Nicola H Perry

List of Publications by Year
in descending order

59 papers	1,273 citations	279798 23 h-index	377865 34 g-index
61 all docs	61 docs citations	61 times ranked	2080 citing authors

#	Article	IF	Citations
1	Multisublattice cluster expansion study of short-range ordering in iron-substituted strontium titanate. Computational Materials Science, 2022, 202, 110969.	3.0	0
2	Multi-scale chemo-mechanical evolution during crystallization of mixed conducting SrTi_{0.65}Fe_{0.35}O_{3âˆ’<i>Î´</i>} films and correlation to electrical conductivity. Journal of Materials Chemistry A, 2022, 10, 2421-2433.	10.3	2
3	(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
4	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
5	Predicting transformations during reactive flash sintering in CuO and Mn 2 O 3. Journal of the American Ceramic Society, 2021, 104, 76-85.	3.8	3
6	Correlating Crystallization-Induced Structural and Electrical Evolutions in SrTi0.65Fe0.35O3-X Thin Films. ECS Meeting Abstracts, 2021, MA2021-01, 1172-1172.	0.0	0
7	Dislocation-Mediated Conductivity in Oxides: Progress, Challenges, and Opportunities. ACS Nano, 2021, 15, 9211-9221.	14.6	24
8	Understanding Chemical Expansion in Pr-Based Mixed Conducting Perovskites PrGa0.9Mg0.1O3 and BaPr0.9Y0.1O3. ECS Meeting Abstracts, 2021, MA2021-01, 1140-1140.	0.0	0
9	Perovskite Na-ion conductors developed from analogous Li3xLa2/3âˆ’xTiO3 (LLTO): chemo-mechanical and defect engineering. Journal of Materials Chemistry A, 2021, 9, 21241-21258.	10.3	7
10	Toward Durable Protonic Ceramic Cells: Hydration-Induced Chemical Expansion Correlates with Symmetry in the Y-Doped BaZrO₃â€“BaCeO₃ Solid Solution. Journal of Physical Chemistry C, 2021, 125, 26216-26228.	3.1	12
11	Designing Optimal Perovskite Structure for High Ionic Conduction. Advanced Materials, 2020, 32, e1905178.	21.0	30
12	Toward design of cation transport in solid-state battery electrolytes: Structure-dynamics relationships. Current Opinion in Solid State and Materials Science, 2020, 24, 100875.	11.5	27
13	Simultaneous Electrical, Electrochemical, and Optical Relaxation Measurements of Oxygen Surface Exchange Coefficients: Sr(Ti,Fe)O_{3âˆ’d} Film Crystallization Case Study. ACS Applied Materials & Interfaces, 2020, 12, 48614-48630.	8.0	12
14	Tailoring Nonstoichiometry and Mixed Ionic Electronic Conductivity in Pr_{0.1}Ce_{0.9}O_{2âˆ’Î´}/SrTiO₃ Heterostructures. ACS Applied Materials & Interfaces, 2019, 11, 34841-34853.	8.0	7
15	In Situ Optical Absorption Studies of Point Defect Kinetics and Thermodynamics in Oxide Thin Films. Advanced Materials Interfaces, 2019, 6, 1900496.	3.7	11
16	Emergence of Rapid Oxygen Surface Exchange Kinetics during in Situ Crystallization of Mixed Conducting Thin Film Oxides. ACS Applied Materials & Interfaces, 2019, 11, 9102-9116.	8.0	12
17	In Situ Method Correlating Raman Vibrational Characteristics to Chemical Expansion via Oxygen Nonstoichiometry of Perovskite Thin Films. Advanced Materials, 2019, 31, e1902493.	21.0	33
18	Propagation of the contactâ€driven reduction of Mn₂O₃ during reactive flash sintering. Journal of the American Ceramic Society, 2019, 102, 7210-7216.	3.8	10

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19	Modifying Grain Boundary Ionic/Electronic Transport in Nano-Sr- and Mg- Doped LaGaO_{3-Î´} by Sintering Variations. Journal of the Electrochemical Society, 2019, 166, F569-F580.	2.9	10
20	Cluster Expansion Framework for the Sr(Ti1â€“xFex)O3â€“x/2 (0 < x < 1) Mixed Ionic Electronic Conductor: Properties Based on Realistic Configurations. Chemistry of Materials, 2019, 31, 3144-3153.	6.7	6
21	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.	8.0	29
22	The interplay and impact of strain and defect association on the conductivity of rare-earth substituted ceria. Acta Materialia, 2019, 166, 447-458.	7.9	33
23	Non stoichiometry and lattice expansion of BaZr0.9Dy0.1O3-Î´ in oxidizing atmospheres. Solid State Ionics, 2019, 330, 33-39.	2.7	7
24	Origins and Control of Optical Absorption in a Nondilute Oxide Solid Solution: Sr(Ti,Fe)O_{3â€“<i>x</i>} Perovskite Case Study. Chemistry of Materials, 2019, 31, 1030-1041.	6.7	17
25	Atomic Modeling and Electronic Structure of Mixed Ionicâ€“Electronic Conductor SrTi1â€“xFexO3â€“x/2+Î´ Considered as a Mixture of SrTiO3 and Sr2Fe2O5. Chemistry of Materials, 2019, 31, 233-243.	6.7	13
26	Electro-chemo-mechanical studies of perovskite-structured mixed ionic-electronic conducting SrSn1-xFexO3-x/2+Î´ Part III: Thermal and chemical expansion. Journal of Electroceramics, 2018, 40, 332-337.	2.0	3
27	Oxygen surface exchange kinetics measurement by simultaneous optical transmission relaxation and impedance spectroscopy: Sr(Ti,Fe)O3-x thin film case study. Science and Technology of Advanced Materials, 2018, 19, 130-141.	6.1	21
28	Electro-chemo-mechanical studies of perovskite-structured mixed ionic-electronic conducting SrSn1-xFexO3-x/2+Î´part I: Defect chemistry. Journal of Electroceramics, 2017, 38, 74-80.	2.0	6
29	Impact of microstructure and crystallinity on surface exchange kinetics of strontium titanium iron oxide perovskite by <i>in situ</i> optical transmission relaxation approach. Journal of Materials Chemistry A, 2017, 5, 23006-23019.	10.3	15
30	Redox cycling induced Ni exsolution in Gd0.1Ce0.8Ni0.1O2 - (Sr0.9La0.1)0.9Ti0.9Ni0.1O3 composite solid oxide fuel cell anodes. Journal of Power Sources, 2017, 370, 122-130.	7.8	18
31	Relating Microstructure to Surface Exchange Kinetics Using<i>in Situ</i>Optical Absorption Relaxation. ECS Transactions, 2017, 75, 23-31.	0.5	8
32	Roles of Bulk and Surface Chemistry in the Oxygen Exchange Kinetics and Related Properties of Mixed Conducting Perovskite Oxide Electrodes. Materials, 2016, 9, 858.	2.9	43
33	Tunable Mixed Ionic/Electronic Conductivity and Permittivity of Graphene Oxide Paper for Electrochemical Energy Conversion. ACS Applied Materials & Interfaces, 2016, 8, 11466-11475.	8.0	44
34	Discovery of a ternary pseudobrookite phase in the earth-abundant Tiâ€“Znâ€“O system. Dalton Transactions, 2016, 45, 1572-1581.	3.3	6
35	Understanding chemical expansion in perovskite-structured oxides. Physical Chemistry Chemical Physics, 2015, 17, 10028-10039.	2.8	89
36	Strongly coupled thermal and chemical expansion in the perovskite oxide system Sr(Ti,Fe)O_{3â^'Î±}. Journal of Materials Chemistry A, 2015, 3, 3602-3611.	10.3	48

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37	Improving the Si Impurity Tolerance of Pr_{0.1}Ce_{0.9}O_{2âˆ’Î´} SOFC Electrodes with Reactive Surface Additives. Chemistry of Materials, 2015, 27, 3065-3070.	6.7	37
38	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.	10.3	33
39	Defect chemistry and surface oxygen exchange kinetics of La-doped Sr(Ti,Fe)O3âˆ’ in oxygen-rich atmospheres. Solid State Ionics, 2015, 273, 18-24.	2.7	26
40	Tailoring chemical expansion by controlling charge localization: in situ X-ray diffraction and dilatometric study of (La,Sr)(Ga,Ni)O_{3âˆ’Î´} perovskite. Journal of Materials Chemistry A, 2014, 2, 18906-18916.	10.3	28
41	Electronic and ionic conductivity of Eu0.2Ce0.8O2âˆ’Î´. Solid State Ionics, 2014, 263, 75-79.	2.7	3
42	Oxygen Exchange Kineics of Thin Ftilms Studied by Optical Transmission Relaxation: Correlation with Surface Composition and Microstructure. Microscopy and Microanalysis, 2014, 20, 1906-1907.	0.4	0
43	Influence of Donor Doping on Cathode Performance: (La,Sr)(Ti,Fe)O_{3-Î´} Case Study. ECS Transactions, 2013, 57, 1719-1723.	0.5	4
44	Isolating the Role of Charge Localization in Chemical Expansion: (La,Sr)(Ga,Ni)O3-X Case Study. ECS Transactions, 2013, 57, 1879-1884.	0.5	6
45	Chemical Expansion in SOFC Materials: Ramifications, Origins, and Mitigation. ECS Transactions, 2013, 57, 643-648.	0.5	6
46	Liâ€Doped Cr₂MnO₄: A New pâ€Type Transparent Conducting Oxide by Computational Materials Design. Advanced Functional Materials, 2013, 23, 5267-5276.	14.9	57
47	Phase Equilibria of the Zinc Oxideâ€“Cobalt Oxide System in Air. Journal of the American Ceramic Society, 2013, 96, 966-971.	3.8	12
48	Non-equilibrium origin of high electrical conductivity in gallium zinc oxide thin films. Applied Physics Letters, 2013, 103, .	3.3	51
49	Structural, Optical, and Transport Properties of Î±- and Î²-Ag₃VO₄. Chemistry of Materials, 2012, 24, 3346-3354.	6.7	29
50	Band or Polaron: The Hole Conduction Mechanism in the <i>p</i>â€Type Spinel <scp><scp>Rh₂ZnO₄</scp></scp>. Journal of the American Ceramic Society, 2012, 95, 269-274.	3.8	48
51	Co3O4â€“Co2ZnO4 spinels: The case for a solid solution. Journal of Solid State Chemistry, 2012, 190, 143-149.	2.9	15
52	Temperature Dependence of Effective Grain Core/Single Crystal Dielectric Constants for Acceptorâ€Doped Oxygen Ion Conductors. Journal of the American Ceramic Society, 2011, 94, 508-515.	3.8	14
53	Nanograin Composite Model Studies of Nanocrystalline Gadolinia-Doped Ceria. Journal of the American Ceramic Society, 2011, 94, 1073-1078.	3.8	19
54	Asymmetric cation nonstoichiometry in spinels: Site occupancy in Co<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math>ZnO<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>4</mml:mn></mml:msub></mml:math>and Rh<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:	3.2	25

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55	Grain core and grain boundary electrical/dielectric properties of yttria-doped tetragonal zirconia polycrystal (TZP) nanoceramics. Solid State Ionics, 2010, 181, 276-284.	2.7	34
56	Transport and band structure studies of crystalline<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>ZnRh</mml:mtext></mml:mrow><mml:mn>2</mml:mn></mml:m Physical Review B, 2010, 81, .	3.2	33
57	The Brick Layer Model Revisited: Introducing the Nanoâ€Grain Composite Model. Journal of the American Ceramic Society, 2008, 91, 1733-1746.	3.8	121
58	Engineered Nanostructures for Multifunctional Singleâ€Walled Carbon Nanotube Reinforced Silicon Nitride Nanocomposites. Journal of the American Ceramic Society, 2008, 91, 3129-3137.	3.8	61
59	Toward Zero-Strain Mixed Conductors: Anomalously Low Redox Coefficients of Chemical Expansion in Praseodymium-Oxide Perovskites. Chemistry of Materials, 0, , .	6.7	3