

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	Probing Nanoscale Ferroelectricity by Ultraviolet Raman Spectroscopy. <i>Science</i> , 2006, 313, 1614-1616.	6.0	295
2	Suppressed Dependence of Polarization on Epitaxial Strain in Highly Polar Ferroelectrics. <i>Physical Review Letters</i> , 2007, 98, 217602.	2.9	146
3	Dynamic layer rearrangement during growth of layered oxide films by molecular beam epitaxy. <i>Nature Materials</i> , 2014, 13, 879-883.	13.3	133
4	Ab Initio Studies of Polarization and Piezoelectricity in Vinylidene Fluoride and BN-Based Polymers. <i>Physical Review Letters</i> , 2004, 92, 115504.	2.9	116
5	Polarization enhancement in two- and three-component ferroelectric superlattices. <i>Applied Physics Letters</i> , 2005, 87, 102906.	1.5	106
6	Structure and physical properties of paracrystalline atomistic models of amorphous silicon. <i>Journal of Applied Physics</i> , 2001, 90, 4437-4451.	1.1	85
7	Screening mechanisms at polar oxide heterointerfaces. <i>Reports on Progress in Physics</i> , 2016, 79, 076501.	8.1	69
8	Towards an accurate description of perovskite ferroelectrics: exchange and correlation effects. <i>Scientific Reports</i> , 2017, 7, 43482.	1.6	57
9	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
10	Theoretical study on the nature of band-tail states in amorphous Si. <i>Physical Review B</i> , 1998, 58, 15624-15631.	1.1	50
11	Topological phase transformations and intrinsic size effects in ferroelectric nanoparticles. <i>Nanoscale</i> , 2017, 9, 1616-1624.	2.8	49
12	Polymer piezoelectric energy harvesters for low wind speed. <i>Applied Physics Letters</i> , 2014, 104, .	1.5	33
13	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
14	Vibrational properties of ferroelectric β -vinylidene fluoride polymers and oligomers. <i>Physical Review B</i> , 2010, 81, .	1.1	30
15	First-principles studies of lone-pair-induced distortions in epitaxial phases of perovskite SnTiO_3 and PbTiO_3 . <i>Physical Review B</i> , 2015, 91, .	1.1	29
16	Low-temperature anomalous specific heat without tunneling modes: A simulation for Si with voids. <i>Physical Review B</i> , 2000, 61, 5376-5380.	1.1	28
17	Piezoelectricity in the Dielectric Component of Nanoscale Dielectric-Ferroelectric Superlattices. <i>Physical Review Letters</i> , 2010, 104, 207601.	2.9	28
18	Room-temperature relaxor ferroelectricity and photovoltaic effects in tin titanate directly deposited on a silicon substrate. <i>Physical Review B</i> , 2018, 97, .	1.1	28

#	ARTICLE	IF	CITATIONS
19	Assessment of machine learning approaches for predicting the crystallization propensity of active pharmaceutical ingredients. <i>CrystEngComm</i> , 2019, 21, 1215-1223.	1.3	28
20	Approximate ab initio calculation of vibrational properties of hydrogenated amorphous silicon with inner voids. <i>Physical Review B</i> , 1998, 58, 15325-15328.	1.1	22
21	Atomic layer deposition of environmentally benign SnTiO _x as a potential ferroelectric material. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2016, 34, .	0.9	21
22	Strain induced vortex-to-uniform polarization transitions in soft-ferroelectric nanoparticles. <i>Applied Physics Letters</i> , 2014, 104, 262906.	1.5	20
23	Electromechanical control of polarization vortex ordering in an interacting ferroelectric-dielectric composite dimer. <i>Applied Physics Letters</i> , 2018, 113, .	1.5	19
24	Metastable vortex-like polarization textures in ferroelectric nanoparticles of different shapes and sizes. <i>Journal of Applied Physics</i> , 2018, 124, 064104.	1.1	17
25	Domain alignment within ferroelectric/dielectric PbTiO ₃ /SrTiO ₃ superlattice nanostructures. <i>Nanoscale</i> , 2018, 10, 3262-3271.	2.8	16
26	Computer simulation of low-energy excitations in amorphous silicon with voids. <i>Journal of Non-Crystalline Solids</i> , 2000, 266-269, 156-160.	1.5	15
27	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
28	Amplitudon and phason modes of electrocaloric energy interconversion. <i>Npj Computational Materials</i> , 2016, 2, .	3.5	14
29	First-principles studies of spontaneous polarization in mixed poly(vinylidene fluoride)/poly(methyl methacrylate) copolymer. <i>Physical Review B</i> , 2017, 95, 044111.	1.2	13
30	The structure of electronic states in amorphous silicon. <i>Journal of Molecular Graphics and Modelling</i> , 1999, 17, 285-291.	1.3	10
31	Component-specific electromechanical response in a ferroelectric/dielectric superlattice. <i>Physical Review B</i> , 2010, 82, .	1.1	10
32	Polarization canting in ferroelectric diisopropylammonium-halide molecular crystals: a computational first principles study. <i>Journal of Materials Chemistry C</i> , 2018, 6, 1143-1152.	2.7	10
33	Mesoscale modeling of polycrystalline light transmission. <i>Acta Materialia</i> , 2019, 175, 82-89.	3.8	10
34	Size, shape, and orientation dependence of the field-induced behavior in ferroelectric nanoparticles. <i>Journal of Applied Physics</i> , 2019, 125, 134102.	1.1	10
35	Landau-Devonshire thermodynamic potentials for displacive perovskite ferroelectrics from first principles. <i>Journal of Materials Science</i> , 2019, 54, 8381-8400.	1.7	10
36	Machine learning study of magnetism in uranium-based compounds. <i>Physical Review Materials</i> , 2020, 4, .	0.9	10

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37	Structural, vibrational, and dielectric properties of Ruddlesden-Popper $\text{Ba}_{1-x}\text{Sr}_x\text{Ti}_2\text{O}_7$ first principles. Physical Review B, 2015, 91, .		
38	Stress-Induced Shift of Band Gap in ZnO Nanowires from Finite-Element Modeling. Physical Review Applied, 2017, 8, .	1.5	7
39	Influence of Elastic and Surface Strains on the Optical Properties of Semiconducting Core-Shell Nanoparticles. Physical Review Applied, 2015, 4, .	1.5	6
40	Nanosecond Phase Transition Dynamics in Compressively Strained Epitaxial BiFeO_3 . Advanced Electronic Materials, 2016, 2, 1500204.	2.6	6
41	Domain- and symmetry-transition origins of reduced nanosecond piezoelectricity in ferroelectric/dielectric superlattices. New Journal of Physics, 2012, 14, 013034.	1.2	5
42	Oxygen vacancy effects on double perovskite $\text{Bi}_2\text{FeMnO}_6$: A first-principles study. Europhysics Letters, 2016, 116, 57002.	0.7	5
43	Mesoscale modeling of light transmission modulation in ceramics. Acta Materialia, 2020, 193, 261-269.	3.8	5
44	Surface charge mediated polar response in ferroelectric nanoparticles. Applied Physics Letters, 2021, 119, .	1.5	5
45	Surface structure and energetics of low index facets of bismuth ferrite. Physical Chemistry Chemical Physics, 2020, 22, 16400-16406.	1.3	4
46	Polarization effects and phase equilibria in high-energy-density polyvinylidene-fluoride-based polymers. Acta Crystallographica Section A: Foundations and Advances, 2010, 66, 553-557.	0.3	3
47	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
48	Towards modeling thermoelectric properties of anisotropic polycrystalline materials. Acta Materialia, 2022, 228, 117743.	3.8	1
49	Polarization in Nanotubes and Nanotubular Structures. , 2005, , .		0