

# Sean R Bishop

## List of Publications by Year in descending order

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51  
papers

2,459  
citations

218677

26  
h-index

197818

49  
g-index

52  
all docs

52  
docs citations

52  
times ranked

3127  
citing authors

#	ARTICLE	IF	CITATIONS
1	Understanding Chemical Expansion in Non-Stoichiometric Oxides: Ceria and Zirconia Case Studies. <i>Advanced Functional Materials</i> , 2012, 22, 1958-1965.	14.9	305
2	Point Defects in Oxides: Tailoring Materials Through Defect Engineering. <i>Annual Review of Materials Research</i> , 2011, 41, 369-398.	9.3	302
3	Compliant Yet Brittle Mechanical Behavior of $\text{Li}_2\text{S-P}_2\text{S}_5$ Lithium-Ion-Conducting Solid Electrolyte. <i>Advanced Energy Materials</i> , 2017, 7, 1602011.	19.5	219
4	Electrical conductivity and defect equilibria of $\text{Pr}_{0.1}\text{Ce}_{0.9}\text{O}_{2-\delta}$ . <i>Physical Chemistry Chemical Physics</i> , 2011, 13, 10165.	2.8	138
5	Understanding chemical expansion in perovskite-structured oxides. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 10028-10039.	2.8	89
6	Praseodymium-cerium oxide thin film cathodes: Study of oxygen reduction reaction kinetics. <i>Journal of Electroceramics</i> , 2012, 28, 62-69.	2.0	78
7	Role of Point Defects in the Physical Properties of Fluorite Oxides. <i>Journal of the American Ceramic Society</i> , 2006, 89, 3162-3166.	3.8	74
8	Chemical expansion of nonstoichiometric $\text{Pr}_{0.1}\text{Ce}_{0.9}\text{O}_{2-\delta}$ : Correlation with defect equilibrium model. <i>Journal of the European Ceramic Society</i> , 2011, 31, 2351-2356.	5.7	74
9	Charge localization increases chemical expansion in cerium-based oxides. <i>Physical Chemistry Chemical Physics</i> , 2012, 14, 12070.	2.8	68
10	Thermal Chemical Expansion in Strontium-Doped Lanthanum Cobalt Iron Oxide. <i>Journal of the American Ceramic Society</i> , 2010, 93, 4115-4121.	3.8	61
11	Non-Stoichiometry in Oxide Thin Films: A Chemical Capacitance Study of the Praseodymium-Cerium Oxide System. <i>Advanced Functional Materials</i> , 2013, 23, 2168-2174.	14.9	58
12	Oxygen Nonstoichiometry and Defect Chemistry of Perovskite-Structured $\text{Ba}_x\text{Sr}_{1-x}\text{Ti}_x\text{Fe}_{1-x}\text{O}_{3-\delta}$ Solid Solutions. <i>Chemistry of Materials</i> , 2013, 25, 2970-2975.	6.7	58
13	Defects and transport in $\text{Pr}_x\text{Ce}_{1-x}\text{O}_{2-\delta}$ : Composition trends. <i>Journal of Materials Research</i> , 2012, 27, 2009-2016.	2.6	56
14	Chemical expansion and its dependence on the host cation radius. <i>Journal of Materials Chemistry A</i> , 2013, 1, 7673.	10.3	49
15	Strongly coupled thermal and chemical expansion in the perovskite oxide system $\text{Sr}(\text{Ti},\text{Fe})\text{O}_{3-\delta}$ . <i>Journal of Materials Chemistry A</i> , 2015, 3, 3602-3611.	10.3	48
16	Dynamic chemical expansion of thin-film non-stoichiometric oxides at extreme temperatures. <i>Nature Materials</i> , 2017, 16, 749-754.	27.5	46
17	Electrochemically Triggered Metal-Insulator Transition between $\text{VO}_2$ and $\text{V}_2\text{O}_5$ . <i>Advanced Functional Materials</i> , 2018, 28, 1803024.	14.9	46
18	Tunable Mixed Ionic/Electronic Conductivity and Permittivity of Graphene Oxide Paper for Electrochemical Energy Conversion. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 11466-11475.	8.0	44

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19	Oxygen diffusion and surface exchange in the mixed conducting oxides $\text{SrTi}_{1-y}\text{Fe}_y\text{O}_{3-\delta}$ . <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 29495-29505.	2.8	43
20	Investigation of Nonstoichiometry in Oxide Thin Films by Simultaneous <i>in Situ</i> Optical Absorption and Chemical Capacitance Measurements: Pr-Doped Ceria, a Case Study. <i>Chemistry of Materials</i> , 2014, 26, 1374-1379.	6.7	41
21	Nonstoichiometry in Oxide Thin Films Operating under Anodic Conditions: A Chemical Capacitance Study of the Praseodymium-Cerium Oxide System. <i>Chemistry of Materials</i> , 2014, 26, 6622-6627.	6.7	39
22	The role of point defects in the physical properties of nonstoichiometric ceria. <i>Journal of Applied Physics</i> , 2007, 101, 044906.	2.5	38
23	Improving the Si Impurity Tolerance of $\text{Pr}_{0.1}\text{Ce}_{0.9}\text{O}_{2-\delta}$ SOFC Electrodes with Reactive Surface Additives. <i>Chemistry of Materials</i> , 2015, 27, 3065-3070.	6.7	37
24	Enhanced sensing response of solid-electrolyte gas sensors to toluene: Role of composite Au/metal oxide sensing electrode. <i>Sensors and Actuators B: Chemical</i> , 2017, 252, 268-276.	7.8	36
25	Enhanced long-term stability of bismuth oxide-based electrolytes for operation at 500°C. <i>Ionics</i> , 2010, 16, 97-103.	2.4	34
26	Impact of alkoxy chain length on carbazole-based, visible light-driven, dye sensitized photocatalytic hydrogen production. <i>Journal of Materials Chemistry A</i> , 2015, 3, 21713-21721.	10.3	33
27	Tailoring Material Properties through Defect Engineering. <i>Chemistry Letters</i> , 2010, 39, 1226-1231.	1.3	28
28	Tailoring chemical expansion by controlling charge localization: in situ X-ray diffraction and dilatometric study of $(\text{La,Sr})(\text{Ga,Ni})\text{O}_{3-\delta}$ perovskite. <i>Journal of Materials Chemistry A</i> , 2014, 2, 18906-18916.	10.3	28
29	Defect Chemistry of Pr Doped Ceria Thin Films Investigated by <i>in Situ</i> Optical and Impedance Measurements. <i>Chemistry of Materials</i> , 2017, 29, 1999-2007.	6.7	27
30	Optically derived energy band gap states of Pr in ceria. <i>Solid State Ionics</i> , 2012, 225, 198-200.	2.7	26
31	Defect chemistry and surface oxygen exchange kinetics of La-doped $\text{Sr}(\text{Ti,Fe})\text{O}_{3-\delta}$ in oxygen-rich atmospheres. <i>Solid State Ionics</i> , 2015, 273, 18-24.	2.7	26
32	Operando reduction of elastic modulus in $(\text{Pr, Ce})\text{O}_{2-\delta}$ thin films. <i>Acta Materialia</i> , 2016, 105, 16-24.	7.9	24
33	Surface Defect Chemistry and Electronic Structure of $\text{Pr}_{0.1}\text{Ce}_{0.9}\text{O}_{2-\delta}$ Revealed in Operando. <i>Chemistry of Materials</i> , 2018, 30, 2600-2606.	6.7	24
34	Defining chemical expansion: the choice of units for the stoichiometric expansion coefficient. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 9229-9232.	2.8	19
35	Threshold catalytic onset of carbon formation on $\text{CeO}_2$ during $\text{CO}_2$ electrolysis: mechanism and inhibition. <i>Journal of Materials Chemistry A</i> , 2019, 7, 15233-15243.	10.3	19
36	Mechanical, Electrical, and Optical Properties of $(\text{Pr,Ce})\text{O}_{2-\delta}$ Solid Solutions: Kinetic Studies. <i>ECS Transactions</i> , 2011, 35, 1137-1144.	0.5	14

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37	In Situ Electrical Characterization of Anatase TiO <sub>2</sub> Quantum Dots. <i>Advanced Functional Materials</i> , 2014, 24, 4952-4958.	14.9	14
38	Cathodic and defect properties of Ba <sub>x</sub> Sr <sub>1-x</sub> Ti <sub>1-y</sub> FeyO <sub>3-y/2+δ</sub> mixed conducting oxides. <i>Solid State Ionics</i> , 2013, 230, 2-6.	2.7	13
39	The defect and transport properties of acceptor doped TlBr: role of dopant exsolution and association. <i>Physical Chemistry Chemical Physics</i> , 2012, 14, 10160.	2.8	12
40	Chemically-induced expansion of Zr <sub>0.2</sub> Ce <sub>0.8</sub> O <sub>2+δ</sub> . <i>Solid State Ionics</i> , 2014, 261, 1-4.	2.7	12
41	(High Temperature Materials Division Outstanding Achievement Award) Measurement and Modeling of Electrical, Mechanical, and Chemical Properties of a Model Mixed Ionic Electronic Conductor: Pr Doped Ceria. <i>ECS Transactions</i> , 2011, 33, 51-57.	0.5	11
42	Praseodymium Cuprate Thin Film Cathodes for Intermediate Temperature Solid Oxide Fuel Cells: Roles of Doping, Orientation, and Crystal Structure. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 34295-34302.	8.0	11
43	Electro-chemo-mechanical studies of perovskite-structured mixed ionic-electronic conducting SrSn <sub>1-x</sub> FexO <sub>3-x/2+δ</sub> part I: Defect chemistry. <i>Journal of Electroceramics</i> , 2017, 38, 74-80.	2.0	6
44	Role of grain size on redox induced compositional stresses in Pr doped ceria thin films. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 12206-12220.	2.8	6
45	Chemical Expansion and Frozen-In Oxygen Vacancies in Pr-Doped Ceria. <i>ECS Transactions</i> , 2011, 35, 1131-1136.	0.5	5
46	Kinetics of Schottky defect formation and annihilation in single crystal TlBr. <i>Physical Chemistry Chemical Physics</i> , 2013, 15, 11926.	2.8	5
47	CeO <sub>2</sub> Nanorods and Nanocubes: Impact of Nanoparticle Shape on Dilatometry and Electrical Properties. <i>Journal of the American Ceramic Society</i> , 2016, 99, 2415-2421.	3.8	4
48	Electro-chemo-mechanical studies of perovskite-structured mixed ionic-electronic conducting SrSn <sub>1-x</sub> FexO <sub>3-x/2+δ</sub> Part III: Thermal and chemical expansion. <i>Journal of Electroceramics</i> , 2018, 40, 332-337.	2.0	3
49	Electro-chemo-mechanical studies of perovskite-structured mixed ionic-electronic conducting SrSn <sub>1-x</sub> FexO <sub>3-x/2+δ</sub> part II: Electrical conductivity and cathode performance. <i>Journal of Electroceramics</i> , 2018, 40, 57-64.	2.0	3
50	Editorial for the JECR special issue on electro-chemo-mechanics. <i>Journal of Electroceramics</i> , 2014, 32, 1-2.	2.0	2
51	Nano-Structured Materials for Next Generation Fuel Cells and Photoelectrochemical Devices. <i>Materials Research Society Symposia Proceedings</i> , 2011, 1326, 1.	0.1	1