

# Vasant G Sathe

## List of Publications by Year in descending order

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127  
papers

1,990  
citations

304743

22  
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302126

39  
g-index

128  
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128  
docs citations

128  
times ranked

2455  
citing authors

#	ARTICLE	IF	CITATIONS
1	Revisiting eigen displacements of tetragonal BaTiO <sub>3</sub> : Combined first principle and experimental investigation. <i>Physica B: Condensed Matter</i> , 2022, 624, 413381.	2.7	15
2	Synthesis of Sn <sup>1+~</sup> x NiO <sub>2</sub> nanoparticles: Observation of room temperature structural, optical and magnetic behavior. <i>Journal of Alloys and Compounds</i> , 2022, 891, 161990.	5.5	4
3	Synthesis, physical, optical, structural and radiation shielding characterization of borate glasses: A focus on the role of SrO/Al <sub>2</sub> O <sub>3</sub> substitution. <i>Ceramics International</i> , 2022, 48, 2124-2137.	4.8	37
4	Insights into the conduction mechanism of magneto-dielectric BaFe <sub>10.5</sub> In <sub>1.5</sub> O <sub>19</sub> : an impedance spectroscopy and AC conductivity study. <i>Journal of Materials Science: Materials in Electronics</i> , 2022, 33, 4072.	2.2	1
5	Reversible optical control of Fano resonance and domain configuration at room temperature in BaTiO <sub>3</sub> . <i>Journal of Applied Physics</i> , 2022, 131, 053102.	2.5	2
6	Investigation of magnetic properties and converse magnetoelectric effect in the composite of doped barium hexaferrite with potassium niobate, 0.5BaFe <sub>10</sub> Sc <sub>2</sub> O <sub>19</sub> -0.5KNbO <sub>3</sub> and 0.5BaFe <sub>10</sub> In <sub>2</sub> O <sub>19</sub> -0.5KNbO <sub>3</sub> . <i>Physica B: Condensed Matter</i> , 2022, 633, 413736.	2.7	1
7	Optical control of domain configuration through light polarization in ferroelectric BaTiO <sub>3</sub> . <i>Physical Review B</i> , 2022, 105, .	3.2	1
8	Unveiling the Role of VO <sub>2</sub> (B) Polymorph in the Insulator-Metal Transition of VO <sub>2</sub> (M1) Thin Films. <i>Physica Status Solidi (B): Basic Research</i> , 2022, 259, .	1.5	5
9	Magnetism, spin-phonon coupling and Kitaev interaction in Mott insulator La <sub>2</sub> ZnIrO <sub>6</sub> single crystal oxide. <i>Ceramics International</i> , 2022, 48, 29190-29196.	4.8	1
10	Giant exchange bias in antiferromagnetic Pr <sub>2</sub> CoFe <sub>0.5</sub> Mn <sub>0.5</sub> O <sub>6</sub> : a structural and magnetic properties study. <i>Journal Physics D: Applied Physics</i> , 2022, 55, 365004.	2.8	10
11	Magnetoelastic coupling and spin contributions to entropy and thermal transport in biferroic yttrium orthochromite YCrO <sub>3</sub> . <i>Journal of Physics Condensed Matter</i> , 2021, 33, 125702.	1.8	2
12	Phonon scattering mechanism in van der Waals heterostructures comprising of MoS <sub>2</sub> and WS <sub>2</sub> nanosheets. <i>Materials Today: Proceedings</i> , 2021, 45, 4612-4618.	1.8	3
13	Breaking of inversion symmetry in NdGaO <sub>3</sub> . <i>Physical Review B</i> , 2021, 103, .	3.2	2
14	Coexistence of local structural heterogeneities and long-range ferroelectricity in Pb-free SrBi <sub>2</sub> O <sub>6</sub> . <i>Physical Review B</i> , 2021, 103, .	3.2	1
15	Strong trilinear coupling of phonon instabilities drives the avalanche-like hybrid improper ferroelectric transition in SrBi <sub>2</sub> O <sub>6</sub> . <i>Physical Review B</i> , 2021, 103, .	3.2	1
16	Amorphous Salts Solid Dispersions of Celecoxib: Enhanced Biopharmaceutical Performance and Physical Stability. <i>Molecular Pharmaceutics</i> , 2021, 18, 2334-2348.	4.6	18
17	Emergence of metamagnetic transition, re-entrant cluster glass and spin phonon coupling in Tb <sub>2</sub> CoMnO <sub>6</sub> . <i>Journal of Physics Condensed Matter</i> , 2021, 33, 275802.	1.8	9
18	Electric field tuning of the Fano resonance in BaTiO <sub>3</sub> . , 2021, , .		3

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19	Large nonlinear electrostrain and piezoelectric response in nonergodic Lattice dynamics and magnetic exchange interactions in Materials, 2021, 5, .	2.4	4
20	Investigation on diffuse phase transition through Raman and dielectric properties of Pb(GeCo) <sub>2</sub> O <sub>4</sub> spinel with pyrochlore lattice. Physical Review B, 2021, 104, .	3.2	7
21	Investigation on diffuse phase transition through Raman and dielectric properties of Pb(Fe <sub>0.5</sub> Nb <sub>0.5</sub> )O <sub>3</sub> and Pb(Co <sub>0.33</sub> Nb <sub>0.67</sub> )O <sub>3</sub> solid solutions. Materials Chemistry and Physics, 2021, 267, 124678.	4.0	5
22	Influence of swift heavy ion irradiations on temperature dependent phononic behavior of epitaxial LaNiO <sub>3</sub> thin film. Journal of Applied Physics, 2021, 130, .	2.5	1
23	Lattice assisted dielectric relaxation in four-layer Aurivillius Bi <sub>5</sub> FeTi <sub>3</sub> O <sub>15</sub> ceramic at low temperatures. Journal of Physics Condensed Matter, 2021, 33, 355803.	1.8	2
24	Enhancement of shielding ability using PbF <sub>2</sub> in Fe-reinforced bismuth borate glasses. Journal of Materials Science: Materials in Electronics, 2021, 32, 23047-23065.	2.2	21
25	Investigation and fabrication of Cadmium Telluride (CdTe) single crystal as a photodetector. Physica B: Condensed Matter, 2021, 614, 413027.	2.7	7
26	Enhanced thermoelectric performance of solution-grown Bi <sub>2</sub> Te <sub>3</sub> nanorods. Materials Today Energy, 2021, 21, 100700.	4.7	10
27	Effect of spin reorientation on the dielectric and conductivity behavior of Ca <sub>2</sub> FeCoO <sub>5</sub> . Journal of Materials Science: Materials in Electronics, 2021, 32, 26955.	2.2	1
28	Fano resonance and relaxor behavior in Pr doped SrTiO <sub>3</sub> : A Raman spectroscopic investigation. Physica B: Condensed Matter, 2021, 620, 413265.	2.7	10
29	Evidence for cluster spin-glass like phase with longitudinal conical magnetic structure in Ga doped M-type barium hexaferrite, BaFe <sub>10</sub> Ga <sub>2</sub> O <sub>19</sub> . Journal of Magnetism and Magnetic Materials, 2021, 540, 168483.	2.3	10
30	Magneto-structural correlation across the spin reorientation transition temperature in pure and Sm substituted TmFeO <sub>3</sub> : A temperature dependent Raman and synchrotron X-ray diffraction study. Journal of Alloys and Compounds, 2021, 885, 160985.	5.5	2
31	Femtometer atomic displacement, the root cause for multiferroic behavior of CuO unearthed through polarized Raman spectroscopy. Journal of Physics Condensed Matter, 2021, 33, 12LT01.	1.8	4
32	Anomalous magnetism in half doped cobaltite Eu <sub>0.5</sub> Sr <sub>0.5</sub> CoO <sub>3</sub> . Ceramics International, 2020, 46, 3663-3667.	4.8	0
33	Effect of scandium substitution on magnetic and transport properties of the M-type barium hexaferrites. Journal of Alloys and Compounds, 2020, 815, 152467.	5.5	28
34	Re-normalization of lattice vibrations below magnetic transition probed by Raman spectroscopy. Physica B: Condensed Matter, 2020, 579, 411806.	2.7	2
35	Spin phonon coupling in Mn doped HoFeO <sub>3</sub> compounds exhibiting spin reorientation behaviour. Journal of Physics Condensed Matter, 2020, 32, 095801.	1.8	5
36	Electric field induced structural, magnetic and ferroelectric properties of 0.6PbFe <sub>0.5</sub> Nb <sub>0.5</sub> O <sub>3</sub> -0.4BiFeO <sub>3</sub> multiferroic solid solution. Ceramics International, 2020, 46, 27595-27600.	4.8	6



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55	Enhanced zeta potential of polyol method synthesized PVP-capped Sb <sub>2</sub> S <sub>3</sub> nanoparticles. AIP Conference Proceedings, 2019, , .	0.4	4
56	Pressure induced re-entrant order-disorder like structural phase transition in spinel ferrite nanoparticles. AIP Conference Proceedings, 2019, , .	0.4	0
57	Phonon anomalies in magnetoelectric Cr <sub>2</sub> O <sub>3</sub> . AIP Conference Proceedings, 2019, , .	0.4	0
58	Investigation of electrical and magneto-transport properties in half doped cobaltite Eu <sub>0.5</sub> Sr <sub>0.5</sub> CoO <sub>3</sub> . AIP Conference Proceedings, 2019, , .	0.4	1
59	Insulator to metal transition in VO <sub>2</sub> M1+B phase on silicon substrate. AIP Conference Proceedings, 2019, , .	0.4	1
60	Dielectric and Raman spectroscopy measurements across structural phase transition in multiferroic HoFe <sub>3</sub> (BO <sub>3</sub> ) <sub>4</sub> single crystal. AIP Conference Proceedings, 2019, , .	0.4	0
61	Evidence of structural modifications in the region around the broad dielectric maxima in the 30% Sn-doped barium titanate relaxor. Physical Review B, 2019, 100, .	3.2	15
62	Phonon invisibility driven by strong magneto-elastic coupling in AlFeO <sub>3</sub> thin film. Journal of Applied Physics, 2019, 126, .	2.5	1
63	Symmetry breaking and spin lattice coupling in $\text{NdCrTiO}_5$ . Physical Review B, 2019, 100, .	3.2	15
64	Enhanced thermoelectric property of nanostructured CaMnO <sub>3</sub> by sol-gel hydrothermal method. Physica B: Condensed Matter, 2019, 575, 411707.	2.7	18
65	Spin-lattice coupling mediated giant magnetodielectricity across the spin reorientation in $\text{Ca}_2\text{FeCoO}_5$ . Physical Review B, 2019, 99, .	3.2	17
66	Temperature dependent Raman investigations of few-layered WS <sub>2</sub> nanosheets. Solid State Communications, 2019, 298, 113626.	1.9	23
67	Temperature Dependent Raman Spectroscopic Study of the Fe Doped La <sub>0.67</sub> Sr <sub>0.33</sub> MnO <sub>3</sub> Prepared Using Ball Milling Method. Physics of the Solid State, 2019, 61, 618-626.	0.6	3
68	Hexagonal Sr <sub>0.6</sub> Ba <sub>0.4</sub> MnO <sub>3</sub> : Spin and dipole coupling via local structure. Journal of Alloys and Compounds, 2019, 796, 237-242.	5.5	6
69	Griffiths phase-like behavior and origin of spin-phonon interaction in Eu <sub>0.75</sub> Y <sub>0.25</sub> MnO <sub>3</sub> . Journal of Magnetism and Magnetic Materials, 2019, 482, 38-43.	2.3	3
70	Observation of magnetoelastic and magnetoelectric coupling in Sc doped BaFe <sub>12</sub> O <sub>19</sub> due to spin-glass-like phase. Journal of Physics Condensed Matter, 2019, 31, 295701.	1.8	15
71	Modifier role of ZnO on the structural and transport properties of lithium boro tellurite glasses. Journal of Non-Crystalline Solids, 2019, 514, 35-45.	3.1	31
72	Effect of electric poling on structural, magnetic and ferroelectric properties of 0.8PbFe <sub>0.5</sub> Nb <sub>0.5</sub> O <sub>3</sub> -0.2BiFeO <sub>3</sub> multiferroic solid solution. Ceramics International, 2019, 45, 13171-13178.	4.8	10



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91	Effect of 120 MeV Au <sup>9+</sup> ion irradiation on the structure and surface morphology of ZnO/NiO heterojunction. Surface and Interface Analysis, 2018, 50, 954-961.	1.8	2
92	Spin dynamics in brownmillerite Ca <sub>2</sub> Fe <sub>1.2</sub> Al <sub>0.8</sub> O <sub>5</sub> : A temperature dependent neutron diffraction study. Ceramics International, 2018, 44, 19866-19871.	4.8	4
93	Temperature Dependent Phononic Response of Few Layered MoS <sub>2</sub> Nanosheets. Journal of Nanoscience and Technology, 2018, 4, 546-548.	0.3	1
94	Evidence of iso-structural phase transition in high pressure Raman spectroscopic studies of CaCu <sub>3</sub> Ti <sub>4</sub> O <sub>12</sub> . Solid State Communications, 2017, 251, 94-97.	1.9	2
95	Study of spin-phonon coupling and magnetic field induced spin reorientation in polycrystalline multiferroic GdCd <sub>2</sub> F <sub>2</sub> Fe <sub>2</sub> O <sub>12</sub> . Materials Chemistry and Physics. 2017. 196. 205-212.	4.0	36
96	Stabilization of metallic phase in V <sub>2</sub> O <sub>3</sub> thin film. Applied Physics Letters, 2017, 110, .	3.3	33
97	Synthesis, structural and photoluminescence properties of nano-crystalline Cu doped NiO. Materials Research Express, 2017, 4, 105027.	1.6	25
98	Strain control in self assembled growth of vertical nano structured heteroepitaxial thin films. AIP Conference Proceedings, 2017, . .	0.4	0
99	Influence of local structural distortions on magnetism and spin-phonon coupling of multiferroic spinel chalcogenide. Journal of Applied Physics, 2017, 121, 243905.	2.5	1
100	Electron-phonon coupling in perovskites studied by Raman Scattering. Journal of Physics: Conference Series, 2016, 755, 012008.	0.4	8
101	Local lattice distortions and magnetic properties of CdCr <sub>2</sub> Se <sub>4</sub> xS <sub>x</sub> . Journal of Applied Physics, 2016, 120, 045107.	2.5	2
102	Magnetic, ferroelectric, and spin phonon coupling studies of Sr <sub>3</sub> Co <sub>2</sub> Fe <sub>24</sub> O <sub>41</sub> multiferroic Z-type hexaferrite. Journal of Applied Physics, 2016, 120, .	2.5	15
103	Strong magnetoelectric and spin phonon coupling in SmFeO <sub>3</sub> /PMN-PT composite. Applied Physics Letters, 2016, 109, 082902.	3.3	5
104	Absence of low temperature phase transitions and enhancement of ferroelectric transition temperature in highly strained BaTiO <sub>3</sub> epitaxial films grown on MgO Substrates. Journal of Applied Physics, 2015, 117, 134103.	2.5	13
105	Raman spectroscopic study of structural transformation in ordered double perovskites La <sub>2</sub> CoMnO <sub>6</sub> bulk and epitaxial film. Solid State Communications, 2015, 224, 10-14.	1.9	13
106	Controlling phase separation in La <sub>5/8</sub> Pr <sub>y</sub> Ca <sub>3/8</sub> MnO <sub>3</sub> (y=0.45) epitaxial thin films by strain disorder. Applied Physics Letters, 2015, 106, 072401.	3.3	5
107	Effect of pressure and temperature on Raman scattering and anharmonicity study of tin dichalcogenide single crystals. Solid State Communications, 2015, 201, 54-58.	1.9	33
108	Raman spectroscopic investigations on transition metal dichalcogenides MX <sub>2</sub> (M=Mo, W). J. Appl. Phys. 2015, 117, 104301.	2.5	72

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109	Pressure and temperature dependence of Raman spectra and their anharmonic effects in Bi <sub>2</sub> Se <sub>3</sub> single crystal. <i>Physica B: Condensed Matter</i> , 2014, 433, 72-78.	2.7	18
110	Investigation of orthorhombic-to-tetragonal structural phase transition in (Ba <sub>1-x</sub> Cax)(Zr <sub>0.05</sub> Ti <sub>0.95</sub> )O <sub>3</sub> ferroelectric ceramics using micro-Raman scattering. <i>Journal of Applied Physics</i> , 2014, 115, .	2.5	13
111	Spin-phonon coupling in ordered double perovskites A <sub>2</sub> CoMnO <sub>6</sub> (A=La, Pr, Nd) probed by micro-Raman spectroscopy. <i>Solid State Communications</i> , 2014, 194, 59-64.	1.9	35
112	Local structural disorder and its influence on the average global structure and polar properties in Na <sub>0.5</sub> Bi <sub>0.5</sub> TiO <sub>3</sub> . <i>Journal of Applied Physics</i> , 2013, 114, 104301.	3.2	194
113	Signature of spin-phonon coupling in Sr <sub>2</sub> CoO <sub>4</sub> thin film: A Raman spectroscopic study. <i>Applied Physics Letters</i> , 2013, 102, .	3.3	45
114	Raman tensor and domain structure study of single-crystal-like epitaxial films of CaCu <sub>3</sub> Ti <sub>4</sub> O <sub>12</sub> grown by pulsed laser deposition. <i>Journal of Physics Condensed Matter</i> , 2013, 25, 025902.	1.8	6
115	Evidence of spin phonon coupling in magnetoelectric NiFe <sub>2</sub> O <sub>4</sub> /PMN-PT composite. <i>Applied Physics Letters</i> , 2013, 103, .	3.3	17
116	Enhancement of the ferromagnetic metallic phase fraction by extrinsic disorder in phase separated La <sub>5/8-y</sub> Pr <sub>y</sub> Ca <sub>3/8</sub> MnO <sub>3</sub> (y=0.45) thin film. <i>Journal of Physics Condensed Matter</i> , 2013, 25, 175003.	1.8	12
117	An x-ray absorption spectroscopy study of Ni-Mn-Ga shape memory alloys. <i>Journal of Physics Condensed Matter</i> , 2013, 25, 046001.	1.8	8
118	Direct visualization of first-order magnetic transition in La <sub>5/8-y</sub> Pr <sub>y</sub> Ca <sub>3/8</sub> MnO <sub>3</sub> (y=0.45) thin films. <i>Physical Review B</i> , 2013, 87, .	3.2	29
119	Evidence of the Fano resonance in a temperature dependent Raman study of CaCu <sub>3</sub> Ti <sub>4</sub> O <sub>12</sub> and SrCu <sub>3</sub> Ti <sub>4</sub> O <sub>12</sub> . <i>Journal of Physics Condensed Matter</i> , 2012, 24, 252202.	1.8	12
120	Mossbauer, Raman and X-ray diffraction studies of superparamagnetic NiFe <sub>2</sub> O <sub>4</sub> nanoparticles prepared by sol-gel auto-combustion method. <i>Journal of Magnetism and Magnetic Materials</i> , 2011, 323, 2049-2054.	2.3	212
121	Effect of strain on the phase separation and devitrification of the magnetic glass state in thin films of La <sub>5/8-y</sub> Pr <sub>y</sub> Ca <sub>3/8</sub> MnO <sub>3</sub> (y=0.45). <i>Journal of Physics Condensed Matter</i> , 2010, 22, 176002.	1.8	22
122	Optical band gap, glass transition temperature and structural studies of (100-x)TeO <sub>2</sub> -xAg <sub>2</sub> O-xWO <sub>3</sub> glass system. <i>Journal of Alloys and Compounds</i> , 2010, 504, 468-474.	5.5	129
123	Photo-induced insulator-metal transition probed by Raman spectroscopy. <i>Journal of Physics Condensed Matter</i> , 2009, 21, 075603.	1.8	9
124	Signature of Austenitic to Martensitic Phase Transition in Ni <sub>2</sub> MnGa in Mn and Ni K-Edge XANES Spectra. <i>Advanced Materials Research</i> , 2008, 52, 175-180.	0.3	4
125	Signature of Jahn-Teller distortion and oxygen stoichiometry in Raman spectra of epitaxial LaMnO <sub>3</sub> + $\delta$ thin films. <i>Journal of Applied Physics</i> , 2008, 104, .	2.5	32
126	The effect of magnetic order and thickness in the Raman spectra of oriented thin films of LaMnO <sub>3</sub> . <i>Journal of Physics Condensed Matter</i> , 2007, 19, 346232.	1.8	26



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127	Tracing microscopic atomic displacements using polarized Raman spectroscopy: A case study on BaTiO <sub>3</sub> . Journal Physics D: Applied Physics, 0, , .	2.8	2