6365.	4.0	93
178	Modelling the effects of measured anode triple-phase boundary densities on the performance of micro-tubular hollow fiber SOFCs. Solid State Ionics, 2011, 192, 494-500.	1.3	47
179	Microstructure stability studies of Ni patterned anodes for SOFC. Solid State Ionics, 2011, 192, 565-570.	1.3	27
180	Hydraulic tortuosity in arbitrary porous media flow. Physical Review E, 2011, 84, 036319.	0.8	239
181	Fuel cells based on electrolyte and non-electrolyte separators. Energy and Environmental Science, 2011, 4, 2986.	15.6	111
182	Determination of the effective gas diffusivity of a porous composite medium from the three-dimensional reconstruction of its microstructure. Physical Review E, 2011, 83, 026310.	0.8	61

#	ARTICLE	IF	CITATIONS
183	Effective transport properties of the porous electrodes in solid oxide fuel cells. Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy, 2011, 225, 183-197.	0.8	29
184	Microstructural Optimization by Tailoring Particle Sizes for LSM-YSZ Solid Oxide Fuel Cell Composite Cathodes. Journal of the Electrochemical Society, 2011, 159, B39-B52.	1.3	24
185	Electrochemical Characteristics of a Ni ²⁺ -GDC Nanoparticles-Structured-in-Nanowire as an Anode for LT-SOFCs. Electrochemical and Solid-State Letters, 2011, 14, B16.	2.2	7
186	Durability of Solid Oxide Cells. Green, 2011, 1, .	0.4	63
187	Effect of Porous Microstructural Properties on the Results of a Cell-Level Model in Solid Oxide Fuel Cells. ECS Transactions, 2011, 35, 1107-1114.	0.3	1
188	Layered LnBaCo _{2-x} Cu _x O _{5+δ} (0 ≤ x ≤ 1.0) Perovskite Cathodes for Intermediate-Temperature Solid Oxide Fuel Cells. Journal of the Electrochemical Society, 2011, 158, B276.	1.3	49
189	Microstructural Characterization of SOFC Electrodes: Observations and Simulations. ECS Transactions, 2011, 35, 1367-1377.	0.3	3
190	Polarization Characteristics and Chemistry in Reversible Tubular Solid-Oxide Cells Operating on Mixtures of H ₂ , CO, H ₂ O, and CO ₂ . Journal of the Electrochemical Society, 2011, 158, B117.	1.3	42
191	Towards an integrated materials characterization toolbox. Journal of Materials Research, 2011, 26, 1341-1383.	1.2	84
192	Comparison between FIB-SEM Experimental 3-D Reconstructions of SOFC Electrodes and Random Particle-Based Numerical Models. ECS Transactions, 2011, 35, 997-1005.	0.3	6
193	Process Based Large Scale Molecular Dynamic Simulation of a Fuel Cell Catalyst Layer. Journal of the Electrochemical Society, 2012, 159, B251-B258.	1.3	19
194	Can Silver Be a Reliable Current Collector for Electrochemical Tests?. ECS Electrochemistry Letters, 2012, 2, F4-F7.	1.9	24
195	Advanced microscopy techniques for the characterization of polymer electrolyte membrane fuel cell components. , 2012, , 26-66e.		1
196	Combining Structural and Electrochemical Analysis of Electrodes Using Micro-Computed Tomography and a Microfluidic Fuel Cell. Journal of the Electrochemical Society, 2012, 159, B292-B298.	1.3	39
197	Effect of Firing Temperature on LSM-YSZ Composite Cathodes: A Combined Three-Dimensional Microstructure and Impedance Spectroscopy Study. Journal of the Electrochemical Society, 2012, 159, B385-B393.	1.3	66
198	Solid Oxide Fuel Cells. , 2012, , 7-36.		18
199	Numerical Simulation of SOFC Electrode Polarization Using Three-Dimensional Microstructure Reconstructed by FIB-SEM. Materials Research Society Symposia Proceedings, 2012, 1385, 1.	0.1	1
200	An Analytical Method to Assess Microstructure in Li-Ion Battery Cathodes. , 2012, , .		0

#	ARTICLE	IF	CITATIONS
201	Direct Simulation of Transport Properties from Three-Dimensional (3D) Reconstructed Solid-Oxide Fuel-Cell (SOFC) Electrode Microstructures. <i>Journal of Physics: Conference Series</i> , 2012, 362, 012001.	0.3	4
202	Characterization of Nanometer-Scale Porosity in Reservoir Carbonate Rock by Focused Ion Beam-Scanning Electron Microscopy. <i>Microscopy and Microanalysis</i> , 2012, 18, 171-178.	0.2	27
203	Solid oxide fuel cell: design, materials, and transport phenomena. <i>Nanomaterials and Energy</i> , 2012, 1, 247-264.	0.1	6
204	High-electrochemical performance of a highly dispersed nanoporous nanocomposite Ni-YSZ. <i>Journal of the Ceramic Society of Japan</i> , 2012, 120, 11-14.	0.5	0
205	Three-Dimensional Simulation of SOFC Anode Polarization Characteristics Based on Sub-Grid Scale Modeling of Microstructure. <i>Journal of the Electrochemical Society</i> , 2012, 159, B315-B323.	1.3	43
206	Estimation of the electrodes' three phase boundary sites in electrochemical exhaust gas sensors before and after electric polarization. <i>Sensors and Actuators B: Chemical</i> , 2012, 175, 225-233.	4.0	3
207	Quantitative Characterization of LiFePO_4 Cathodes Reconstructed by FIB/SEM Tomography. <i>Journal of the Electrochemical Society</i> , 2012, 159, A972-A980.	1.3	110
208	A new energy conversion technology joining electrochemical and physical principles. <i>RSC Advances</i> , 2012, 2, 5066.	1.7	51
209	Electrical conductivity optimization in electrolyte-free fuel cells by single-component $\text{Ce}_{0.8}\text{Sm}_{0.2}\text{O}_{2-\delta}$ - $\text{Li}_{0.15}\text{Ni}_{0.45}\text{Zn}_{0.4}$ layer. <i>RSC Advances</i> , 2012, 2, 3828.	1.7	57
210	Nondestructive volumetric 3-D chemical mapping of nickel-sulfur compounds at the nanoscale. <i>Nanoscale</i> , 2012, 4, 1557.	2.8	12
211	Three-Dimensional Reconstruction of a LiCoO_2 Li-Ion Battery Cathode. <i>Electrochemical and Solid-State Letters</i> , 2012, 15, A33.	2.2	85
212	Visualization of hierarchically structured zeolite bodies from macro to nano length scales. <i>Nature Chemistry</i> , 2012, 4, 825-831.	6.6	234
213	Morphology and Catalytic Performance of Flake-Shaped NiO-Yttria-Stabilized Zirconia (YSZ) Particles with Nanocrystalline YSZ Grains. <i>Industrial & Engineering Chemistry Research</i> , 2012, 51, 6387-6394.	1.8	8
214	The evolution of low temperature solid oxide fuel cells. <i>Journal of Materials Research</i> , 2012, 27, 2063-2078.	1.2	70
215	Impact of particle size ratio and volume fraction on effective material parameters and performance in solid oxide fuel cell electrodes. <i>Journal of Power Sources</i> , 2012, 215, 199-215.	4.0	33
216	3D Non-destructive morphological analysis of a solid oxide fuel cell anode using full-field X-ray nano-tomography. <i>Journal of Power Sources</i> , 2012, 218, 348-351.	4.0	67
217	High electrode activity of nanostructured, columnar ceria films for solid oxide fuel cells. <i>Energy and Environmental Science</i> , 2012, 5, 8682.	15.6	83
218	Challenges in Ceramic Science: A Report from the Workshop on Emerging Research Areas in Ceramic Science. <i>Journal of the American Ceramic Society</i> , 2012, 95, 3699-3712.	1.9	59

#	ARTICLE	IF	CITATIONS
219	High electrochemical activity of the oxide phase in model ceria-Pt and ceria-Ni composite anodes. <i>Nature Materials</i> , 2012, 11, 155-161.	13.3	288
220	Electrical properties optimization of calcium Co-doping system: CeO ₂ -Sm ₂ O ₃ . <i>International Journal of Hydrogen Energy</i> , 2012, 37, 11934-11940.	3.8	7
221	Representative volume element size for accurate solid oxide fuel cell cathode reconstructions from focused ion beam tomography data. <i>Electrochimica Acta</i> , 2012, 82, 268-276.	2.6	75
222	PEM fuel cell CL characterization using a standalone FIB and SEM: Experiments and simulation. <i>Electrochimica Acta</i> , 2012, 85, 322-331.	2.6	24
223	Oxidation states study of nickel in solid oxide fuel cell anode using x-ray full-field spectroscopic nano-tomography. <i>Applied Physics Letters</i> , 2012, 101, .	1.5	21
224	Phase-field modeling of three-phase electrode microstructures in solid oxide fuel cells. <i>Applied Physics Letters</i> , 2012, 101, .	1.5	20
225	Modeling the Steady-State and Dynamic Characteristics of Solid-Oxide Fuel Cells. <i>Advances in Chemical Engineering</i> , 2012, , 331-381.	0.5	10
227	Electrode/Electrolyte Interphase Characterization in Solid Oxide Fuel Cells. , 0, , .		0
228	Continuum Mechanics of Solid Oxide Fuel Cells Using Three-Dimensional Reconstructed Microstructures. , 2012, , .		1
229	Solid Oxide Fuel Cells. , 2012, , 569-589.		0
230	Microstructural Change of Ni-GDC Cermet Anode in the Electrolyte-supported Disk-type SOFC upon Daily Start-up and Shut-down Operations. <i>Fuel Cells</i> , 2012, 12, 537-542.	1.5	14
231	Electrochemistry of Mixed Oxygen Ion and Electron Conducting Electrodes in Solid Electrolyte Cells. <i>Annual Review of Chemical and Biomolecular Engineering</i> , 2012, 3, 313-341.	3.3	83
232	Geometrical triple phase boundary length measurement using focused ion beam tomography. <i>Canadian Journal of Chemical Engineering</i> , 2012, 90, 712-718.	0.9	1
233	Channel size distribution of complex three-dimensional microstructures calculated from the topological characterization of isodistance structures. <i>Acta Materialia</i> , 2012, 60, 2509-2517.	3.8	5
234	Three-dimensional microstructural changes in the Ni-YSZ solid oxide fuel cell anode during operation. <i>Acta Materialia</i> , 2012, 60, 3491-3500.	3.8	93
235	Performance comparison of the mass transfer models with internal reforming for solid oxide fuel cell anodes. <i>International Journal of Heat and Mass Transfer</i> , 2012, 55, 3933-3945.	2.5	19
236	Microstructural development of Ni-1Ce10ScSZ cermet electrode for Solid Oxide Electrolysis Cell (SOEC) application. <i>International Journal of Hydrogen Energy</i> , 2012, 37, 3865-3873.	3.8	20
237	Simulation of sintering kinetics and microstructure evolution of composite solid oxide fuel cells electrodes. <i>International Journal of Hydrogen Energy</i> , 2012, 37, 3392-3402.	3.8	77

#	ARTICLE	IF	CITATIONS
238	3D finite element model for reconstructed mixed-conducting cathodes: I. Performance quantification. <i>Electrochimica Acta</i> , 2012, 77, 315-323.	2.6	75
239	3D finite element model for reconstructed mixed-conducting cathodes: II. Parameter sensitivity analysis. <i>Electrochimica Acta</i> , 2012, 77, 309-314.	2.6	28
240	Mechanically Assisted Deposition of Nickel Oxide–Yttria Stabilized Zirconia Nanocomposite Film and its Microstructural Evolution for Solid Oxide Fuel Cells Anode Application. <i>International Journal of Applied Ceramic Technology</i> , 2012, 9, 928-935.	1.1	9
241	Determination of Phase Volume Fractions of Ceramic Composite by Synchrotron Radiation Computed Tomography. <i>Journal of the American Ceramic Society</i> , 2012, 95, 2667-2671.	1.9	12
242	A new symmetric solid oxide fuel cell with a samaria-doped ceria framework and a silver-infiltrated electrocatalyst. <i>Journal of Power Sources</i> , 2012, 197, 57-64.	4.0	34
243	Characterisation of Solid Oxide Fuel Cell Ni–8YSZ substrate by synchrotron X-ray nano-tomography: from 3D reconstruction to microstructure quantification. <i>Journal of Power Sources</i> , 2012, 198, 182-189.	4.0	103
244	A review of modeling and simulation techniques across the length scales for the solid oxide fuel cell. <i>Journal of Power Sources</i> , 2012, 199, 1-13.	4.0	102
245	Electrochemical properties of pure Ba _{0.5} Sr _{0.5} Co _{0.8} Fe _{0.2} O ₃ and Ba _{0.5} Sr _{0.5} Co _{0.8} Fe _{0.2} O ₃ -based composite cathodes for an intermediate temperature solid oxide fuel cell with Sc-doped zirconia solid electrolyte. <i>Journal of Power Sources</i> , 2012, 213, 31-39.	4.0	15
246	Effect of sintering aids on the electrical properties of Ce _{0.9} Nd _{0.1} O ₂ . <i>Solid State Sciences</i> , 2012, 14, 805-808.	1.5	13
247	Design and Optimization of Composite Electrodes in Solid Oxide Cells. <i>Fuel Cells</i> , 2012, 12, 61-76.	1.5	10
248	Composite electrode modelling and optimization for solid oxide fuel cells. <i>International Journal of Energy Research</i> , 2013, 37, 95-104.	2.2	8
250	Three-dimensional microstructural imaging methods for energy materials. <i>Physical Chemistry Chemical Physics</i> , 2013, 15, 16377.	1.3	72
251	3D microstructure construction and quantitative evaluation of sintered ZrO ₂ under different sintering conditions. <i>Journal of Materials Science</i> , 2013, 48, 5852-5861.	1.7	7
252	High-temperature long-term stable ordered mesoporous Ni–CGO as an anode for solid oxide fuel cells. <i>Journal of Materials Chemistry A</i> , 2013, 1, 4531.	5.2	31
253	Studies of Solid Oxide Fuel Cell Electrode Evolution Using 3D Tomography. <i>Fuel Cells</i> , 2013, 13, 449-454.	1.5	25
254	Effect of Composition Ratio of Ni–YSZ Anode on Distribution of Effective Three-Phase Boundary and Power Generation Performance. <i>Fuel Cells</i> , 2013, 13, 476-486.	1.5	33
255	Effect of particle size distribution on particle based composite anode models. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2013, 29, 357-369.	1.5	3
256	Microstructure reconstruction and homogenization of porous Ni-YSZ composites for temperature dependent properties. <i>Journal of Power Sources</i> , 2013, 235, 74-80.	4.0	36

#	ARTICLE	IF	CITATIONS
257	Numerical Investigation of Amounts of Heat, Power and Temperature Distribution in IT-SOFC. ECS Transactions, 2013, 58, 115-129.	0.3	0
258	Effects of three-dimensional cathode microstructure on the performance of lithium-ion battery cathodes. Electrochimica Acta, 2013, 88, 580-588.	2.6	144
259	Multiscale tomography of nanoporous carbon-supported noble metal catalyst layers. Journal of Power Sources, 2013, 228, 185-192.	4.0	70
260	An electrochemical device for three-dimensional (3D) diffusivity measurement in fuel cells. Nano Energy, 2013, 2, 1004-1009.	8.2	19
261	Thermo-elastic properties of SOFC/SOEC electrode materials determined from three-dimensional microstructural reconstructions. International Journal of Hydrogen Energy, 2013, 38, 12379-12391.	3.8	41
262	Three-dimensional morphological measurements of LiCoO ₂ and LiCoO ₂ /Li(Ni _{1/3} Mn _{1/3} Co _{1/3})O ₂ lithium-ion battery cathodes. Journal of Power Sources, 2013, 227, 267-274.	4.0	66
263	Flexible multiphysics simulation of porous electrodes: Conformal to 3D reconstructed microstructures. Nano Energy, 2013, 2, 105-115.	8.2	55
264	Analysis of impact of sintering temperature on microstructure of LSCF-SDC composite cathodes using nano-CT. Proceedings of SPIE, 2013, , .	0.8	1
265	CHAPTER 8. Three-dimensional Numerical Modelling of Ni-YSZ Anode. RSC Energy and Environment Series, 0, , 200-218.	0.2	0
266	CHAPTER 9. Multi-scale Modelling of Solid Oxide Fuel Cells. RSC Energy and Environment Series, 0, , 219-246.	0.2	1
267	Direct comparison between X-ray nanotomography and scanning electron microscopy for the microstructure characterization of a solid oxide fuel cell anode. Materials Characterization, 2013, 78, 87-95.	1.9	16
268	Understanding sintering characteristics of ZnO nanoparticles by FIB-SEM three-dimensional analysis. Journal of the European Ceramic Society, 2013, 33, 2499-2507.	2.8	16
269	Probing Bias-Dependent Electrochemical Gas-Solid Reactions in (La _x Sr _{1-x})CoO ₃ Cathode Materials. Advanced Functional Materials, 2013, 23, 5027-5036.	7.8	9
270	The Effects of Catalyst Layer Deposition Methodology on Electrode Performance. Advanced Energy Materials, 2013, 3, 589-599.	10.2	183
271	FIB/SEM-based calculation of tortuosity in a porous LiCoO ₂ cathode for a Li-ion battery. Electrochemistry Communications, 2013, 27, 77-80.	2.3	74
272	Spatially Resolved Mapping of Oxygen Reduction/Evolution Reaction on Solid-Oxide Fuel Cell Cathodes with Sub-10 nm Resolution. ACS Nano, 2013, 7, 3808-3814.	7.3	25
273	Protons crossing triple phase boundaries based on a metal catalyst, Pd or Ni, and barium zirconate. Physical Chemistry Chemical Physics, 2013, 15, 12525.	1.3	16
274	Improvement of the sub-grid-scale model designed for 3D numerical simulation of solid oxide fuel cell electrodes using an adaptive power index. Journal of Power Sources, 2013, 223, 268-276.	4.0	31

#	ARTICLE	IF	CITATIONS
275	Finite element thermal stress analysis of solid oxide fuel cell cathode microstructures. Journal of Power Sources, 2013, 225, 269-276.	4.0	22
276	Comprehensive quantification of Ni ϵ -Gd _{0.1} Ce _{0.9} O _{1.95} anode functional layer microstructures by three-dimensional reconstruction using a FIB/SEM dual beam system. Journal of Power Sources, 2013, 228, 220-228.	4.0	46
277	The influence of constrictivity on the effective transport properties of porous layers in electrolysis and fuel cells. Journal of Materials Science, 2013, 48, 2934-2952.	1.7	128
278	Simulated annealing reconstruction and characterization of the three-dimensional microstructure of a LiCoO ₂ Lithium-ion battery cathode. Materials Characterization, 2013, 80, 62-68.	1.9	29
279	Particle size dependence of polarization of Ni/YSZ cermet anodes for solid oxide fuel cells. Journal of Power Sources, 2013, 234, 147-153.	4.0	11
280	3D phase mapping of solid oxide fuel cell YSZ/Ni cermet at the nanoscale by holographic X-ray nanotomography. Journal of Power Sources, 2013, 243, 841-849.	4.0	68
281	Geometric Properties of Nanostructured Solid Oxide Fuel Cell Electrodes. Journal of the Electrochemical Society, 2013, 160, F278-F289.	1.3	83
282	Influence of Microstructure on the Electrochemical Behavior of LSC Cathodes for Intermediate Temperature SOFC. Journal of the Electrochemical Society, 2013, 160, F1245-F1253.	1.3	18
283	Three-dimensional reconstruction and analysis of an entire solid oxide fuel cell by full-field transmission X-ray microscopy. Journal of Power Sources, 2013, 233, 174-179.	4.0	90
284	Modelling the water distribution within a hydrophilic and hydrophobic 3D reconstructed cathode catalyst layer of a proton exchange membrane fuel cell. Journal of Power Sources, 2013, 227, 260-266.	4.0	41
285	Breakthrough fuel cell technology using ceria-based multi-functional nanocomposites. Applied Energy, 2013, 106, 163-175.	5.1	126
286	Optimization of multilayer Laue lenses for a scanning X-ray microscope. Journal of Synchrotron Radiation, 2013, 20, 89-97.	1.0	24
288	Solid Oxide Fuel Cells. , 2013, , 657-685.		1
289	Solid Oxide Fuel Cell Materials: Durability, Reliability and Cost. , 2013, , 607-656.		0
290	Variable temperature electrochemical strain microscopy of Sm-doped ceria. Nanotechnology, 2013, 24, 145401.	1.3	19
291	A new energy conversion technology based on nano-redox and nano-device processes. Nano Energy, 2013, 2, 1179-1185.	8.2	117
292	A Direct and Quantitative Three-Dimensional Reconstruction of the Internal Structure of Disordered Mesoporous Carbon with Tailored Pore Size. Microscopy and Microanalysis, 2013, 19, 745-750.	0.2	10
293	Redox cycling of Ni ϵ -YSZ anodes for solid oxide fuel cells: Influence of tortuosity, constriction and percolation factors on the effective transport properties. Journal of Power Sources, 2013, 242, 179-194.	4.0	59

#	ARTICLE	IF	CITATIONS
294	Direct <i>In Situ</i> Probe of Electrochemical Processes in Operating Fuel Cells. ACS Nano, 2013, 7, 6330-6336.	7.3	18
295	Quantitative roughness characterization and 3D reconstruction of electrode surface using cyclic voltammetry and SEM image. Applied Surface Science, 2013, 282, 105-114.	3.1	49
296	Characterization of electrode polarization losses in solid oxide fuel cells: Impedance spectroscopy involving spatially-limited electrode geometry. Journal of Physics and Chemistry of Solids, 2013, 74, 496-503.	1.9	7
297	Block Copolymer Lithography of Rhodium Nanoparticles for High Temperature Electrocatalysis. ACS Nano, 2013, 7, 4919-4923.	7.3	13
298	Stochastic 3D modeling of La _{0.6} Sr _{0.4} CoO ₃ cathodes based on structural segmentation of FIB-SEM images. Computational Materials Science, 2013, 67, 48-62.	1.4	38
299	Simulated annealing reconstruction and characterization of a LiCoO ₂ Lithium-ion battery cathode. Science Bulletin, 2013, 58, 4692-4695.	1.7	17
300	Three-Dimensional Microstructural Evolution of Ni- Yttria-Stabilized Zirconia Solid Oxide Fuel Cell Anodes At Elevated Temperatures. Journal of the Electrochemical Society, 2013, 160, F1293-F1304.	1.3	54
301	On the Predictions of Carbon Deposition on the Nickel Anode of a SOFC and Its Impact on Open-Circuit Conditions. Journal of the Electrochemical Society, 2013, 160, F94-F105.	1.3	50
302	Multiphysics Design and Development of Heterogeneous Functional Materials for Renewable Energy Devices: The HeteroFoam Story. Journal of the Electrochemical Society, 2013, 160, F470-F481.	1.3	12
303	Percolation Theory in Solid Oxide Fuel Cell Composite Electrodes with a Mixed Electronic and Ionic Conductor. Energies, 2013, 6, 1632-1656.	1.6	32
304	Ultra Small Angle X-ray Scattering Studies of Solid Oxide Fuel Cell Cathode Powders. ECS Transactions, 2013, 50, 111-115.	0.3	2
305	Equivalent Circuit Model for the Electrochemical Reaction Process within the Solid Oxide Fuel Cell Composite Electrode. Advanced Materials Research, 0, 662, 266-272.	0.3	3
306	Protons Crossing Triple Phase Boundaries based on Pd and Barium Zirconate: A Density Functional Theory Study. Materials Research Society Symposia Proceedings, 2013, 1542, 1.	0.1	0
307	Kinetics of Carbon Monoxide Electro-Oxidation in Solid-Oxide Fuel Cells from Ni-YSZ Patterned-Anode Measurements. Journal of the Electrochemical Society, 2013, 160, F698-F708.	1.3	20
308	Specifications for Hard Condensed Matter Specimens for Three-Dimensional High-Resolution Tomographies. Microscopy and Microanalysis, 2013, 19, 726-739.	0.2	21
309	Quantitative analysis methods for three-dimensional microstructure of the solid-oxide fuel cell anode. Journal of Physics: Conference Series, 2013, 463, 012030.	0.3	2
311	Modeling Microstructure Evolution of Ni Cermet Using a Cellular Automaton Approach. Journal of the Electrochemical Society, 2014, 161, F605-F614.	1.3	10
312	Performance Variability and Degradation in Porous La _{1-x} Sr _x CoO _{3-δ} Electrodes. Journal of the Electrochemical Society, 2014, 161, F561-F568.	1.3	5

#	ARTICLE	IF	CITATIONS
313	Microstructural Characterization of Hard Ceramics. , 2014, , 265-284.		2
314	Modeling Analysis of Bi-Layer Ni-(ZrO ₂) _x (Y ₂ O ₃) _{1-\hat{x}} Anodes for Anode-Supported Intermediate Temperature-Solid Oxide Fuel Cells. <i>Energies</i> , 2014, 7, 5647-5674.	1.6	7
315	Phase wettability and microstructural evolution in solid oxide fuel cell anode materials. <i>Acta Materialia</i> , 2014, 78, 271-281.	3.8	23
316	Three dimensional stress analysis of solid oxide fuel cell anode micro structure. <i>International Journal of Hydrogen Energy</i> , 2014, 39, 19119-19131.	3.8	22
317	Sample Preparation of Energy Materials for X-ray Nanotomography with Micromanipulation. <i>ChemPhysChem</i> , 2014, 15, 1587-1591.	1.0	12
318	Three-dimensional Reconstruction and Microstructure Modeling of Porosity-Graded Cathode Using Focused Ion Beam and Homogenization Techniques. <i>Fuel Cells</i> , 2014, 14, 91-95.	1.5	16
319	Computational analysis of the reacting flow in a microstructured reformer using a multiscale approach. <i>AIChE Journal</i> , 2014, 60, 2263-2274.	1.8	10
320	Solid Oxide Fuel Cells with Improved Gas Transport. <i>SpringerBriefs in Energy</i> , 2014, , 45-70.	0.2	1
321	X-ray micro-computed tomography and tortuosity calculations of percolating pore networks. <i>Acta Materialia</i> , 2014, 71, 126-135.	3.8	72
322	Chemomechanics of ionically conductive ceramics for electrical energy conversion and storage. <i>Journal of Electroceramics</i> , 2014, 32, 3-27.	0.8	38
323	Full-Field Synchrotron Tomography of Nongraphitic Foam and Laminate Anodes for Lithium-Ion Batteries. <i>ACS Applied Materials & Interfaces</i> , 2014, 6, 4524-4534.	4.0	16
324	Properties and development of Ni/YSZ as an anode material in solid oxide fuel cell: A review. <i>Renewable and Sustainable Energy Reviews</i> , 2014, 36, 149-179.	8.2	280
325	Quantification of double-layer Ni/YSZ fuel cell anodes from focused ion beam tomography data. <i>Journal of Power Sources</i> , 2014, 246, 819-830.	4.0	66
326	Investigation of Oxygen Reactions in a Screenprinted Pt/YSZ-Model Electrode System. <i>ECS Transactions</i> , 2014, 58, 37-43.	0.3	0
327	Fundamentals of electro- and thermochemistry in the anode of solid-oxide fuel cells with hydrocarbon and syngas fuels. <i>Progress in Energy and Combustion Science</i> , 2014, 40, 74-111.	15.8	158
328	Tortuosity characterization of 3D microstructure at nano-scale for energy storage and conversion materials. <i>Journal of Power Sources</i> , 2014, 249, 349-356.	4.0	91
329	Metal-supported solid oxide fuel cells with impregnated SrFe _{0.75} Mo _{0.25} O ₃ cathodes. <i>Journal of Power Sources</i> , 2014, 247, 556-561.	4.0	30
330	A rapid analytical assessment tool for three dimensional electrode microstructural networks with geometric sensitivity. <i>Journal of Power Sources</i> , 2014, 246, 322-334.	4.0	27

#	ARTICLE	IF	CITATIONS
331	Application of carbon materials in redox flow batteries. <i>Journal of Power Sources</i> , 2014, 253, 150-166.	4.0	262
332	Evolution of electrochemical interfaces in solid oxide fuel cells (SOFC): a Ni and Zr resonant anomalous ultra-small-angle X-ray scattering study with elemental and spatial resolution across the cell assembly. <i>RSC Advances</i> , 2014, 4, 4676-4690.	1.7	10
333	Temperature gradients in microelectrode measurements: Relevance and solutions for studies of SOFC electrode materials. <i>Solid State Ionics</i> , 2014, 268, 82-93.	1.3	28
334	Three-dimensional microstructure of high-performance pulsed-laser deposited Ni-YSZ SOFC anodes. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 15249.	1.3	32
335	Advances in 3D focused ion beam tomography. <i>MRS Bulletin</i> , 2014, 39, 354-360.	1.7	69
336	Gas Transport in Solid Oxide Fuel Cells. <i>SpringerBriefs in Energy</i> , 2014, , .	0.2	30
337	An electrochemical device for the Knudsen and bulk diffusivity measurement in the anodes of solid oxide fuel cells. <i>International Journal of Hydrogen Energy</i> , 2014, 39, 15057-15062.	3.8	7
338	Tortuosity factor of three-dimensional infiltrate network. <i>Journal of Power Sources</i> , 2014, 269, 189-193.	4.0	9
339	Characterization of Ni-Infiltrated GDC Electrodes for Solid Oxide Cell Applications. <i>Journal of the Electrochemical Society</i> , 2014, 161, F899-F905.	1.3	30
340	Application of the level-set method to the analysis of an evolving microstructure. <i>Computational Materials Science</i> , 2014, 85, 46-58.	1.4	19
341	Fabrication and Characterization of Graded Anodes for Anode-Supported Solid Oxide Fuel Cells by Tape Casting and Lamination. <i>Electrocatalysis</i> , 2014, 5, 273-278.	1.5	8
342	Characterization of Ni-YSZ anodes for solid oxide fuel cells fabricated by solution precursor plasma spraying with axial feedstock injection. <i>Journal of Power Sources</i> , 2014, 247, 831-839.	4.0	16
343	Hierarchically Oriented Macroporous Anode-Supported Solid Oxide Fuel Cell with Thin Ceria Electrolyte Film. <i>ACS Applied Materials & Interfaces</i> , 2014, 6, 5130-5136.	4.0	87
344	A Sintering Kinetics Model for Ceramic Dual-Phase Composite. <i>Journal of the American Ceramic Society</i> , 2014, 97, 2580-2589.	1.9	11
345	Importance of oxygen spillover for fuel oxidation on Ni/YSZ anodes in solid oxide fuel cells. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 8536.	1.3	16
346	Evolution of Pores and Tortuosity During Sintering. <i>Journal of the American Ceramic Society</i> , 2014, 97, 2383-2386.	1.9	12
347	Study on the Cr deposition and poisoning phenomenon at $(La_{0.6}Sr_{0.4})(Co_{0.2}Fe_{0.8})O_{3-\delta}$ electrode of solid oxide fuel cells by transmission X-ray microscopy. <i>International Journal of Hydrogen Energy</i> , 2014, 39, 15728-15734.	3.8	20
348	Modeling and Parametric Study of a Single Solid Oxide Fuel Cell by Finite Element Method. <i>Fuel Cells</i> , 2014, 14, 189-199.	1.5	11

#	ARTICLE	IF	CITATIONS
349	A theoretical model for the electrical conductivity of core-shell nano-composite electrode of SOFC. <i>Solid State Ionics</i> , 2014, 262, 370-373.	1.3	10
350	Three-dimensional electrochemical Li-ion battery modelling featuring a focused ion-beam/scanning electron microscopy based three-phase reconstruction of a LiCoO ₂ cathode. <i>Electrochimica Acta</i> , 2014, 115, 131-139.	2.6	96
351	Symmetrical solid oxide fuel cells with impregnated SrFe _{0.75} Mo _{0.25} O ₃ electrodes. <i>Journal of Power Sources</i> , 2014, 252, 58-63.	4.0	61
352	Lattice-Boltzmann modeling of gas transport in Ni-Yttria-stabilized zirconia anodes during thermal cycling based on X-ray computed tomography. <i>Electrochimica Acta</i> , 2014, 121, 386-393.	2.6	5
353	On the accuracy of triple phase boundary lengths calculated from tomographic image data. <i>Journal of Power Sources</i> , 2014, 261, 198-205.	4.0	17
354	Microstructure reconstruction and characterization of PEMFC electrodes. <i>International Journal of Hydrogen Energy</i> , 2014, 39, 15894-15906.	3.8	73
355	Enhanced triple-phase boundary density in infiltrated electrodes for solid oxide fuel cells demonstrated by high-resolution tomography. <i>Journal of Power Sources</i> , 2014, 266, 291-295.	4.0	87
356	3D imaging and quantification of interfaces in SOFC anodes. <i>Journal of the European Ceramic Society</i> , 2014, 34, 3755-3761.	2.8	24
357	Novel architected metal-supported solid oxide fuel cells with Mo-doped SrFeO ₃ electrocatalysts. <i>Journal of Power Sources</i> , 2014, 267, 148-154.	4.0	28
358	Complex oxide nanomembranes for energy conversion and storage: A review. <i>Journal of Materials Research</i> , 2014, 29, 320-337.	1.2	21
359	Theoretical Modeling for Fundamental Understanding of High-Temperature Solid Oxide Fuel Cells. <i>Electrochemical Energy Storage and Conversion</i> , 2015, , 339-361.	0.0	0
360	Effect of infiltrated transition metals on nickel morphology change and area-specific resistance of Ni-YSZ based SOFC anode during long-term operation. <i>Journal of Electroceramics</i> , 2015, 35, 81-89.	0.8	3
361	Advanced Technologies for High-Temperature Solid Oxide Fuel Cells. <i>Electrochemical Energy Storage and Conversion</i> , 2015, , 307-337.	0.0	0
362	Particle-size effects in the formation of bicontinuous Pickering emulsions. <i>Physical Review E</i> , 2015, 92, 032308.	0.8	37
364	Characterizing nano-scale electrocatalysis during partial oxidation of methane. <i>Scientific Reports</i> , 2014, 4, 3937.	1.6	10
365	Towards Comprehensive Description of Stack Durability/Reliability Behavior. <i>Fuel Cells</i> , 2015, 15, 652-668.	1.5	20
366	Image Analysis and Modeling of the Orientation of Pores in a Constrained Film on a Rigid Substrate. <i>Journal of the American Ceramic Society</i> , 2015, 98, 2403-2410.	1.9	4
367	3D Microstructure Effects in Ni-YSZ Anodes: Prediction of Effective Transport Properties and Optimization of Redox Stability. <i>Materials</i> , 2015, 8, 5554-5585.	1.3	40

#	ARTICLE	IF	CITATIONS
369	Change of an anode's microstructure morphology during the fuel starvation of an anode-supported solid oxide fuel cell. <i>International Journal of Hydrogen Energy</i> , 2015, 40, 6927-6934.	3.8	37
370	Dynamics and rheology of nonpolar bijels. <i>Soft Matter</i> , 2015, 11, 5282-5293.	1.2	75
371	High Temperature Electrolysis. , 2015, , 183-209.		11
372	Discharge Performance of Li ⁺ O ₂ Batteries Using a Multiscale Modeling Approach. <i>Journal of Physical Chemistry C</i> , 2015, 119, 14851-14860.	1.5	29
373	Structural Characterization of Porous Materials. <i>World Scientific Series in Nanoscience and Nanotechnology</i> , 2015, , 339-363.	0.1	0
374	Catalytic water dehydrogenation and formation on nickel: Dual path mechanism in high electric fields. <i>Journal of Catalysis</i> , 2015, 332, 187-200.	3.1	52
375	FIB+SEM Tomography and Numerical Simulation of Corroded PEM Fuel Cell Cathodes. <i>ECS Transactions</i> , 2015, 69, 431-441.	0.3	1
377	Cross-sectional observation of nanostructured catalyst layer of polymer electrolyte fuel cell using FIB/SEM. <i>Journal of Power Sources</i> , 2015, 280, 210-216.	4.0	24
378	High power density supercapacitors based on the carbon dioxide activated d-glucose derived carbon electrodes and 1-ethyl-3-methylimidazolium tetrafluoroborate ionic liquid. <i>Journal of Power Sources</i> , 2015, 280, 667-677.	4.0	111
379	Triple phase boundary specific pathway analysis for quantitative characterization of solid oxide cell electrode microstructure. <i>Journal of Power Sources</i> , 2015, 279, 686-693.	4.0	42
380	Schottky Junction Effect on High Performance Fuel Cells Based on Nanocomposite Materials. <i>Advanced Energy Materials</i> , 2015, 5, 1401895.	10.2	166
381	Microstructural characteristics and elastic modulus of porous solids. <i>Acta Materialia</i> , 2015, 89, 268-277.	3.8	79
382	Modelling and understanding materials microstructure evolution driven by interface energy. <i>Computational Materials Science</i> , 2015, 107, 1-7.	1.4	7
383	Effect of various sintering inhibitors on the long term performance of Ni-YSZ anodes used for SOFCs. <i>International Journal of Hydrogen Energy</i> , 2015, 40, 11968-11975.	3.8	25
384	Anodization of sputtered metallic films: The microstructural connection. <i>Scripta Materialia</i> , 2015, 105, 18-21.	2.6	4
385	Parasitic Currents Caused by Different Ionic and Electronic Conductivities in Fuel Cell Anodes. <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 15746-15751.	4.0	5
386	Solid oxide fuel cells fueled with reduced Fe/Ti oxide. <i>Journal of Materials Chemistry A</i> , 2015, 3, 2242-2250.	5.2	7
387	A robust NiO ⁺ Sm _{0.2} Ce _{0.8} O _{1.9} anode for direct-methane solid oxide fuel cell. <i>Materials Research Bulletin</i> , 2015, 71, 1-6.	2.7	13

#	ARTICLE	IF	CITATIONS
388	Exchange Current Density of SOFC Electrodes: Theoretical Relations and Partial Pressure Dependencies Rate-Determined by Electrochemical Reactions. <i>Journal of the Electrochemical Society</i> , 2015, 162, F136-F152.	1.3	23
389	Multicomponent Gas Diffusion in Porous Electrodes. <i>Journal of the Electrochemical Society</i> , 2015, 162, F613-F621.	1.3	38
390	A Nanostructured Architecture for Reduced-Temperature Solid Oxide Fuel Cells. <i>Advanced Energy Materials</i> , 2015, 5, 1500375.	10.2	20
391	Solid oxide cells with zirconia/ceria Bi-Layer electrolytes fabricated by reduced temperature firing. <i>Journal of Materials Chemistry A</i> , 2015, 3, 9955-9964.	5.2	66
392	Thermal aging stability of infiltrated solid oxide fuel cell electrode microstructures: A three-dimensional kinetic Monte Carlo simulation. <i>Journal of Power Sources</i> , 2015, 299, 578-586.	4.0	15
393	Designing an optimal 3D microstructure for three-phase solid oxide fuel cell anodes with maximal active triple phase boundary length (TPBL). <i>International Journal of Hydrogen Energy</i> , 2015, 40, 15585-15596.	3.8	15
394	Tomographic Analysis of Polymer Electrolyte Fuel Cell Catalyst Layers: Methods, Validity and Challenges. <i>ECS Transactions</i> , 2015, 69, 409-418.	0.3	4
395	An analytical approach for solid oxide cell electrode geometric design. <i>Journal of Power Sources</i> , 2015, 300, 365-375.	4.0	5
396	Nano-structural changes in Li-ion battery cathodes during cycling revealed by FIB-SEM serial sectioning tomography. <i>Journal of Materials Chemistry A</i> , 2015, 3, 18171-18179.	5.2	74
397	New formulas for the tortuosity factor of electrochemically conducting channels. <i>Electrochemistry Communications</i> , 2015, 60, 52-55.	2.3	5
398	One-pot synthesized hetero-structured $\text{Ca}_3\text{Co}_2\text{O}_6/\text{La}_{0.6}\text{Ca}_{0.4}\text{CoO}_3$ dual-phase composite cathode materials for solid-oxide fuel cells. <i>International Journal of Hydrogen Energy</i> , 2015, 40, 12750-12760.	3.8	15
399	Cobalt-free $\text{Ba}_{0.5}\text{Sr}_{0.5}\text{Fe}_{0.8}\text{Cu}_{0.1}\text{Ti}_{0.1}\text{O}_{3-\delta}$ as a bi-functional electrode material for solid oxide fuel cells. <i>Journal of Power Sources</i> , 2015, 298, 184-192.	4.0	47
400	Evaluation of Exchange Current Density for LSM Porous Cathode Based on Measurement of Three-Phase Boundary Length. <i>ECS Transactions</i> , 2015, 68, 657-664.	0.3	2
401	3D imaging of cell interactions with electrospun PLGA nanofiber membranes for bone regeneration. <i>Acta Biomaterialia</i> , 2015, 27, 88-100.	4.1	99
402	Influence of Ni/Mo ratio on structural and electrical properties of double perovskite system $\text{Sr}_2\text{Ni}_{1+x}\text{Mo}_{1-x}\text{O}_6$. <i>Applied Physics A: Materials Science and Processing</i> , 2015, 121, 635-644.	1.1	21
403	A comparison of measured and modeled velocity fields for a laminar flow in a porous medium. <i>Advances in Water Resources</i> , 2015, 85, 45-63.	1.7	36
404	Challenges and prospects of anodes for solid oxide fuel cells (SOFCs). <i>Ionics</i> , 2015, 21, 301-318.	1.2	47
405	In-situ quantification of solid oxide fuel cell electrode microstructure by electrochemical impedance spectroscopy. <i>Journal of Power Sources</i> , 2015, 277, 277-285.	4.0	61

#	ARTICLE	IF	CITATIONS
406	The chemical oxygen surface exchange and bulk diffusion coefficient determined by impedance spectroscopy of porous La _{0.58} Sr _{0.4} Co _{0.2} Fe _{0.8} O _{3-δ} (LSCF) cathodes. <i>Solid State Ionics</i> , 2015, 269, 67-79.	1.3	70
407	Micro level two dimensional stress and thermal analysis anode/electrolyte interface of a solid oxide fuel cell. <i>International Journal of Hydrogen Energy</i> , 2015, 40, 7895-7902.	3.8	22
408	Dispersion, connectivity and tortuosity of hierarchical porosity composite SOFC cathodes prepared by freeze-casting. <i>Journal of the European Ceramic Society</i> , 2015, 35, 585-595.	2.8	78
409	Analyses of microstructural and elastic properties of porous SOFC cathodes based on focused ion beam tomography. <i>Journal of Power Sources</i> , 2015, 273, 486-494.	4.0	29
410	Imaging of Fuel Cell and Battery Electrodes Using Focused Ion Beam Scanning Electron Microscopy. <i>Microscopy and Microanalysis</i> , 2016, 22, 1310-1311.	0.2	1
411	Solid oxide fuel cells. , 2016, , 89-114.		1
412	The Hydrogen Grand Challenge. <i>Frontiers in Energy Research</i> , 2016, 4, .	1.2	47
413	A Finite Length Cylinder Model for Mixed Oxide-Ion and Electron Conducting Cathodes Suited for Intermediate-Temperature Solid Oxide Fuel Cells. <i>Journal of the Electrochemical Society</i> , 2016, 163, F548-F563.	1.3	4
414	Image contrast enhancement of Ni/YSZ anode during the slice-and-view process in FIB-SEM. <i>Journal of Microscopy</i> , 2016, 261, 326-332.	0.8	5
415	Nickel-Iron/Gadolinium-Doped Ceria (CGO) Composite Electrocatalyst as a Protective Layer for a Solid Oxide Fuel Cell Anode Fed with Biofuels. <i>ChemCatChem</i> , 2016, 8, 648-655.	1.8	16
416	Morphological modelling of three-phase microstructures of anode layers using SEM images. <i>Journal of Microscopy</i> , 2016, 263, 51-63.	0.8	20
417	The influence of the reducing conditions on the final microstructure and performance of nickel-yttria stabilized zirconia cermets. <i>Electrochimica Acta</i> , 2016, 221, 41-47.	2.6	9
418	Dependence of solid oxide fuel cell electrode microstructure parameters on focused ion beam Scanning electron microscopy resolution. <i>International Journal of Hydrogen Energy</i> , 2016, 41, 22373-22380.	3.8	16
419	Solid Oxide Cell Microstructural Performance in Hydrogen and Carbon Monoxide Reactant Streams. <i>Journal of Electrochemical Energy Conversion and Storage</i> , 2016, 13, .	1.1	2
420	Effect of Ni content on the morphological evolution of Ni-YSZ solid oxide fuel cell electrodes. <i>Applied Physics Letters</i> , 2016, 108, .	1.5	22
421	The Capacitance of Nickel Pattern Electrodes on Zirconia Electrolyte. <i>Journal of the Electrochemical Society</i> , 2016, 163, H1019-H1025.	1.3	11
422	Three-Phase 3D Reconstruction of a LiCoO ₂ Cathode via FIB-SEM Tomography. <i>Microscopy and Microanalysis</i> , 2016, 22, 140-148.	0.2	34
423	TauFactor: An open-source application for calculating tortuosity factors from tomographic data. <i>SoftwareX</i> , 2016, 5, 203-210.	1.2	257

#	ARTICLE	IF	CITATIONS
424	A review on micro-level modeling of solid oxide fuel cells. <i>International Journal of Hydrogen Energy</i> , 2016, 41, 9968-9981.	3.8	31
425	The fuel cells studies from ionic electrolyte $\text{Ce}_{0.8}\text{Sm}_{0.05}\text{Ca}_{0.15}\text{O}_{2-\delta}$ to the mixture layers with semiconductor $\text{Ni}_{0.8}\text{Co}_{0.15}\text{Al}_{0.05}\text{LiO}_{2-\delta}$. <i>International Journal of Hydrogen Energy</i> , 2016, 41, 18761-18768.	3.8	57
426	LiNiFe-based layered structure oxide and composite for advanced single layer fuel cells. <i>Journal of Power Sources</i> , 2016, 316, 37-43.	4.0	42
427	Stereo-epitaxial growth of single-crystal Ni nanowires and nanoplates from aligned seed crystals. <i>Nanoscale</i> , 2016, 8, 10291-10297.	2.8	2
428	Effects of nickel oxide impurities on the microstructure and electrical properties of a nickel-yttria-stabilized zirconia anode. <i>International Journal of Hydrogen Energy</i> , 2016, 41, 10833-10843.	3.8	2
429	Comparison of three-dimensional analysis and stereological techniques for quantifying lithium-ion battery electrode microstructures. <i>Journal of Microscopy</i> , 2016, 263, 280-292.	0.8	57
430	The effect of fuel utilization on heat and mass transfer within solid oxide fuel cells examined by three-dimensional numerical simulations. <i>International Journal of Heat and Mass Transfer</i> , 2016, 97, 77-93.	2.5	74
431	Microporous and mesoporous carbons for energy storage synthesized by activation of carbonaceous material by zinc chloride, potassium hydroxide or mixture of them. <i>Journal of Power Sources</i> , 2016, 326, 624-634.	4.0	68
432	Impact of nanostructured anode on low-temperature performance of thin-film-based anode-supported solid oxide fuel cells. <i>Journal of Power Sources</i> , 2016, 315, 324-330.	4.0	60
433	Evaluation of nickel-yttria stabilized zirconia anode degradation during discharge operation and redox cycles operation by electrochemical calculation. <i>Journal of Power Sources</i> , 2016, 330, 149-155.	4.0	13
434	Accessible triple-phase boundary length: A performance metric to account for transport pathways in heterogeneous electrochemical materials. <i>Journal of Power Sources</i> , 2016, 325, 786-800.	4.0	20
435	Lanthanum-doped Calcium Manganite ($\text{La}_{0.1}\text{Ca}_{0.9}\text{MnO}_3$) Cathode for Advanced Solid Oxide Fuel Cell (SOFC). <i>Materials Today: Proceedings</i> , 2016, 3, 2698-2706.	0.9	9
436	Chromium poisoning in (La,Sr)MnO ₃ cathode: Three-dimensional simulation of a solid oxide fuel cell. <i>Journal of Power Sources</i> , 2016, 326, 331-340.	4.0	25
437	Porous Ni/ZrO ₂ Cermet from Highly Concentrated Composite Colloid. <i>Journal of the American Ceramic Society</i> , 2016, 99, 3533-3539.	1.9	1
438	Phases and Interfaces from Real Space Atomically Resolved Data: Physics-Based Deep Data Image Analysis. <i>Nano Letters</i> , 2016, 16, 5574-5581.	4.5	40
439	Investigating microstructural evolution during the electroreduction of UO ₂ to U in LiCl-KCl eutectic using focused ion beam tomography. <i>Journal of Nuclear Materials</i> , 2016, 480, 355-361.	1.3	16
440	Fabrication of thin films on an anode support with surface modification for high-efficiency intermediate-temperature solid oxide fuel cells via a dip-coating method. <i>Electrochimica Acta</i> , 2016, 217, 150-155.	2.6	21
441	An Electrochemical Effectiveness Model and Its Implication for Performance Loss Due to Electrode Microstructural Degradation in Solid Oxide Fuel Cells. <i>Fuel Cells</i> , 2016, 16, 591-599.	1.5	4

#	ARTICLE	IF	CITATIONS
442	Role of microstructure on electrode operating mechanisms for mixed ionic electronic conductors: From synchrotron-based 3D reconstruction to electrochemical modeling. <i>Solid State Ionics</i> , 2016, 294, 90-107.	1.3	42
443	Evolution of the electrochemical interface in high-temperature fuel cells and electrolyzers. <i>Nature Energy</i> , 2016, 1, .	19.8	557
444	Is 2D stereological method good enough for quantification of solid oxide fuel cell electrode microstructure?. <i>Science Bulletin</i> , 2016, 61, 1313-1316.	4.3	6
445	Simulation-based microstructural optimization of solid oxide fuel cell for low temperature operation. <i>International Journal of Hydrogen Energy</i> , 2016, 41, 13632-13643.	3.8	21
446	A Coupled Experimental/Numerical Approach for Tuning High-Performing SOFC-Cathode. <i>ECS Transactions</i> , 2016, 72, 81-92.	0.3	7
447	Stochastic 3D modeling of complex three-phase microstructures in SOFC-electrodes with completely connected phases. <i>Computational Materials Science</i> , 2016, 118, 353-364.	1.4	33
448	Pore scale investigation of gaseous mixture flow in porous anode of solid oxide fuel cell. <i>Energy</i> , 2016, 107, 295-304.	4.5	9
449	Relating the 3D electrode morphology to Li-ion battery performance; a case for LiFePO ₄ . <i>Journal of Power Sources</i> , 2016, 324, 358-367.	4.0	33
450	Quantitative Analysis of Porosity and Transport Properties by FIB-SEM 3D Imaging of a Solder Based Sintered Silver for a New Microelectronic Component. <i>Journal of Electronic Materials</i> , 2016, 45, 2242-2251.	1.0	21
451	Electron microscopy investigations of changes in morphology and conductivity of LiFePO ₄ /C electrodes. <i>Journal of Power Sources</i> , 2016, 307, 259-269.	4.0	48
452	A prospect for computing in porous materials research: Very large fluid flow simulations. <i>Journal of Computational Science</i> , 2016, 12, 62-76.	1.5	37
453	Exchange current model for (La _{0.8} Sr _{0.2}) _{0.95} MnO ₃ (LSM) porous cathode for solid oxide fuel cells. <i>Journal of Power Sources</i> , 2016, 315, 63-69.	4.0	28
454	Effect of lanthanum (La ³⁺) doping on the structural and electrical properties of double perovskite Sr ₂ NiMoO ₆ . <i>RSC Advances</i> , 2016, 6, 22094-22102.	1.7	19
455	High-performance Ni-YSZ thin-walled microtubes for anode-supported solid oxide fuel cells obtained by powder extrusion moulding. <i>RSC Advances</i> , 2016, 6, 19007-19015.	1.7	19
456	Modeling reaction-diffusion processes within catalyst washcoats: I. Microscale processes based on three-dimensional reconstructions. <i>Chemical Engineering Science</i> , 2016, 145, 299-307.	1.9	18
457	The application of 3D imaging techniques, simulation and diffusion experiments to explore transport properties in porous oxygen transport membrane support materials. <i>Solid State Ionics</i> , 2016, 288, 315-321.	1.3	25
458	Observing the microstructural evolution of Ni-Yttria-stabilized zirconia solid oxide fuel cell anodes. <i>Acta Materialia</i> , 2016, 103, 204-210.	3.8	44
459	Numerical modeling of nickel-infiltrated gadolinium-doped ceria electrodes reconstructed with focused ion beam tomography. <i>Electrochimica Acta</i> , 2016, 190, 178-185.	2.6	34

#	ARTICLE	IF	CITATIONS
460	Multi scale and physics models for intermediate and low temperatures H ⁺ -solid oxide fuel cells with H ⁺ /e ⁻ /O ₂ mixed conducting properties: Part A, generalized percolation theory for LSCF-SDC-BZCY 3-component cathodes. <i>Journal of Power Sources</i> , 2016, 303, 305-316.	4.0	35
461	Electrochemical and microstructural properties of Ni _{0.9} (Y ₂ O ₃) _{0.08} (ZrO ₂) _{0.92} (Ce _{0.9} Gd _{0.1})O _{1.95} anode-supported microtubular solid oxide fuel cells. <i>Solid State Ionics</i> , 2016, 285, 227-233.	1.3	19
462	Corn-cob like nanofibres as cathode catalysts for an effective microstructure design in solid oxide fuel cells. <i>Journal of Materials Chemistry A</i> , 2017, 5, 3966-3973.	5.2	29
463	Investigation of a Combined Hydrogen and Oxygen Spillover Mechanism for Syngas Electro-Oxidation on Ni/YSZ. <i>Journal of the Electrochemical Society</i> , 2017, 164, F32-F45.	1.3	13
464	Long-term microstructural changes in solid oxide fuel cell anodes: 3D reconstruction. <i>Journal of the American Ceramic Society</i> , 2017, 100, 1653-1660.	1.9	8
465	Guidelines for the Rational Design and Engineering of 3D Manufactured Solid Oxide Fuel Cell Composite Electrodes. <i>Journal of the Electrochemical Society</i> , 2017, 164, F89-F98.	1.3	21
466	Effect of Anode Thickness on Polarization Resistance for Metal-Supported Microtubular Solid Oxide Fuel Cells. <i>Journal of the Electrochemical Society</i> , 2017, 164, F243-F247.	1.3	15
467	Prediction of La _{0.6} Sr _{0.4} Co _{0.2} Fe _{0.8} O ₃ cathode microstructures during sintering: Kinetic Monte Carlo (KMC) simulations calibrated by artificial neural networks. <i>Journal of Power Sources</i> , 2017, 346, 103-112.	4.0	30
468	Comprehensive Enhancement of Nanostructured Lithium-Ion Battery Cathode Materials via Conformal Graphene Dispersion. <i>Nano Letters</i> , 2017, 17, 2539-2546.	4.5	81
469	A review of high temperature co-electrolysis of H ₂ O and CO ₂ to produce sustainable fuels using solid oxide electrolysis cells (SOECs): advanced materials and technology. <i>Chemical Society Reviews</i> , 2017, 46, 1427-1463.	18.7	515
470	Three-Phase Segmentation of Solid Oxide Fuel Cell Anode Materials Using Lab Based X-ray Nano-Computed Tomography. <i>Fuel Cells</i> , 2017, 17, 75-82.	1.5	26
471	Microstructure degradation of Ni/CGO anodes for solid oxide fuel cells after long operation time using 3D reconstructions by FIB tomography. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 13767-13777.	1.3	27
472	Charge separation and transport in La _{0.6} Sr _{0.4} Co _{0.2} Fe _{0.8} O _{3-δ} and ion-doping ceria heterostructure material for new generation fuel cell. <i>Nano Energy</i> , 2017, 37, 195-202.	8.2	115
473	The fractal nature of the three-phase boundary: A heuristic approach to the degradation of nanostructured solid oxide fuel cell anodes. <i>Nano Energy</i> , 2017, 38, 526-536.	8.2	52
474	An active functional layer for carbon-tolerant anode of intermediate temperature solid oxide fuel cells. <i>Materials Letters</i> , 2017, 208, 54-57.	1.3	11
475	Simulation of electrochemical processes during oxygen evolution on Pb-MnO ₂ composite electrodes. <i>Electrochimica Acta</i> , 2017, 245, 512-525.	2.6	10
476	Analysis of a perovskite-ceria functional layer-based solid oxide fuel cell. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 17536-17543.	3.8	7
477	Study of the tortuosity factors at multi-scale for a novel-structured SOFC anode. <i>Journal of Physics: Conference Series</i> , 2017, 849, 012020.	0.3	7

#	ARTICLE	IF	CITATIONS
478	An ionic conductor $\text{Ce}_{0.8}\text{Sm}_{0.2}\text{O}_{2-\delta}$ (SDC) and semiconductor $\text{Sm}_{0.5}\text{Sr}_{0.5}\text{CoO}_3$ (SSC) composite for high performance electrolyte-free fuel cell. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 22228-22234.	3.8	35
479	Direct observation of enhanced water and carbon dioxide reactivity on multivalent metal oxides and their composites. <i>Energy and Environmental Science</i> , 2017, 10, 919-923.	15.6	16
480	The three-dimensional structure of flexible resorcinol-formaldehyde aerogels investigated by means of holotomography. <i>Journal of Sol-Gel Science and Technology</i> , 2017, 84, 391-399.	1.1	13
481	Quantifying intermediate-frequency heterogeneities of SOFC electrodes using X-ray computed tomography. <i>Journal of the American Ceramic Society</i> , 2017, 100, 2232-2242.	1.9	23
482	3D multi-energy deconvolution electron microscopy. <i>Nanoscale</i> , 2017, 9, 684-689.	2.8	20
483	Testing of Electrodes, Cells, and Short Stacks. CISM International Centre for Mechanical Sciences, Courses and Lectures, 2017, , 31-76.	0.3	3
484	Biological application of focus ion beam-scanning electron microscopy (FIB-SEM) to the imaging of cartilaginous fibrils and osteoblastic cytoplasmic processes. <i>Journal of Oral Biosciences</i> , 2017, 59, 55-62.	0.8	17
485	Microstructure and performance of LSM/YSZ based solid oxide fuel cell cathodes fabricated from solution combustion co-synthesized powders and by solution precursor plasma spraying. <i>Surface and Coatings Technology</i> , 2017, 310, 25-32.	2.2	10
486	Trace compounds impact on SOFC performance: Experimental and modelling approach. <i>Applied Energy</i> , 2017, 208, 637-654.	5.1	54
487	Correlation between triple phase boundary and the microstructure of Solid Oxide Fuel Cell anodes: The role of composition, porosity and Ni densification. <i>Journal of Power Sources</i> , 2017, 365, 210-219.	4.0	53
488	Microstructure Degradation of LSM/YSZ Cathodes for Solid Oxide Fuel Cells Aged in Stack after Long Operation Time. <i>Journal of the Electrochemical Society</i> , 2017, 164, F1385-F1391.	1.3	9
489	Polarization Characteristics and Microstructural Changes of Solid Oxide Fuel Cell and Solid Oxide Electrolysis Cell Fuel Electrodes. <i>Journal of the Electrochemical Society</i> , 2017, 164, F1158-F1164.	1.3	9
490	FIB-SEM Tomography Connects Microstructure to Corrosion-Induced Performance Loss in PEMFC Cathodes. <i>Journal of the Electrochemical Society</i> , 2017, 164, F901-F907.	1.3	29
491	The electrolyte-layer free fuel cell using a semiconductor-ionic $\text{Sr}_2\text{Fe}_{1.5}\text{Mo}_{0.5}\text{O}_6$ $\text{Ce}_{0.8}\text{Sm}_{0.2}\text{O}_{2-\delta}$ composite functional membrane. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 25001-25007.	3.8	32
493	Towards Quantification of Local Electrochemical Parameters in Microstructures of Solid Oxide Fuel Cell Electrodes using High Performance Computations. <i>ECS Transactions</i> , 2017, 78, 2711-2722.	0.3	7
494	A Method for Quantitative 3D Mesoscale Analysis of Solid Oxide Fuel Cell Microstructures Using Xe-plasma Focused Ion Beam (PFIB) Coupled with SEM. <i>ECS Transactions</i> , 2017, 78, 2159-2170.	0.3	14
495	Analyzing the Mechanical Performance of Solid Oxide Fuel Cells at Interfacial Anode/Electrolyte Regions Using Sub-Micron Resolution 3D X-Ray Computed Tomography. <i>ECS Transactions</i> , 2017, 78, 2317-2321.	0.3	2
496	Correlative tomography at the cathode/electrolyte interfaces of solid oxide fuel cells. <i>Journal of Power Sources</i> , 2017, 360, 399-408.	4.0	41

#	ARTICLE	IF	CITATIONS
497	Three-dimensional numerical simulation of solid oxide fuel cell cathode based on lattice Boltzmann method with sub-grid scale models. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 21886-21900.	3.8	11
498	Quantitative Study of LSCF and LSM-YSZ Cathode Microstructure by FIB/SEM Tomography. <i>ECS Transactions</i> , 2017, 78, 861-867.	0.3	3
499	Theory-based design of sintered granular composites triples three-phase boundary in fuel cells. <i>Physical Review E</i> , 2017, 96, 052903.	0.8	2
500	Analytical transport network theory to guide the design of 3-D microstructural networks in energy materials: Part 1. Flow without reactions. <i>Journal of Power Sources</i> , 2017, 372, 297-311.	4.0	4
501	Homogeneity and representativeness analyses of solid oxide fuel cell cathode microstructures. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 30166-30178.	3.8	13
502	Sintering process simulation of a solid oxide fuel cell anode and its predicted thermophysical properties. <i>Applied Thermal Engineering</i> , 2017, 125, 209-219.	3.0	8
503	Ex-situ tracking solid oxide cell electrode microstructural evolution in a redox cycle by high resolution ptychographic nanotomography. <i>Journal of Power Sources</i> , 2017, 360, 520-527.	4.0	20
504	Combining structural, electrochemical, and numerical studies to investigate the relation between microstructure and the stack performance. <i>Journal of Applied Electrochemistry</i> , 2017, 47, 979-989.	1.5	24
505	Microstructural Characterization of Yttria-Stabilized Zirconia Sintered at Different Temperatures Using 3D EBSD, 2D EBSD and Stereological Calculations. <i>Journal of Materials Engineering and Performance</i> , 2017, 26, 4681-4688.	1.2	9
506	Characterization of the inner structure of porous TiO ₂ nanoparticle films in dye sensitive solar cells (DSSC) by focused ion beam (FIB) tomography and transmission Kikuchi diffraction (TKD) in the scanning electron microscope (SEM). <i>Materials Characterization</i> , 2017, 131, 39-48.	1.9	13
507	Microstructural Degradation. , 2017, , 79-99.		5
508	Evaluation of electrochemical reaction mechanisms of La _{0.6} Sr _{0.4} CoO _{3-δ} -Gd _{0.1} Ce _{0.9} O _{2-δ} composite cathodes by 3D numerical simulation. <i>Solid State Ionics</i> , 2018, 319, 162-169.	1.3	9
509	Combined Cu-CeO ₂ /YSZ and Ni/YSZ dual layer anode structures for direct methane solid oxide fuel cells. <i>International Journal of Energy Research</i> , 2018, 42, 3228-3243.	2.2	4
510	Three-dimensional thermal stress analysis of the re-oxidized Ni-YSZ anode functional layer in solid oxide fuel cells. <i>Journal of Alloys and Compounds</i> , 2018, 752, 148-154.	2.8	18
511	Understanding the thermo-mechanical behaviour of solid oxide fuel cell anodes using synchrotron X-ray diffraction. <i>Solid State Ionics</i> , 2018, 314, 156-164.	1.3	15
512	Nanomaterials and technologies for low temperature solid oxide fuel cells: Recent advances, challenges and opportunities. <i>Nano Energy</i> , 2018, 45, 148-176.	8.2	363
513	Advanced impedance modelling of Ni/8YSZ cermet anodes. <i>Electrochimica Acta</i> , 2018, 265, 736-750.	2.6	43
514	Quantification of the degradation of Ni-YSZ anodes upon redox cycling. <i>Journal of Power Sources</i> , 2018, 374, 61-68.	4.0	47

#	ARTICLE	IF	CITATIONS
515	Stochastic geometrical modeling of solid oxide cells electrodes validated on 3D reconstructions. Computational Materials Science, 2018, 143, 262-276.	1.4	56
516	3D Evaluation of Porous Zeolite Absorbents Using FIB-SEM Tomography. International Journal of Precision Engineering and Manufacturing - Green Technology, 2018, 5, 195-199.	2.7	8
517	Measurement of hydrogen gas concentration in fuel electrode of fuel electrode-supported SOFC. Transactions of the JSME (in Japanese), 2018, 84, 17-00317-17-00317.	0.1	1
518	Mesoscale characterization of local property distributions in heterogeneous electrodes. Journal of Power Sources, 2018, 386, 1-9.	4.0	28
519	4D nano-tomography of electrochemical energy devices using lab-based X-ray imaging. Nano Energy, 2018, 47, 556-565.	8.2	37
520	Tortuosity in electrochemical devices: a review of calculation approaches. International Materials Reviews, 2018, 63, 47-67.	9.4	172
521	Reconstructing the microstructure of polyimide-silicalite mixed matrix membranes and their particle connectivity using FIB-SEM tomography. Journal of Microscopy, 2018, 269, 230-246.	0.8	3
522	Effects of Pt and ionomer ratios on the structure of catalyst layer: A theoretical model for polymer electrolyte fuel cells. Journal of Power Sources, 2018, 374, 196-204.	4.0	60
523	Use of a distribution function of relaxation times (DFRT) in impedance analysis of SOFC electrodes. Solid State Ionics, 2018, 314, 103-111.	1.3	93
524	Towards a realistic prediction of sintering of solid oxide fuel cell electrodes: From tomography to discrete element and kinetic Monte Carlo simulations. Scripta Materialia, 2018, 146, 31-35.	2.6	16
525	Improving microstructural quantification in FIB/SEM nanotomography. Ultramicroscopy, 2018, 184, 24-38.	0.8	44
526	Thermomechanics of Solid Oxide Fuel Cell Electrode Microstructures Using Finite Element Methods: Progressive Interface Degradation under Thermal Cycling. , 2018, , .		0
527	Developing micro-scale heterogeneous numerical simulation of a solid oxide fuel cell anode. Journal of Physics: Conference Series, 2018, 1101, 012027.	0.3	0
528	A Three-Dimensional Numerical Assessment of Heterogeneity Impact on a Solid Oxide Fuel Cell's Anode Performance. Catalysts, 2018, 8, 503.	1.6	15
529	Microstructure design using graphs. Npj Computational Materials, 2018, 4, .	3.5	13
530	Evaluating microstructure evolution in an SOFC electrode using digital volume correlation. Sustainable Energy and Fuels, 2018, 2, 2625-2635.	2.5	4
531	Pore structure refinement of cement paste incorporating nanosilica: Study with dual beam scanning electron microscopy/focused ion beam (SEM/FIB). Materials Characterization, 2018, 145, 323-328.	1.9	28
532	Thermally driven <i>in situ</i> exsolution of Ni nanoparticles from (Ni, Gd)CeO ₂ for high-performance solid oxide fuel cells. Journal of Materials Chemistry A, 2018, 6, 18133-18142.	5.2	32

#	ARTICLE	IF	CITATIONS
533	Thermally Driven SOFC Degradation in 4D: Part II. Macroscale. Journal of the Electrochemical Society, 2018, 165, F932-F941.	1.3	12
534	A three-dimensional heterogeneity analysis of electrochemical energy conversion in SOFC anodes using electron nanotomography and mathematical modeling. International Journal of Hydrogen Energy, 2018, 43, 10016-10030.	3.8	35
535	Microscopic techniques for analysis of ceramic fuel cells. Wiley Interdisciplinary Reviews: Energy and Environment, 2018, 7, e299.	1.9	2
536	Three-dimensional numerical reconstruction method for irregular structures of granular geomaterials. Geomechanics and Geophysics for Geo-Energy and Geo-Resources, 2018, 4, 327-341.	1.3	8
537	Electrochemical and Chemical Insertion for Energy Transformation and Switching. Annual Review of Materials Research, 2018, 48, 137-165.	4.3	36
538	Nanostructured Semiconductor Composites for Solid Oxide Fuel Cells (SOFCs). , 2018, , 413-474.		0
539	Highly durable solid oxide fuel cells: suppressing chemical degradation via rational design of a diffusion-blocking layer. Journal of Materials Chemistry A, 2018, 6, 15083-15094.	5.2	28
540	Quantitative Analysis of Microstructures and Reaction Interfaces on Composite Cathodes in All-Solid-State Batteries Using a Three-Dimensional Reconstruction Technique. ACS Applied Materials & Interfaces, 2018, 10, 23740-23747.	4.0	53
541	Image analysis of the porous yttria-stabilized zirconia (YSZ) structure for a lanthanum ferrite-impregnated solid oxide fuel cell (SOFC) electrode. Journal of the European Ceramic Society, 2018, 38, 5463-5470.	2.8	16
542	Thermally Driven SOFC Degradation in 4D: Part I. Microscale. Journal of the Electrochemical Society, 2018, 165, F921-F931.	1.3	14
543	A novel approach for the quantification of inhomogeneous 3D current distribution in fuel cell electrodes. Journal of Power Sources, 2018, 396, 246-256.	4.0	15
544	Faradaic efficiency of porous electrodeposits: an application to $\hat{1}^2$ -Ni(OH) ₂ films. Journal of Solid State Electrochemistry, 2018, 22, 3025-3033.	1.2	1
545	Comparison of electrochemical hydrogen oxidation on different metal/ceramic model anodes and mechanistic implications. JPhys Energy, 2019, 1, 035001.	2.3	3
546	Reduction of $0.40\text{NiO} \cdot 0.60\{[(\text{ZrO}_2)_{0.92}(\text{Y}_2\text{O}_3)_{0.08}]_{1-x}(\text{TiO}_2)_x\}$ Composites Synthesized by Microwave Energy to $0.40\text{Ni} \cdot 0.60\{[(\text{ZrO}_2)_{0.92}(\text{Y}_2\text{O}_3)]_{1-x}(\text{TiO}_2)_x\}$ Composites. SSRN Electronic Journal, 2019, , ,		
547	Representative resolution analysis for X-ray CT: A Solid oxide fuel cell case study. Chemical Engineering Science: X, 2019, 4, 100043.	1.5	2
548	Lattice Boltzmann modelling of the coupling between charge transport and electrochemical reactions in a solid oxide fuel cell with a patterned anode. International Journal of Hydrogen Energy, 2019, 44, 30293-30305.	3.8	11
549	A Novel Meshing and Calculating Method for Studying the Effect of Irregular Microstructure on the SOFC Composite Electrode Performances. International Journal of Electrochemical Science, 2019, , 5226-5236.	0.5	1
550	Seeing mesoatomic distortions in soft-matter crystals of a double-gyroid block copolymer. Nature, 2019, 575, 175-179.	13.7	78

#	ARTICLE	IF	CITATIONS
551	Enhanced CO ₂ Electrolysis at Redox Engineered Interfaces. ECS Transactions, 2019, 91, 2565-2570.	0.3	2
552	Hierarchical dual-porosity nanoscale nickel cermet electrode with high performance and stability. Nanoscale, 2019, 11, 17746-17758.	2.8	8
553	Characterization of inter-diffusion phase between gadolinium-doped ceria and yttria-stabilized zirconia during high-temperature sintering by in-situ and ex-situ transmission electron microscopy observations. Solid State Ionics, 2019, 342, 115058.	1.3	5
554	High-throughput 3D reconstruction of stochastic heterogeneous microstructures in energy storage materials. Npj Computational Materials, 2019, 5, .	3.5	18
555	Developments in X-ray tomography characterization for electrochemical devices. Materials Today, 2019, 31, 69-85.	8.3	79
556	Influence of Lanthanum Doping on Structural and Electrical/Electrochemical Properties of Double Perovskite Sr ₂ CoMoO ₆ as Anode Materials for Intermediate-Temperature Solid Oxide Fuel Cells. ACS Applied Materials & Interfaces, 2019, 11, 24659-24667.	4.0	16
557	Porous Metal-Organic Frameworks for Enhanced Performance Silicon Anodes in Lithium-Ion Batteries. Chemistry of Materials, 2019, 31, 4156-4165.	3.2	34
558	Atomic structure observations and reaction dynamics simulations on triple phase boundaries in solid-oxide fuel cells. Communications Chemistry, 2019, 2, .	2.0	16
559	Microstructural feature analysis of commercial Li-ion battery cathodes by focused ion beam tomography. Journal of Power Sources, 2019, 427, 1-14.	4.0	49
560	High-throughput, super-resolution 3D reconstruction of nano-structured solid oxide fuel cell electrodes and quantification of microstructure-property relationships. Journal of Power Sources, 2019, 427, 112-119.	4.0	26
561	A Novel Approach to the Optimization of a Solid Oxide Fuel Cell Anode Using Evolutionary Algorithms. IEEE Access, 2019, 7, 34361-34372.	2.6	33
562	Composition and Structure Dependent Mesopore/Macropore Formation in Zeolites by Desilication. Journal of Physical Chemistry C, 2019, 123, 8793-8801.	1.5	19
563	A Multiscale Approach to the Numerical Simulation of the Solid Oxide Fuel Cell. Catalysts, 2019, 9, 253.	1.6	29
564	Enhanced carbon dioxide electrolysis at redox manipulated interfaces. Nature Communications, 2019, 10, 1550.	5.8	59
565	Modeling of solid oxide fuel cell (SOFC) electrodes from fabrication to operation: Correlations between microstructures and electrochemical performances. Energy Conversion and Management, 2019, 190, 1-13.	4.4	47
566	Simultaneous three-dimensional elemental mapping of Hollandite and Pyrochlore material phases in ceramic waste form materials. Journal of the American Ceramic Society, 2019, 102, 5620-5631.	1.9	0
567	Numerical simulation of La _{0.6} Sr _{0.4} Co _{0.2} Fe _{0.8} O ₃ - Gd _{0.1} Ce _{0.9} O _{1.95} composite cathodes with micro pillars. International Journal of Hydrogen Energy, 2019, 44, 6871-6885.	3.8	19
568	Detailed description of pulse isotopic exchange method for analyzing oxygen surface exchange behavior on oxide ion conductors. Chinese Journal of Chemical Physics, 2019, 32, 474-484.	0.6	1

#	ARTICLE	IF	CITATIONS
569	Study of $\text{La}_{0.6}\text{Sr}_{0.4}\text{Co}_{1-x}\text{Fe}_x\text{O}_{3-\delta}$ ($x = 0.2$) Tj ETQq0 0 0 rgBT /Overloc of the Electrochemical Society, 2019, 166, F1301-F1307.	1.3	6
570	Optimal design of a model energy conversion device. Structural and Multidisciplinary Optimization, 2019, 59, 389-401.	1.7	4
571	Microstructural correlations for specific surface area and triple phase boundary length for composite electrodes of solid oxide cells. Journal of Power Sources, 2019, 412, 736-748.	4.0	31
572	Electricity generation in dry methane by a durable ceramic fuel cell with high-performing and coking-resistant layered perovskite anode. Applied Energy, 2019, 233-234, 37-43.	5.1	30
573	On a pluri-Gaussian model for three-phase microstructures, with applications to 3D image data of gas-diffusion electrodes. Computational Materials Science, 2019, 156, 325-331.	1.4	19
574	Reviewing the mathematical validity of a fuel cell cathode model. Existence of weak bounded solution. Computers and Mathematics With Applications, 2019, 77, 1425-1436.	1.4	4
575	A $\text{LaNi}_{0.9}\text{Co}_{0.1}\text{O}_3$ coated $\text{Ce}_{0.8}\text{Sm}_{0.2}\text{O}_{1.9}$ composite anode for solid oxide fuel cells fed with methanol. Catalysis Today, 2019, 327, 220-225.	2.2	14
576	Fabrication of 3D and 4D polymer micro- and nanostructures based on electrospinning. , 2020, , 191-229.		6
577	An FeNbO_4 -based oxide anode for a solid oxide fuel cell (SOFC). Electrochimica Acta, 2020, 335, 135692.	2.6	14
578	Dry coating of active material particles with sulfide solid electrolytes for an all-solid-state lithium battery. Journal of Power Sources, 2020, 448, 227579.	4.0	50
579	Solid oxide fuel and electrolysis cells. , 2020, , 387-547.		7
580	Quantitative Analysis of Multi-Scale Heterogeneities in Complex Electrode Microstructures. Journal of the Electrochemical Society, 2020, 167, 054506.	1.3	9
581	Recent advances in solid oxide cell technology for electrolysis. Science, 2020, 370, .	6.0	505
582	Electrostatic spray deposited $\text{Ca}_3\text{Co}_4\text{O}_9+\delta$ and $\text{Ca}_3\text{Co}_4\text{O}_9+\delta/\text{Ce}_{0.9}\text{Gd}_{0.1}\text{O}_{1.95}$ cathodes for SOFC. Electrochimica Acta, 2020, 362, 137142.	2.6	25
583	Modelling of redox flow battery electrode processes at a range of length scales: a review. Sustainable Energy and Fuels, 2020, 4, 5433-5468.	2.5	29
584	Microstructure optimization of porous mixed ionic and electronic conducting cathode for solid oxide fuel cells. Journal of Power Sources, 2020, 478, 228771.	4.0	17
585	Simultaneous Electrical, Electrochemical, and Optical Relaxation Measurements of Oxygen Surface Exchange Coefficients: $\text{Sr}(\text{Ti},\text{Fe})\text{O}_{3-\delta}$ Film Crystallization Case Study. ACS Applied Materials & Interfaces, 2020, 12, 48614-48630.	4.0	12
586	Review of solid oxide fuel cell materials: cathode, anode, and electrolyte. Energy Transitions, 2020, 4, 113-126.	3.6	137

#	ARTICLE	IF	CITATIONS
587	An Anisotropic Microstructure Evolution in a Solid Oxide Fuel Cell Anode. <i>Nanoscale Research Letters</i> , 2020, 15, 3.	3.1	14
588	Influence of Microstructure on Electrochemical Performance of Plasma Sprayed Ni-YSZ Anodes for SOFCs. <i>Fuel Cells</i> , 2020, 20, 730-740.	1.5	3
589	Thin Solid Film Electrolyte and Its Impact on Electrode Polarization in Solid Oxide Fuel Cells Studied by Three-Dimensional Microstructure-Scale Numerical Simulation. <i>Energies</i> , 2020, 13, 5127.	1.6	5
590	Optimization of Material Contrast for Efficient FIB-SEM Tomography of Solid Oxide Fuel Cells. <i>Fuel Cells</i> , 2020, 20, 580-591.	1.5	8
591	A mesoporous catalytic fiber architecture decorated by exsolved nanoparticles for reversible solid oxide cells. <i>Journal of Power Sources</i> , 2020, 468, 228349.	4.0	14
592	Thermo-mechanical stress analyses of solid oxide fuel cell anode based on three-dimensional microstructure reconstruction. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 19791-19800.	3.8	23
593	Oxygen surface exchange kinetics and electronic conductivity of the third-order Ruddlesden-Popper phase Pr ₄ Ni _{2.7} Co _{0.3} O _{10-δ} . <i>Solid State Ionics</i> , 2020, 348, 115282.	1.3	7
594	A Model of Solid Oxide Fuel Cell Degradation on a Microstructural Level. <i>Applied Sciences (Switzerland)</i> , 2020, 10, 1906.	1.3	5
595	Tomographic Reconstruction and Analysis of a Silver CO ₂ Reduction Cathode. <i>Advanced Energy Materials</i> , 2020, 10, 2000488.	10.2	16
598	A reduced-complexity model of the solid oxide fuel cell performance degradation due to the nickel agglomeration in the anode. <i>Journal of Power Sources</i> , 2020, 466, 228309.	4.0	2
599	Integrated application of semantic segmentation-assisted deep learning to quantitative multi-phased microstructural analysis in composite materials: Case study of cathode composite materials of solid oxide fuel cells. <i>Journal of Power Sources</i> , 2020, 471, 228458.	4.0	19
600	Distributions of local electrochemistry in heterogeneous microstructures of solid oxide fuel cells using high-performance computations. <i>Electrochimica Acta</i> , 2020, 345, 136191.	2.6	11
602	Autonomous analysis to identify bijels from two-dimensional images. <i>Soft Matter</i> , 2020, 16, 2565-2573.	1.2	4
603	The Effects of Constriction Factor and Geometric Tortuosity on Li ⁺ Ion Transport in Porous Solid-State Li ⁺ Ion Electrolytes. <i>Advanced Functional Materials</i> , 2020, 30, 1910362.	7.8	22
604	Solid oxide fuel cell: Materials for anode, cathode and electrolyte. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 23988-24013.	3.8	123
605	Particle-based model for functional and diffusion layers of solid oxide cells electrodes. <i>Powder Technology</i> , 2020, 367, 67-81.	2.1	16
606	Modeling dye-sensitized solar cells with graphene based on nanocomposites in the Brillouin zone and density functional theory. <i>Journal of the Korean Ceramic Society</i> , 2021, 58, 50-61.	1.1	6
607	The development of semiconductor-ionic conductor composite electrolytes for fuel cells with symmetrical electrodes. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 9835-9846.	3.8	8

#	ARTICLE	IF	CITATIONS
608	Model-guided design of a high performance and durability Ni nanofiber/ceria matrix solid oxide fuel cell electrode. <i>Journal of Energy Chemistry</i> , 2021, 56, 98-112.	7.1	21
609	A triple (e ⁻ /O ² /H ⁺) conducting perovskite BaCo _{0.4} Fe _{0.4} Zr _{0.1} Y _{0.1} O _{3-δ} for low temperature solid oxide fuel cell. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 9767-9774.	3.8	16
610	Synthesis of layered silicon-graphene hetero-structures by wet jet milling for high capacity anodes in Li-ion batteries. <i>2D Materials</i> , 2021, 8, 015012.	2.0	12
611	Tortuosity of porous media: Image analysis and physical simulation. <i>Earth-Science Reviews</i> , 2021, 212, 103439.	4.0	84
612	Prediction of electrochemical characteristics of practical-size solid oxide fuel cells based on database of unit cell performance. <i>Applied Energy</i> , 2021, 283, 116305.	5.1	9
613	Isostatic pressing of screen printed nickel-gadolinium doped ceria anodes on electrolyte-supported solid oxide fuel cells. <i>Journal of Power Sources</i> , 2021, 485, 229317.	4.0	25
614	Linear sweep and cyclic voltammetry of porous mixed conducting oxygen electrode: Formal study of insertion, diffusion and chemical reaction model. <i>Solid State Ionics</i> , 2021, 359, 115485.	1.3	6
615	Development of nickel based cermet anode materials in solid oxide fuel cells – Now and future. <i>Materials Reports Energy</i> , 2021, 1, 100003.	1.7	34
616	Microstructure Generation via Generative Adversarial Network for Heterogeneous, Topologically Complex 3D Materials. <i>Jom</i> , 2021, 73, 90-102.	0.9	56
617	Ni-GDC and Ni-YSZ electrodes operated in solid oxide electrolysis and fuel cell modes. <i>Journal of Thermal Science and Technology</i> , 2021, 16, JTST0013-JTST0013.	0.6	36
618	Robust Anode-Supported Cells with Fast Oxygen Release Channels for Efficient and Stable CO ₂ Electrolysis at Ultrahigh Current Densities. <i>Small</i> , 2021, 17, e2007211.	5.2	13
619	Deep learning-assisted microstructural analysis of Ni/YSZ anode composites for solid oxide fuel cells. <i>Materials Characterization</i> , 2021, 172, 110906.	1.9	12
620	Junction and energy band on novel semiconductor-based fuel cells. <i>IScience</i> , 2021, 24, 102191.	1.9	45
621	Electrode/electrolyte interface and interface reactions of solid oxide cells: Recent development and advances. <i>Progress in Natural Science: Materials International</i> , 2021, 31, 341-372.	1.8	39
622	Segmentation of Solid Oxide Cell Electrodes by Patch Convolutional Neural Network. <i>Journal of the Electrochemical Society</i> , 2021, 168, 044504.	1.3	18
623	Swarm Intelligence-Based Methodology for Scanning Electron Microscope Image Segmentation of Solid Oxide Fuel Cell Anode. <i>Energies</i> , 2021, 14, 3055.	1.6	6
624	The effects of microstructural parameters on the electrochemical properties of LSM-LSCF composite cathode by the particle-based discrete element method. <i>Ionics</i> , 2021, 27, 2901-2907.	1.2	3
625	Simulation of the Electrochemical Impedance in a Three-Dimensional, Complex Microstructure of Solid Oxide Fuel Cell Cathode and Its Application in the Microstructure Characterization. <i>Frontiers in Chemistry</i> , 2021, 9, 627699.	1.8	5

#	ARTICLE	IF	CITATIONS
646	Application of a General Gas Electrode Model to Ni-YSZ Symmetric Cells: Humidity and Current Collector Effects. Journal of the Korean Ceramic Society, 2016, 53, 511-520.	1.1	4
647	STOCHASTIC 3D MODELING OF AMORPHOUS MICROSTRUCTURES - A POWERFUL TOOL FOR VIRTUAL MATERIALS TESTING. , 2016, , .		2
649	Numerical Simulation of Electrochemical Reaction in Reconstructed Three-Dimensional LSM/YSZ Composite Cathode. , 2008, , .		0
650	3D Data Acquisition and Reconstruction from SEM Stereo Pairs. Journal of the Japan Society for Precision Engineering, 2009, 75, 773-777.	0.0	2
651	3D FIB reconstruction and characterisation of a SOFC electrode. , 2011, , .		0
653	Solid Oxide Fuel Cell Materials: Durability, Reliability, and Cost. , 2012, , 665-700.		0
654	Solid Oxide Fuel Cells solid oxide fuel cell (SOFC). , 2012, , 9885-9904.		0
655	Parameter Estimation for a Reconstructed SOFC Mixed-Conducting LSCF-Cathode. Contributions in Mathematical and Computational Sciences, 2013, , 267-285.	0.3	0
656	Diffusivity Measurement Techniques. SpringerBriefs in Energy, 2014, , 19-44.	0.2	0
657	Influence of carbon deposition on the anode performance of solid oxide fuel cells. Tanso, 2014, 2014, 187-194.	0.1	0
658	3D SOFC anode reconstruction and characterization. Electrochemistry, 2015, 83, 046-751.		
659	Impedance analysis of porous electrode structures in batteries and fuel cells. TM Technisches Messen, 2021, 88, 1-16.	0.3	7
660	Triple-Phase Boundaries (TPBs) in Fuel Cells and Electrolyzers. , 2022, , 299-328.		2
661	Pore-scale modeling of complex transport phenomena in porous media. Progress in Energy and Combustion Science, 2022, 88, 100968.	15.8	139
662	GÄÄLÄNDÄ°RÄ°LMÄ°ÄŽ Ä°YON BOMBARDIMANI ve TARAMALI ELEKTRON MÄ°KROSKOBU ile KATI OKSÄ°T YAKIT PÄ°LÄ°NÄ°N Ä°ceÄ± BOYUTLU ANOT MÄ°KRO YAPISININ OLUÄŽTURULMASI. Ä–mer Halisdemir Ä°niversitesi MÄ°hendislik Bilimleri Dergisi, 0, , .	0.2	0
663	Effects of mass fraction of La _{0.9} Sr _{0.1} Cr _{0.5} Mn _{0.5} O _{3-Î} and Gd _{0.1} Ce _{0.9} O _{2-Î} composite anodes for nickel free solid oxide fuel cells. Journal of the European Ceramic Society, 2022, 42, 1556-1567.	2.8	13
664	Numerical Investigations on the Damage Behaviour of a Reconstructed Anode for Solid Oxide Fuel Cell Application. Energies, 2021, 14, 8082.	1.6	1
665	A macro-nano-atomicâ€‘scale high-throughput approach for material research. Science Advances, 2021, 7, eabj8804.	4.7	9

#	ARTICLE	IF	CITATIONS
666	Simulation of Fracture Formation in Solid Oxide Fuel Cell Anode Using Peridynamic Modeling Method. Journal of Peridynamics and Nonlocal Modeling, 2022, 4, 201-214.	1.4	2
667	A parametric analysis of thermodynamic losses in an anode of a solid oxide fuel cell. Journal of Physics: Conference Series, 2021, 2116, 012081.	0.3	0
668	A Quantified Study of the Resistance of Duplex Stainless Steels to HISC: Part 1—Significance of the Three-Dimensional Phase Distributions and Morphological Properties on Hydrogen Transport. Corrosion, 2022, 78, 249-257.	0.5	2
669	Oxygen Diffusion and Surface Exchange Coefficients of Porous $\text{La}_{0.6}\text{Sr}_{0.4}\text{Co}_{0.2}\text{Fe}_{0.8}\text{O}_{3-\delta}$ Decorated with Co_3O_4 Nanoparticles. Journal of the Electrochemical Society, 2022, 169, 034514.	1.3	2
670	Role of Pr-Vacancies and O-Interstitials on the Activity and Stability of $(\text{Pr}_{1-x}\text{Ln}_x)_2\text{NiO}_4$ (Ln = La, Nd, Pm, Sm, Gd, Tb, Dy, and Tm) Electrodes. Journal of the Electrochemical Society, 2022, 169, 124508.	1.3	3
671	Investigating the Influence of Ni, ZrO_2 , and Y_2O_3 from SOFC Anodes on Siloxane Deposition. ECS Journal of Solid State Science and Technology, 2022, 11, 044005.	0.9	1
672	Fabrication of 3D NiO-YSZ structures for enhanced performance of solid oxide fuel cells and electrolyzers. Electrochemistry Communications, 2022, 137, 107260.	2.3	15
673	A comparison between holographic and near-field ptychographic X-ray tomography for solid oxide cell materials. Materials Characterization, 2022, 187, 111834.	1.9	3
674	A review on solid oxide fuel cell durability: Latest progress, mechanisms, and study tools. Renewable and Sustainable Energy Reviews, 2022, 161, 112339.	8.2	116
675	Predictions on conductivity and mechanical property evolutions of yttria-stabilized zirconia in solid oxide fuel cells based on phase-field modeling of cubic-tetragonal phase transformation. Journal of the European Ceramic Society, 2022, 42, 3489-3499.	2.8	5
676	Inkjet 3D-printing of functional layers of solid oxide electrochemical reactors: a review. Reaction Chemistry and Engineering, 2022, 7, 1692-1712.	1.9	11
677	A novel multi-physics coupled heterogeneous single-cell numerical model for solid oxide fuel cell based on 3D microstructure reconstructions. Energy and Environmental Science, 2022, 15, 2410-2424.	15.6	17
678	A Novel Solid Oxide Electrolysis Cell with Micro/Nano Channel Anode for Electrolysis at Ultra-High Current Density over 5 A cm^{-2} . Advanced Energy Materials, 2022, 12, .	10.2	17
679	Carbon binder domain networks and electrical conductivity in lithium-ion battery electrodes: A critical review. Renewable and Sustainable Energy Reviews, 2022, 166, 112624.	8.2	41
680	Morphological analysis of porosity and sound absorption in sustainable materials from rice husk. Building Acoustics, 2022, 29, 387-399.	1.1	2
681	Electrical conductivity properties of porous $\text{SmBaCo}_2\text{O}_{5+d}$ and $\text{SmBa}_{0.5}\text{Sr}_{0.5}\text{Co}_2\text{O}_{5+d}$ layered perovskite oxide systems for solid oxide fuel cell. Ceramics International, 2022, 48, 28649-28658.	2.3	2
682	Direct-methane anode-supported solid oxide fuel cells fabricated by aqueous gel-casting. Journal of the European Ceramic Society, 2023, 43, 2740-2751.	2.8	5
683	A stochastic geometrical 3D model for time evolution simulation of microstructures in SOC-electrodes. Computational Materials Science, 2022, 212, 111568.	1.4	2

#	ARTICLE	IF	CITATIONS
684	3D resistor-network modeling of infiltrated SOFC electrodes. <i>Electrochimica Acta</i> , 2022, 425, 140686.	2.6	4
685	Characteristic dual-domain composite structure of reduced graphene oxide and its application to higher specific capacitance. <i>Chemical Engineering Journal</i> , 2022, 446, 137390.	6.6	13
686	An Adaptive Thermo-Mechanical Peridynamic Model for Crack Analysis in Anode-Supported. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
687	Shear-Induced Macropore-Infused Nanocomposite Emulsion Thermosets. <i>Advanced Materials Interfaces</i> , 0, , 2200145.	1.9	0
688	Numerical study on TPB density and percolation properties of microstructure reconstruction of nickel/yttria stabilized zirconia cermet anode based on discrete element method. <i>International Journal of Hydrogen Energy</i> , 2022, , .	3.8	1
689	3-D inkjet printed solid oxide electrochemical reactors III. Cylindrical pillared electrode microstructures. <i>Electrochimica Acta</i> , 2022, 426, 140834.	2.6	3
690	Failure analysis of solid oxide fuel cells nickel-yttria stabilized zirconia anode under siloxane contamination. <i>Electrochimica Acta</i> , 2022, 428, 140922.	2.6	2
691	Synthetical designing of solid oxide fuel cell electrodes: Effect of particle size and volume fraction. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 31446-31458.	3.8	9
692	Microstructure and long-term stability of Ni-YSZ anode supported fuel cells: a review. <i>Materials Futures</i> , 2022, 1, 042101.	3.1	11
693	Manipulating and Optimizing the Hierarchically Porous Electrode Structures for Rapid Mass Transport in Solid Oxide Cells. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	12
694	Interface-reinforcing sintering step for highly stable operation of proton-conducting fuel cell stack. <i>Journal of Power Sources</i> , 2022, 548, 232082.	4.0	1
695	An adaptive thermo-mechanical peridynamic model for crack analysis in anode-supported solid oxide fuel cell. <i>Journal of Power Sources</i> , 2022, 547, 231998.	4.0	4
696	Electrochemically plated nickel-decorated ceria nanostructures for direct hydrocarbon solid oxide fuel cell electrodes. <i>Journal of Materials Chemistry A</i> , 2022, 10, 20886-20895.	5.2	4
697	A Biomineralization, Mechanical and Durability Features of Bacteria-Based Self-Healing Concrete—A State of the Art Review. <i>Crystals</i> , 2022, 12, 1222.	1.0	4
698	Call attention to using DRT and EIS to quantify the contributions of solid oxide cell components to the total impedance. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 35437-35448.	3.8	16
699	Solid-State Electrochemistry and Solid Oxide Fuel Cells: Status and Future Prospects. <i>Electrochemical Energy Reviews</i> , 2022, 5, .	13.1	11
700	Restructuring in high burn-up pressurized water reactor UO ₂ fuel central parts: Experimental 3D characterization by focused ion beam-scanning electron microscopy. <i>Journal of Applied Physics</i> , 2022, 132, .	1.1	5
701	A method to determine oxygen reduction reaction kinetics via porous dual-phase composites based on electrical conductivity relaxation. <i>Journal of Materials Chemistry A</i> , 0, , .	5.2	2

#	ARTICLE	IF	CITATIONS
702	Modelling of solid oxide cell oxygen electrodes. JPhys Energy, 2023, 5, 022003.	2.3	2
703	Layer-structured $\text{Li}_{1-x}\text{Na}_x\text{Ni}_{0.8}\text{Co}_{0.15}\text{Al}_{0.05}\text{O}_{2-\delta}$ oxide anode for enhancing ceria electrolyte based solid ceramic fuel cell operating at lower temperatures down to 370°C. Applied Energy, 2023, 336, 120788.	5.1	9
704	Microstructure evolution of Solid Oxide Fuel Cell anodes characterized by persistent homology. Energy and AI, 2023, 14, 100256.	5.8	4
705	Heterogeneous 3D Morphological Evolution of Ni Microparticles in Molten Salts: Visualized by Operando Synchrotron X-ray Nano-tomography. Jom, 2023, 75, 1006-1018.	0.9	2
706	Three-dimensional numerical simulation of oxygen isotope transport in lanthanum strontium manganese - Yttria-stabilized zirconia cathode of solid oxide fuel cell. International Journal of Hydrogen Energy, 2023, 48, 19233-19247.	3.8	6
707	Study of Ni-YSZ Electrode Capacitance and Its Correlation with the Microstructure. Journal of the Electrochemical Society, 2023, 170, 034505.	1.3	0
710	Perovskites for fuel cell applications. , 2023, , 395-418.		0
717	Image Based Methodologies, Workflows, and Calculation Approaches for Tortuosity. Springer Series in Materials Science, 2023, , 91-159.	0.4	0
719	Tortuosity-Porosity Relationships: Review of Empirical Data from Literature. Springer Series in Materials Science, 2023, , 51-89.	0.4	0