

Nicola H Perry

List of Publications by Year in descending order

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279701

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377752

34
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61
all docs

61
docs citations

61
times ranked

2080
citing authors

#	ARTICLE	IF	CITATIONS
1	The Brick Layer Model Revisited: Introducing the Nano-Grain Composite Model. Journal of the American Ceramic Society, 2008, 91, 1733-1746.	1.9	121
2	Understanding chemical expansion in perovskite-structured oxides. Physical Chemistry Chemical Physics, 2015, 17, 10028-10039.	1.3	89
3	Engineered Nanostructures for Multifunctional Single-Walled Carbon Nanotube Reinforced Silicon Nitride Nanocomposites. Journal of the American Ceramic Society, 2008, 91, 3129-3137.	1.9	61
4	Li-Doped Cr ₂ MnO ₄ : A New p-Type Transparent Conducting Oxide by Computational Materials Design. Advanced Functional Materials, 2013, 23, 5267-5276.	7.8	57
5	Non-equilibrium origin of high electrical conductivity in gallium zinc oxide thin films. Applied Physics Letters, 2013, 103, .	1.5	51
6	Band or Polaron: The Hole Conduction Mechanism in the p-Type Spinel Rh_2ZnO_4 . Journal of the American Ceramic Society, 2012, 95, 269-274.	1.9	48
7	Strongly coupled thermal and chemical expansion in the perovskite oxide system $\text{Sr}(\text{Ti,Fe})\text{O}_{3\pm}$. Journal of Materials Chemistry A, 2015, 3, 3602-3611.	5.2	48
8	Tunable Mixed Ionic/Electronic Conductivity and Permittivity of Graphene Oxide Paper for Electrochemical Energy Conversion. ACS Applied Materials & Interfaces, 2016, 8, 11466-11475.	4.0	44
9	Roles of Bulk and Surface Chemistry in the Oxygen Exchange Kinetics and Related Properties of Mixed Conducting Perovskite Oxide Electrodes. Materials, 2016, 9, 858.	1.3	43
10	Improving the Si Impurity Tolerance of $\text{Pr}_{0.1}\text{Ce}_{0.9}\text{O}_{2\pm}$ SOFC Electrodes with Reactive Surface Additives. Chemistry of Materials, 2015, 27, 3065-3070.	3.2	37
11	Grain core and grain boundary electrical/dielectric properties of yttria-doped tetragonal zirconia polycrystal (TZP) nanoceramics. Solid State Ionics, 2010, 181, 276-284.	1.3	34
12	Transport and band structure studies of crystalline ZnRh_2 . Physical Review B, 2010, 81, .	1.1	33
13	Impact of alkoxy chain length on carbazole-based, visible light-driven, dye sensitized photocatalytic hydrogen production. Journal of Materials Chemistry A, 2015, 3, 21713-21721.	5.2	33
14	In Situ Method Correlating Raman Vibrational Characteristics to Chemical Expansion via Oxygen Nonstoichiometry of Perovskite Thin Films. Advanced Materials, 2019, 31, e1902493.	11.1	33
15	The interplay and impact of strain and defect association on the conductivity of rare-earth substituted ceria. Acta Materialia, 2019, 166, 447-458.	3.8	33
16	Designing Optimal Perovskite Structure for High Ionic Conduction. Advanced Materials, 2020, 32, e1905178.	11.1	30
17	Structural, Optical, and Transport Properties of Ag_3VO_4 . Chemistry of Materials, 2012, 24, 3346-3354.	3.2	29
18	On the Theoretical and Experimental Control of Defect Chemistry and Electrical and Photoelectrochemical Properties of Hematite Nanostructures. ACS Applied Materials & Interfaces, 2019, 11, 2031-2041.	4.0	29

#	ARTICLE	IF	CITATIONS
19	Tailoring chemical expansion by controlling charge localization: in situ X-ray diffraction and dilatometric study of $(\text{La,Sr})(\text{Ga,Ni})\text{O}_{3-x}\text{I}$ perovskite. <i>Journal of Materials Chemistry A</i> , 2014, 2, 18906-18916.	5.2	28
20	Toward design of cation transport in solid-state battery electrolytes: Structure-dynamics relationships. <i>Current Opinion in Solid State and Materials Science</i> , 2020, 24, 100875.	5.6	27
21	Defect chemistry and surface oxygen exchange kinetics of La-doped $\text{Sr}(\text{Ti,Fe})\text{O}_{3-x}$ in oxygen-rich atmospheres. <i>Solid State Ionics</i> , 2015, 273, 18-24.	1.3	26
22	Asymmetric cation nonstoichiometry in spinels: Site occupancy in $\text{Co}_{2-x}\text{ZnO}$	1.1	25
23	Dislocation-Mediated Conductivity in Oxides: Progress, Challenges, and Opportunities. <i>ACS Nano</i> , 2021, 15, 9211-9221.	7.3	24
24	Oxygen surface exchange kinetics measurement by simultaneous optical transmission relaxation and impedance spectroscopy: $\text{Sr}(\text{Ti,Fe})\text{O}_{3-x}$ thin film case study. <i>Science and Technology of Advanced Materials</i> , 2018, 19, 130-141.	2.8	21
25	Nanograin Composite Model Studies of Nanocrystalline Gadolinia-Doped Ceria. <i>Journal of the American Ceramic Society</i> , 2011, 94, 1073-1078.	1.9	19
26	Redox cycling induced Ni exsolution in $\text{Gd}_{0.1}\text{Ce}_{0.8}\text{Ni}_{0.1}\text{O}_2 - (\text{Sr}_{0.9}\text{La}_{0.1})_{0.9}\text{Ti}_{0.9}\text{Ni}_{0.1}\text{O}_3$ composite solid oxide fuel cell anodes. <i>Journal of Power Sources</i> , 2017, 370, 122-130.	4.0	18
27	Origins and Control of Optical Absorption in a Nondilute Oxide Solid Solution: $\text{Sr}(\text{Ti,Fe})\text{O}_{3-x}$ Perovskite Case Study. <i>Chemistry of Materials</i> , 2019, 31, 1030-1041.	3.2	17
28	Co_3O_4 – Co_2ZnO_4 spinels: The case for a solid solution. <i>Journal of Solid State Chemistry</i> , 2012, 190, 143-149.	1.4	15
29	Impact of microstructure and crystallinity on surface exchange kinetics of strontium titanium iron oxide perovskite by in situ optical transmission relaxation approach. <i>Journal of Materials Chemistry A</i> , 2017, 5, 23006-23019.	5.2	15
30	Temperature Dependence of Effective Grain Core/Single Crystal Dielectric Constants for Acceptor-Doped Oxygen Ion Conductors. <i>Journal of the American Ceramic Society</i> , 2011, 94, 508-515.	1.9	14
31	Atomic Modeling and Electronic Structure of Mixed Ionic–Electronic Conductor $\text{SrTi}_{1-x}\text{Fe}_x\text{O}_{3-x/2+x}$ Considered as a Mixture of SrTiO_3 and $\text{Sr}_2\text{Fe}_2\text{O}_5$. <i>Chemistry of Materials</i> , 2019, 31, 233-243.	3.2	13
32	Phase Equilibria of the Zinc Oxide–Cobalt Oxide System in Air. <i>Journal of the American Ceramic Society</i> , 2013, 96, 966-971.	1.9	12
33	Emergence of Rapid Oxygen Surface Exchange Kinetics during in Situ Crystallization of Mixed Conducting Thin Film Oxides. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 9102-9116.	4.0	12
34	Simultaneous Electrical, Electrochemical, and Optical Relaxation Measurements of Oxygen Surface Exchange Coefficients: $\text{Sr}(\text{Ti,Fe})\text{O}_{3-x}$ Film Crystallization Case Study. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 48614-48630.	4.0	12
35	Toward Durable Protonic Ceramic Cells: Hydration-Induced Chemical Expansion Correlates with Symmetry in the Y-Doped BaZrO_3 – BaCeO_3 Solid Solution. <i>Journal of Physical Chemistry C</i> , 2021, 125, 26216-26228.	1.5	12
36	In Situ Optical Absorption Studies of Point Defect Kinetics and Thermodynamics in Oxide Thin Films. <i>Advanced Materials Interfaces</i> , 2019, 6, 1900496.	1.9	11

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37	Propagation of the contact-driven reduction of Mn_2O_3 during reactive flash sintering. Journal of the American Ceramic Society, 2019, 102, 7210-7216.	1.9	10
38	Modifying Grain Boundary Ionic/Electronic Transport in Nano-Sr- and Mg- Doped $LaGaO_3$ by Sintering Variations. Journal of the Electrochemical Society, 2019, 166, F569-F580.	1.3	10
39	Relating Microstructure to Surface Exchange Kinetics Using <i>in Situ</i> Optical Absorption Relaxation. ECS Transactions, 2017, 75, 23-31.	0.3	8
40	Tailoring Nonstoichiometry and Mixed Ionic Electronic Conductivity in $Pr_{0.1}Ce_{0.9}O_{2+x}/SrTiO_3$ Heterostructures. ACS Applied Materials & Interfaces, 2019, 11, 34841-34853.	4.0	7
41	Non stoichiometry and lattice expansion of $BaZr_{0.9}Dy_{0.1}O_{3-x}$ in oxidizing atmospheres. Solid State Ionics, 2019, 330, 33-39.	1.3	7
42	Perovskite Na-ion conductors developed from analogous $Li_3xLa_{2/3-x}TiO_3$ (LLTO): chemo-mechanical and defect engineering. Journal of Materials Chemistry A, 2021, 9, 21241-21258.	5.2	7
43	Isolating the Role of Charge Localization in Chemical Expansion: (La,Sr)(Ga,Ni)O _{3-x} Case Study. ECS Transactions, 2013, 57, 1879-1884.	0.3	6
44	Chemical Expansion in SOFC Materials: Ramifications, Origins, and Mitigation. ECS Transactions, 2013, 57, 643-648.	0.3	6
45	Discovery of a ternary pseudobrookite phase in the earth-abundant Ti-Zn-O system. Dalton Transactions, 2016, 45, 1572-1581.	1.6	6
46	Electro-chemo-mechanical studies of perovskite-structured mixed ionic-electronic conducting $SrSn_{1-x}Fe_xO_{3-x/2+\delta}$ Part I: Defect chemistry. Journal of Electroceramics, 2017, 38, 74-80.	0.8	6
47	Cluster Expansion Framework for the $Sr(Ti_{1-x}Fe_x)O_{3-x/2}$ ($0 < x < 1$) Mixed Ionic Electronic Conductor: Properties Based on Realistic Configurations. Chemistry of Materials, 2019, 31, 3144-3153.	3.2	6
48	Influence of Donor Doping on Cathode Performance: (La,Sr)(Ti,Fe)O _{3-x} Case Study. ECS Transactions, 2013, 57, 1719-1723.	0.3	4
49	Electronic and ionic conductivity of $Eu_{0.2}Ce_{0.8}O_{2+x}$. Solid State Ionics, 2014, 263, 75-79.	1.3	3
50	Electro-chemo-mechanical studies of perovskite-structured mixed ionic-electronic conducting $SrSn_{1-x}Fe_xO_{3-x/2+\delta}$ Part III: Thermal and chemical expansion. Journal of Electroceramics, 2018, 40, 332-337.	0.8	3
51	Predicting transformations during reactive flash sintering in CuO and Mn_2O_3 . Journal of the American Ceramic Society, 2021, 104, 76-85.	1.9	3
52	Toward Zero-Strain Mixed Conductors: Anomalously Low Redox Coefficients of Chemical Expansion in Praseodymium-Oxide Perovskites. Chemistry of Materials, 0, , .	3.2	3
53	Multi-scale chemo-mechanical evolution during crystallization of mixed conducting $SrTi_{0.65}Fe_{0.35}O_{3-x}$ films and correlation to electrical conductivity. Journal of Materials Chemistry A, 2022, 10, 2421-2433.	5.2	2
54	Oxygen Exchange Kinetics of Thin Films Studied by Optical Transmission Relaxation: Correlation with Surface Composition and Microstructure. Microscopy and Microanalysis, 2014, 20, 1906-1907.	0.2	0

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55	Correlating Crystallization-Induced Structural and Electrical Evolutions in SrTi _{0.65} Fe _{0.35} O _{3-X} Thin Films. ECS Meeting Abstracts, 2021, MA2021-01, 1172-1172.	0.0	0
56	Understanding Chemical Expansion in Pr-Based Mixed Conducting Perovskites PrGa _{0.9} Mg _{0.1} O ₃ and BaPr _{0.9} Y _{0.1} O ₃ . ECS Meeting Abstracts, 2021, MA2021-01, 1140-1140.	0.0	0
57	Multisublattice cluster expansion study of short-range ordering in iron-substituted strontium titanate. Computational Materials Science, 2022, 202, 110969.	1.4	0
58	(Invited) Evaluation of Steam Splitting (OER) Kinetics in Praseodymium-Based Perovskite Thin Film Electrodes for Efficient Intermediate-Temperature Water Electrolysis. ECS Meeting Abstracts, 2022, MA2022-01, 1736-1736.	0.0	0
59	Modifying Crystal Symmetry and B-O Charge Distribution to Tailor Chemical Expansion in Mixed Conducting Perovskites. ECS Meeting Abstracts, 2022, MA2022-01, 1624-1624.	0.0	0