

Serge M Nakhmanson

List of Publications by Year in descending order

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49
papers

1,693
citations

331259

21
h-index

276539

41
g-index

50
all docs

50
docs citations

50
times ranked

2757
citing authors

#	ARTICLE	IF	CITATIONS
1	Towards modeling thermoelectric properties of anisotropic polycrystalline materials. Acta Materialia, 2022, 228, 117743.	3.8	1
2	Surface charge mediated polar response in ferroelectric nanoparticles. Applied Physics Letters, 2021, 119, .	1.5	5
3	Surface structure and energetics of low index facets of bismuth ferrite. Physical Chemistry Chemical Physics, 2020, 22, 16400-16406.	1.3	4
4	Mesoscale modeling of light transmission modulation in ceramics. Acta Materialia, 2020, 193, 261-269.	3.8	5
5	Machine learning study of magnetism in uranium-based compounds. Physical Review Materials, 2020, 4, .	0.9	10
6	Assessment of machine learning approaches for predicting the crystallization propensity of active pharmaceutical ingredients. CrystEngComm, 2019, 21, 1215-1223.	1.3	28
7	Mesoscale modeling of polycrystalline light transmission. Acta Materialia, 2019, 175, 82-89.	3.8	10
8	Size, shape, and orientation dependence of the field-induced behavior in ferroelectric nanoparticles. Journal of Applied Physics, 2019, 125, 134102.	1.1	10
9	Landau's Devonshire thermodynamic potentials for displacive perovskite ferroelectrics from first principles. Journal of Materials Science, 2019, 54, 8381-8400.	1.7	10
10	Room-temperature relaxor ferroelectricity and photovoltaic effects in tin titanate directly deposited on a silicon substrate. Physical Review B, 2018, 97, .	1.1	28
11	First-principles studies of spontaneous polarization in mixed poly(vinylidene fluoride) ferroelectric thin films. Applied Physics Letters, 2018, 113, 101101.	1.2	13
12	Polarization canting in ferroelectric diisopropylammonium-halide molecular crystals: a computational first principles study. Journal of Materials Chemistry C, 2018, 6, 1143-1152.	2.7	10
13	Domain alignment within ferroelectric/dielectric PbTiO ₃ /SrTiO ₃ superlattice nanostructures. Nanoscale, 2018, 10, 3262-3271.	2.8	16
14	Electromechanical control of polarization vortex ordering in an interacting ferroelectric-dielectric composite dimer. Applied Physics Letters, 2018, 113, .	1.5	19
15	Metastable vortex-like polarization textures in ferroelectric nanoparticles of different shapes and sizes. Journal of Applied Physics, 2018, 124, 064104.	1.1	17
16	Topological phase transformations and intrinsic size effects in ferroelectric nanoparticles. Nanoscale, 2017, 9, 1616-1624.	2.8	49
17	Towards an accurate description of perovskite ferroelectrics: exchange and correlation effects. Scientific Reports, 2017, 7, 43482.	1.6	57
18	Stress-Induced Shift of Band Gap in ZnO Nanowires from Finite-Element Modeling. Physical Review Applied, 2017, 8, .	1.5	7

#	ARTICLE	IF	CITATIONS
19	Chemistry, growth kinetics, and epitaxial stabilization of Sn ²⁺ in Sn-doped SrTiO ₃ using (CH ₃) ₆ Sn ₂ tin precursor. <i>APL Materials</i> , 2016, 4, .	2.2	15
20	Atomic layer deposition of environmentally benign SnTiOx as a potential ferroelectric material. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2016, 34, .	0.9	21
21	Oxygen vacancy effects on double perovskite Bi ₂ FeMnO ₆ : A first-principles study. <i>Europhysics Letters</i> , 2016, 116, 57002.	0.7	5
22	Nanosecond Phase Transition Dynamics in Compressively Strained Epitaxial BiFeO ₃ . <i>Advanced Electronic Materials</i> , 2016, 2, 1500204.	2.6	6
23	Amplitudon and phason modes of electrocaloric energy interconversion. <i>Npj Computational Materials</i> , 2016, 2, .	3.5	14
24	Screening mechanisms at polar oxide heterointerfaces. <i>Reports on Progress in Physics</i> , 2016, 79, 076501.	8.1	69
25	Influence of Elastic and Surface Strains on the Optical Properties of Semiconducting Core-Shell Nanoparticles. <i>Physical Review Applied</i> , 2015, 4, .	1.5	6
26	Structural, vibrational, and dielectric properties of Ruddlesden-Popper $Ba_{1-x}Ca_xBi_2O_{7-2x}$ first principles. <i>Physical Review B</i> , 2015, 91, .		
27	Giant optical enhancement of strain gradient in ferroelectric BiFeO ₃ thin films and its physical origin. <i>Scientific Reports</i> , 2015, 5, 16650.	1.6	33
28	First-principles studies of lone-pair-induced distortions in epitaxial phases of perovskite $Sr_{1-x}Ca_xTiO_3$ and $Pb_{1-x}Sn_xTiO_3$. <i>Physical Review B</i> , 2015, 91, .		
29	Temperature dependent structural, elastic, and polar properties of ferroelectric polyvinylidene fluoride (PVDF) and trifluoroethylene (TrFE) copolymers. <i>Journal of Materials Chemistry C</i> , 2015, 3, 8389-8396.	2.7	51
30	Polymer piezoelectric energy harvesters for low wind speed. <i>Applied Physics Letters</i> , 2014, 104, .	1.5	33
31	Strain induced vortex-to-uniform polarization transitions in soft-ferroelectric nanoparticles. <i>Applied Physics Letters</i> , 2014, 104, 262906.	1.5	20
32	Dynamic layer rearrangement during growth of layered oxide films by molecular beam epitaxy. <i>Nature Materials</i> , 2014, 13, 879-883.	13.3	133
33	Domain- and symmetry-transition origins of reduced nanosecond piezoelectricity in ferroelectric/dielectric superlattices. <i>New Journal of Physics</i> , 2012, 14, 013034.	1.2	5
34	Polarization effects and phase equilibria in high-energy-density polyvinylidene-fluoride-based polymers. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2010, 66, 553-557.	0.3	3
35	Vibrational properties of ferroelectric P(VDF-TrFE) polymers and oligomers. <i>Physical Review B</i> , 2010, 81, .	1.1	30
36	Component-specific electromechanical response in a ferroelectric/dielectric superlattice. <i>Physical Review B</i> , 2010, 82, .	1.1	10

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37	Piezoelectricity in the Dielectric Component of Nanoscale Dielectric-Ferroelectric Superlattices. Physical Review Letters, 2010, 104, 207601.	2.9	28
38	Suppressed Dependence of Polarization on Epitaxial Strain in Highly Polar Ferroelectrics. Physical Review Letters, 2007, 98, 217602.	2.9	146
39	Probing Nanoscale Ferroelectricity by Ultraviolet Raman Spectroscopy. Science, 2006, 313, 1614-1616.	6.0	295
40	Polarization enhancement in two- and three-component ferroelectric superlattices. Applied Physics Letters, 2005, 87, 102906.	1.5	106
41	Polarization in Nanotubes and Nanotubular Structures. , 2005, , .		0
42	Ab Initio Studies of Polarization and Piezoelectricity in Vinylidene Fluoride and BN-Based Polymers. Physical Review Letters, 2004, 92, 115504.	2.9	116
43	Evidence from Simulations for Orientational Medium Range Order in Fluctuation-Electron-Microscopy Observations of a-Si. Microscopy and Microanalysis, 2004, 10, 820-821.	0.2	1
44	Structure and physical properties of paracrystalline atomistic models of amorphous silicon. Journal of Applied Physics, 2001, 90, 4437-4451.	1.1	85
45	Low-temperature anomalous specific heat without tunneling modes: A simulation for a-Si with voids. Physical Review B, 2000, 61, 5376-5380.	1.1	28
46	Computer simulation of low-energy excitations in amorphous silicon with voids. Journal of Non-Crystalline Solids, 2000, 266-269, 156-160.	1.5	15
47	The structure of electronic states in amorphous silicon. Journal of Molecular Graphics and Modelling, 1999, 17, 285-291.	1.3	10
48	Theoretical study on the nature of band-tail states in amorphous Si. Physical Review B, 1998, 58, 15624-15631.	1.1	50
49	Approximate ab initio calculation of vibrational properties of hydrogenated amorphous silicon with inner voids. Physical Review B, 1998, 58, 15325-15328.	1.1	22