

# Pradeep Kumar

## List of Publications by Year in descending order

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47  
papers

580  
citations

623734

14  
h-index

677142

22  
g-index

47  
all docs

47  
docs citations

47  
times ranked

830  
citing authors

#	ARTICLE	IF	CITATIONS
1	Theoretical Studies of Host-Guest Interaction in Gas Hydrates. Journal of Physical Chemistry A, 2011, 115, 14276-14281.	2.5	56
2	Anomalous Raman scattering from phonons and electrons of superconducting. Solid State Communications, 2010, 150, 557-560.	1.9	53
3	Temperature dependent magnetic, dielectric and Raman studies of partially disordered La <sub>2</sub> NiMnO <sub>6</sub> . Solid State Communications, 2014, 184, 47-51.	1.9	45
4	Coupled phonons, magnetic excitations, and ferroelectricity in AlFeO <sub>3</sub> : Raman and first-principles studies. Physical Review B, 2012, 85, .	3.2	31
5	Raman signatures of pressure induced electronic topological and structural transitions in Bi <sub>2</sub> Te <sub>3</sub> . Solid State Communications, 2012, 152, 284-287.	1.9	29
6	Ionic conduction and vibrational characteristics of Al <sup>3+</sup> modified monoclinic LiZr <sub>2</sub> (PO <sub>4</sub> ) <sub>3</sub> . Electrochimica Acta, 2018, 263, 533-543.	5.2	25
7	Growth and NO <sub>2</sub> gas sensing mechanisms of vertically aligned 2D SnS <sub>2</sub> flakes by CVD: Experimental and DFT studies. Sensors and Actuators B: Chemical, 2022, 353, 131078.	7.8	25
8	LiSnZr(PO <sub>4</sub> ) <sub>3</sub> : NASICON-type solid electrolyte with excellent room temperature Li <sup>+</sup> conductivity. Journal of Alloys and Compounds, 2019, 777, 602-611.	5.5	21
9	Competing thermal expansion mismatch and lattice strain engineered growth of crack free WS <sub>2</sub> in-plane heterostructures. Journal of Materials Chemistry C, 2018, 6, 11407-11415.	5.5	19
10	Quaternary semiconductors Cu <sub>2</sub> MgSnS <sub>4</sub> and Cu <sub>2</sub> MgSnSe <sub>4</sub> as potential thermoelectric materials. Journal of Physics Communications, 2017, 1, 045014.	1.2	18
11	First-principles analysis of electron correlation, spin ordering and phonons in the normal state of FeSe. Journal of Physics Condensed Matter, 2010, 22, 385701.	1.8	16
12	Raman evidence for orbiton-mediated multiphonon scattering in multiferroic TbMnO <sub>3</sub> . Journal of Physics Condensed Matter, 2010, 22, 115403.	1.8	16
13	Thermal expansion coefficient and phonon dynamics in coexisting allotropes of monolayer WS <sub>2</sub> probed by Raman scattering. Journal of Physics Condensed Matter, 2019, 31, 505403.	1.8	15
14	Kitaev magnetism and fractionalized excitations in double perovskite Sr <sub>2</sub> MnZrO <sub>6</sub> . Physical Review Research, 2020, 2, .	3.6	15
15	Platinum nanoparticle sensitized plasmonic-enhanced broad spectral photodetection in large area vertical-aligned MoS <sub>2</sub> flakes. Nanotechnology, 2022, 33, 255702.	2.6	15
16	Potential energy curves for neutral and multiply charged carbon monoxide. Pramana - Journal of Physics, 2010, 74, 49-55.	1.8	13
17	Davydov Splitting, Resonance Effect and Phonon Dynamics in Chemical Vapor Deposition Grown Layered MoS <sub>2</sub> . Nanotechnology, 2021, 32, 285705.	2.6	12
18	Superconducting fluctuations and anomalous phonon renormalization much above superconducting transition temperature in Ca <sub>4</sub> Al <sub>2</sub> O <sub>5</sub> .7Fe <sub>2</sub> As <sub>2</sub> . Applied Physics Letters, 2012, 100, 222602.	3.3	11

#	ARTICLE	IF	CITATIONS
19	Coupling of lattice, spin, and intraconfigurational excitations of $\text{Eu}^{2+}$ in $\text{Ca}(\text{Fe}_{0.97}\text{Co}_{0.03})_2\text{As}_2$ : temperature-dependent Raman study. <i>Physical Review Research</i> , 2020, 2, .	3.6	11
20	Temperature-dependent infrared reflectivity studies of multiferroic $\text{TbMnO}_3$ : Evidence for spin-phonon coupling. <i>Pramana - Journal of Physics</i> , 2010, 74, 281-291.	1.8	10
21	Phonon anomalies, orbital-ordering and electronic Raman scattering in iron-pnictide $\text{Ca}(\text{Fe}_{0.97}\text{Co}_{0.03})_2\text{As}_2$ : temperature-dependent Raman study. <i>Journal of Physics Condensed Matter</i> , 2014, 26, 305403.	1.8	10
22	Temperature-dependent Raman study of a $\text{CeFeAsO}_{0.9}\text{F}_{0.1}$ superconductor: crystal field excitations, phonons and their coupling. <i>Journal of Physics Condensed Matter</i> , 2010, 22, 255402.	1.8	9
23	Raman evidence for the superconducting gap and spin-phonon coupling in the superconductor $\text{Ca}(\text{Fe}_{0.95}\text{Co}_{0.05})_2\text{As}_2$ . <i>Journal of Physics Condensed Matter</i> , 2011, 23, 255403.	1.8	9
24	$(\text{Pb}_{1-x}\text{Bi}_x)(\text{Ti}_{1-x}\text{Mn}_x)\text{O}_3$ : Competing mechanism of tetragonal-cubic phase on A/B site modifications. <i>Journal of Alloys and Compounds</i> , 2018, 765, 278-286.	5.5	9
25	Kramers doublets, phonons, crystal-field excitations, and their coupling in $\text{Nd}_2\text{ZnIrO}_6$ . <i>Physical Review Research</i> , 2020, 2, .	3.6	9
26	Orbital-phonon coupling in $\text{Ir}_{5d}\text{Yr}_{4d}$ double perovskite $\text{Ba}_2\text{YrO}_6$ . <i>Journal of Physics Condensed Matter</i> , 2019, 31, 065603.	1.8	8
27	Evidence for phase transitions and pseudospin phonon coupling in $\text{K}_{0.9}(\text{NH}_4)\text{O}_1\text{H}_2\text{AsO}_4$ . <i>AIP Advances</i> , 2015, 5, 037135.	1.3	6
28	Investigation of electronic, magnetic and transport properties of full-Heusler alloys $\text{Fe}_2\text{TiX}$ ( $X = \text{As}$ ) $\text{Tj ETQqO O O rgBT /Overlock 10 Tf 5}$	3.9	6
29	Anisotropic orbital-phonon coupling in layered $\text{MoS}_2$ . <i>Journal of Physics Condensed Matter</i> , 2020, 32, 415702.	1.8	6
30	Low-voltage, self-powered and broadband photodetector with Ohmic, transparent and cost-effective AZO electrodes on vertical aligned $\text{MoS}_2$ flakes. <i>Surfaces and Interfaces</i> , 2022, 30, 101813.	3.0	6
31	Tuning the thermoelectric properties of $\text{YNiBi}$ half-Heusler alloy. <i>Materials Research Express</i> , 2018, 5, 046528.	1.6	5
32	Correlated paramagnetism and interplay of magnetic and phononic degrees of freedom in 3d-5d coupled $\text{La}_2\text{CuIrO}_6$ . <i>Journal of Physics Condensed Matter</i> , 2019, 31, 485803.	1.8	5
33	Structural, dielectric, and piezoelectric properties of lead-free $(1-x)\text{K}_1/2\text{Na}_1/2\text{NbO}_3-x\text{Ca}(\text{Zn}_{1/3}\text{Ta}_{2/3})\text{O}_3$ perovskite solid solution. <i>Journal of Materials Science: Materials in Electronics</i> , 2019, 30, 15084-15096.	2.2	5
34	Electron-phonon coupling, thermal expansion coefficient, resonance effect, and phonon dynamics in high-quality CVD-grown monolayer and bilayer $\text{MoSe}_2$ . <i>Physical Review B</i> , 2022, 105, .	3.2	5
35	Iron isotope effect in $\text{SmFeAsO}_{0.65}$ and $\text{SmFeAsO}_{0.77}\text{H}_{0.12}$ superconductors: A Raman study. <i>AIP Advances</i> , 2016, 6, 105310.	1.3	4
36	Broken translational and rotational symmetries in $\text{LiMn}_{1.5}\text{Ni}_0.5\text{O}_4$ spinel. <i>Journal of Physics Condensed Matter</i> , 2019, 31, 395701.	1.8	4

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37	Coupled excitonic quasiparticle-electron-phonon and interlayer coupling in vertically and horizontally aligned MoS <sub>2</sub> . Journal of Materials Chemistry C, 2022, 10, 5684-5692.	5.5	4
38	A comparative study of thermoelectric properties of CuGaTe <sub>2</sub> by using PBE and MBJ potentials. AIP Conference Proceedings, 2018, , .	0.4	3
39	Unconventional iron-based superconductor CsCa <sub>2</sub> Fe <sub>4</sub> As <sub>4</sub> F <sub>2</sub> : A first-principle study. AIP Conference Proceedings, 2018, , .	0.4	3
40	Structural and electronic properties of LaPd <sub>2</sub> As <sub>2</sub> superconductor: First-principle calculations. AIP Conference Proceedings, 2017, , .	0.4	2
41	Density functional study of ACa <sub>2</sub> Fe <sub>4</sub> As <sub>4</sub> F <sub>2</sub> (A = K, Rb): Electronic structure, unconventional superconductors. AIP Conference Proceedings, 2018, , .	0.4	2
42	Fractional spin fluctuations and quantum liquid signature in $\text{GdMn}_2\text{Pn}$ . Physical Review B, 2021, 104, .	0.4	2
43	Raman evidence for coupling of superconducting quasi-particles with a phonon and crystal field excitation in superconductor Ce <sub>0.6</sub> Y <sub>0.4</sub> FeAsO <sub>0.8</sub> F <sub>0.2</sub> . , 2014, , .		1
44	Anomalous phonon renormalization in single crystal of silicon. AIP Conference Proceedings, 2020, , .	0.4	1
45	Understanding the transport properties of YNiBi half- Heusler alloy: An Ab-initio study. AIP Conference Proceedings, 2017, , .	0.4	0
46	Phonon dynamics in LiZr <sub>1.9</sub> Al <sub>0.1</sub> (PO <sub>4</sub> ) <sub>3</sub> : A temperature dependent Raman study. AIP Conference Proceedings, 2018, , .	0.4	0
47	Doping effect on the thermoelectric properties of chalcopyrite CuGaTe <sub>2</sub> . AIP Conference Proceedings, 2018, , .	0.4	0