Steven McIntosh

List of Publications by Year
in descending order

64 papers	3,473 citations	172207 29 h-index	138251 58 g-index
65 all docs	65 docs citations	65 times ranked	3290 citing authors

#	Article	IF	Citations
1	Direct Hydrocarbon Solid Oxide Fuel Cells. Chemical Reviews, 2004, 104, 4845-4866.	23.0	834
2	Oxygen Stoichiometry and Chemical Expansion of Ba0.5Sr0.5Co0.8Fe0.2O3-Î´Measured by in Situ Neutron Diffraction. Chemistry of Materials, 2006, 18, 2187-2193.	3.2	312
3	Properties and performance of BaxSr1â^'xCo0.8Fe0.2O3â^'Î´ materials for oxygen transport membranes. Journal of Solid State Electrochemistry, 2006, 10, 581-588.	1.2	157
4	Auâ€“Pd separation enhances bimetallic catalysis of alcohol oxidation. Nature, 2022, 603, 271-275.	13.7	114
5	An examination of lanthanide additives on the performance of Cuâ€“YSZ cermet anodes. Electrochimica Acta, 2002, 47, 3815-3821.	2.6	110
6	Effect of Precious-Metal Dopants on SOFC Anodes for Direct Utilization of Hydrocarbons. Electrochemical and Solid-State Letters, 2003, 6, A240.	2.2	109
7	Effect of Polarization on and Implications for Characterization of LSM-YSZ Composite Cathodes. Electrochemical and Solid-State Letters, 2004, 7, A111.	2.2	103
8	Single-enzyme biomineralization of cadmium sulfide nanocrystals with controlled optical properties. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 5275-5280.	3.3	94
9	Cobalt Catalysts Decorated with Platinum Atoms Supported on Barium Zirconate Provide Enhanced Activity and Selectivity for CO₂ Methanation. ACS Catalysis, 2016, 6, 2811-2818.	5.5	90
10	Phase stability and oxygen non-stoichiometry of SrCo0.8Fe0.2O3â^'Î´ measured by in situ neutron diffraction. Solid State Ionics, 2006, 177, 833-842.	1.3	89
11	The rate and selectivity of methane oxidation over La0.75Sr0.25CrxMn1â^'xO3â^'Î´ as a function of lattice oxygen stoichiometry under solid oxide fuel cell anode conditions. Journal of Catalysis, 2008, 255, 313-323.	3.1	76
12	Biomanufacturing of CdS quantum dots. Green Chemistry, 2015, 17, 3775-3782.	4.6	74
13	An Examination of Carbonaceous Deposits in Direct-Utilization SOFC Anodes. Journal of the Electrochemical Society, 2004, 151, A604.	1.3	73
14	Unreliability of simultaneously determining kchem and Dchem via conductivity relaxation for surface-modified La0.6Sr0.4Co0.2Fe0.8O3â^'Î´. Solid State Ionics, 2010, 181, 1429-1436.	1.3	73
15	Transport properties and stability of cobalt doped proton conducting oxides. Solid State Ionics, 2009, 180, 160-167.	1.3	68
16	Direct Hydrocarbon Solid Oxide Fuel Cells. , 2013, , 31-76.		65
17	Visualizing oxygen anion transport pathways in NdBaCo2O5+Î´ by in situ neutron diffraction. Journal of Materials Chemistry A, 2013, 1, 3091.	5.2	55
18	On the reversibility of anode supported proton conducting solid oxide cells. Solid State Ionics, 2011, 203, 57-61.	1.3	49

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19	An in-situ neutron diffraction study of the crystal structure of PrBaCo2O5+Î´ at high temperature and controlled oxygen partial pressure. Solid State Ionics, 2013, 249-250, 34-40.	1.3	49
20	Oxygen transport pathways in Ruddlesdenâ€“Popper structured oxides revealed via in situ neutron diffraction. Journal of Materials Chemistry A, 2015, 3, 21864-21874.	5.2	47
21	Evidence for Two Activation Mechanisms in LSM SOFC Cathodes. Journal of the Electrochemical Society, 2009, 156, B1369.	1.3	46
22	Biomineralization of PbS and PbSâ€“CdS coreâ€“shell nanocrystals and their application in quantum dot sensitized solar cells. Journal of Materials Chemistry A, 2016, 4, 6107-6115.	5.2	46
23	â€œIntelligentâ€•Pt Catalysts Studied on High-Surface-Area CaTiO₃ Films. ACS Catalysis, 2019, 9, 7318-7327.	5.5	39
24	Pulse Reactor Studies to Assess the Potential of La_{0.75}Sr_{0.25}Cr_{0.5}Mn_{0.4}X_{0.1}O_{3-Î´} (X = Co, Fe, Mn, Ni, V) as Direct Hydrocarbon Solid Oxide Fuel Cell Anodes. Chemistry of Materials, 2010, 22, 5856-5865.	3.2	35
25	Insights Into the Fuel Oxidation Mechanism of La[sub 0.75]Sr[sub 0.25]Cr[sub 0.5]Mn[sub 0.5]O[sub 3â^'Î´] SOFC Anodes. Journal of the Electrochemical Society, 2010, 157, B392.	1.3	33
26	On the H2/D2 isotopic exchange rate of proton conducting barium cerates and zirconates. Journal of Materials Chemistry A, 2013, 1, 7639.	5.2	33
27	Performance and Activation Behavior of Surface-Doped Thin-Film La[sub 0.8]Sr[sub 0.2]MnO[sub 3â^'Î´] Cathodes. Journal of the Electrochemical Society, 2008, 155, B1.	1.3	32
28	On the link between bulk structure and surface activity of double perovskite based SOFC cathodes. Solid State Ionics, 2014, 260, 55-59.	1.3	32
29	Enzymatic biomineralization of biocompatible CuInS₂, (CuInZn)S₂and CuInS₂/ZnS core/shell nanocrystals for bioimaging. Nanoscale, 2017, 9, 9340-9351.	2.8	31
30	The Influence of Current Density on the Electrocatalytic Activity of Oxide-Based Direct Hydrocarbon SOFC Anodes. Journal of the Electrochemical Society, 2008, 155, B1202.	1.3	30
31	Direct Single-Enzyme Biomineralization of Catalytically Active Ceria and Ceriaâ€“Zirconia Nanocrystals. ACS Nano, 2017, 11, 3337-3346.	7.3	29
32	Proton-Conducting Perovskites as Supports for Cr Catalysts in Short Contact Time Ethane Dehydrogenation. ACS Catalysis, 2015, 5, 95-103.	5.5	28
33	Structural analysis of PrBaMn2O5+Î´ under SOFC anode conditions by in-situ neutron powder diffraction. Journal of Power Sources, 2016, 330, 240-245.	4.0	27
34	Biomineralized CdS Quantum Dot Nanocrystals: Optimizing Synthesis Conditions and Improving Functional Properties by Surface Modification. Industrial & Engineering Chemistry Research, 2016, 55, 11235-11244.	1.8	26
35	Electrical conductivity relaxation of polycrystalline PrBaCo2O5+Î´ thin films. Solid State Ionics, 2012, 228, 14-18.	1.3	25
36	Enzymatic synthesis of supported CdS quantum dot/reduced graphene oxide photocatalysts. Green Chemistry, 2019, 21, 4046-4054.	4.6	24

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37	Reverse micelle synthesis of perovskite oxide nanoparticles. Solid State Ionics, 2011, 196, 65-72.	1.3	23
38	Evidence for the low oxygen stoichiometry of cubic Ba0.5Sr0.5Co0.5Fe0.5O3-Î´ from in-situ neutron diffraction. Solid State Ionics, 2013, 253, 27-31.	1.3	23
39	Ambient temperature aqueous synthesis of ultrasmall copper doped ceria nanocrystals for the water gas shift and carbon monoxide oxidation reactions. Journal of Materials Chemistry A, 2018, 6, 244-255.	5.2	23
40	Influence of lattice oxygen stoichiometry on the mechanism of methane oxidation in SOFC anodes. Solid State Ionics, 2011, 192, 453-457.	1.3	22
41	Surface modification of SOFC cathodes by Co, Ni, and Pd oxides. Solid State Ionics, 2019, 341, 115051.	1.3	22
42	High temperature in situ neutron powder diffraction of oxides. Journal of Materials Chemistry A, 2014, 2, 6015-6026.	5.2	20
43	The Influence of Grain Size on La0.6Sr0.4Co0.2Fe0.8O3-Î´ Thin Film Electrode Impedance. Journal of the Electrochemical Society, 2011, 158, B1128.	1.3	18
44	Single Enzyme Direct Biomineralization of CdSe and CdSe-CdS Core-Shell Quantum Dots. ACS Applied Materials & Interfaces, 2017, 9, 13430-13439.	4.0	18
45	On the methane oxidation activity of Sr2(MgMo)2O6-Î´: a potential anode material for direct hydrocarbon solid oxide fuel cells. Journal of Materials Chemistry, 2011, 21, 7443.	6.7	16
46	Tailored Coupling of Biomineralized CdS Quantum Dots to rGO to Realize Ambient Aqueous Synthesis of a High-Performance Hydrogen Evolution Photocatalyst. ACS Applied Materials & Interfaces, 2020, 12, 42773-42780.	4.0	15
47	Properties and Performance of Anode-Supported Proton-Conducting BaCe[sub 0.48]Zr[sub 0.4]Yb[sub 0.1]Co[sub 0.02]O[sub 3-Î´] Solid Oxide Fuel Cells. Journal of the Electrochemical Society, 2010, 157, B1397.	1.3	14
48	Is the surface oxygen exchange rate linked to bulk ion diffusivity in mixed conducting Ruddlesdenâ€“Popper phases?. Faraday Discussions, 2015, 182, 113-127.	1.6	14
49	On the link between bulk and surface properties of mixed ion electron conducting materials Ln_{0.5}Sr_{0.5}Co_{0.8}Fe_{0.2}O_{3â^'Î´} (Ln = La, Pr, Nd). Journal of Materials Chemistry A, 2014, 2, 18838-18847.	5.2	13
50	Single enzyme direct biomineralization of ZnS, Zn_xCd_{1â^'x}S and Zn_xCd_{1â^'x}Sâ€“ZnS quantum confined nanocrystals. RSC Advances, 2017, 7, 38490-38497.	1.7	12
51	Low temperature aqueous synthesis of size-controlled nanocrystals through size focusing: a quantum dot biomineralization case study. Nanoscale, 2018, 10, 20785-20795.	2.8	12
52	On the Choice of Anode Electrocatalyst for Alcohol Fuelled Proton Conducting Solid Oxide Fuel Cells. Journal of the Electrochemical Society, 2011, 158, B1532.	1.3	10
53	Biomineralization of Nanocrystalline CdS/ZnS Photocatalysts via Controlled Surface Passivation for Enhanced Hydrogen Evolution. ACS Applied Nano Materials, 2022, 5, 2293-2304.	2.4	10
54	In Situ Biomineralization of Cu_xZn_ySn_zS₄ Nanocrystals within TiO₂-Based Quantum Dot Sensitized Solar Cell Anodes. ACS Applied Materials & Interfaces, 2019, 11, 45656-45664.	4.0	9

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55	Oxygen vacancy localization and anisotropic oxygen anion transport in Sr1â^'xYxCoO3â^'Î´ (xâ€¯=â€¯0.1, 0.2) under solid oxide fuel cell cathode conditions. Solid State Ionics, 2018, 321, 34-42.	1.3	7
56	Scalable Biomineralization of CdS Quantum Dots by Immobilized Cystathionine Î³-Lyase. ACS Sustainable Chemistry and Engineering, 2020, 8, 15189-15198.	3.2	6
57	Investigating the Catalytic Requirements of Perovskite Fuel Electrodes Using Ultra-Low Metal Loadings. Journal of the Electrochemical Society, 2021, 168, 084502.	1.3	4
58	Direct Hydrocarbon Solid Oxide Fuel Cells. ChemInform, 2004, 35, no.	0.1	1
59	Morphology and Composition of Biomineralized Ceria and Ceria-Zirconia Nanocrystals. Microscopy and Microanalysis, 2016, 22, 250-251.	0.2	1
60	Sequential, low-temperature aqueous synthesis of Agâ€“Inâ€“S/Zn quantum dots via staged cation exchange under biomineralization conditions. Journal of Materials Chemistry B, 2022, 10, 4529-4545.	2.9	1
61	Structural and Optical Characterization of Biosynthesized CdS Quantum Dots. Microscopy and Microanalysis, 2015, 21, 1737-1738.	0.2	0
62	Insights into Proton Recombination in Ceramic Proton Conducting Electrodes. Journal of the Electrochemical Society, 2021, 168, 044522.	1.3	0
63	Direct Hydrocarbon Solid Oxide Fuel Cells. , 2012, , 633-664.		0
64	Oxygen Anion Transport in Solid Oxides. , 2014, , 1461-1475.		0