

Surinder M Sharma

List of Publications by Year in descending order

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109
papers

2,731
citations

147726

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223716

46
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110
all docs

110
docs citations

110
times ranked

2995
citing authors

#	ARTICLE	IF	CITATIONS
1	Crystal Structure and Melting of Fe Shock Compressed to 273 GPa: <i>In Situ</i> X-Ray Diffraction. <i>Physical Review Letters</i> , 2020, 125, 215702.	2.9	44
2	Transformation of shock-compressed copper to the body-centered-cubic structure at 180 GPa. <i>Physical Review B</i> , 2020, 102, .	1.1	32
3	Nanosecond Melting and Recrystallization in Shock-Compressed Silicon. <i>Physical Review Letters</i> , 2018, 121, 135701.	2.9	35
4	Laser heated diamond anvil cell facility for high temperature high pressure research: application to material synthesis and melting studies. <i>Indian Journal of Physics</i> , 2018, 92, 1259-1269.	0.9	5
5	The synthesis of unconventional stoichiometric compounds in the KBr system at high pressures. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 7996-8007.	1.3	17
6	Structural phase transitions in Li ₂ S, Na ₂ S and K ₂ S under compression. <i>Journal of Alloys and Compounds</i> , 2017, 710, 460-467.	2.8	12
7	Transformation of shock-compressed graphite to hexagonal diamond in nanoseconds. <i>Science Advances</i> , 2017, 3, eaao3561.	4.7	61
8	Comparative studies of Laser induced plasma in TEOS and MTMS based aerogels and solid quartz. <i>MRS Advances</i> , 2017, 2, 3531-3536.	0.5	2
9	Raman spectroscopy of laser shocked polystyrene. <i>Journal of Raman Spectroscopy</i> , 2017, 48, 458-464.	1.2	11
10	K-shell X-ray spectroscopy of laser produced aluminum plasma. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2017, 187, 20-29.	1.1	10
11	Protein crystallography beamline (PX-BL21) at Indus-2 synchrotron. <i>Journal of Synchrotron Radiation</i> , 2016, 23, 629-634.	1.0	53
12	Correlation between Structure and Ferromagnetism in Nano-BiFeO ₃ . <i>Journal of Physical Chemistry C</i> , 2016, 120, 8411-8416.	1.5	37
13	Hydrogen Bond Symmetrization in Glycinium Oxalate under Pressure. <i>Journal of Physical Chemistry B</i> , 2016, 120, 851-859.	1.2	37
14	Study of Phase Transformation in BaTe ₂ O ₆ by in Situ High-Pressure X-ray Diffraction, Raman Spectroscopy, and First-Principles Calculations. <i>Inorganic Chemistry</i> , 2016, 55, 227-238.	1.9	11
15	High-pressure investigations on Piplia Kalan eucrite meteorite using in-situ X-ray diffraction and ⁵⁷ Fe Mössbauer spectroscopic technique up to 16 ÅGPa. <i>Geoscience Frontiers</i> , 2016, 7, 265-271.	4.3	10
16	Proton transfer aiding phase transitions in oxalic acid dihydrate under pressure. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 8065-8074.	1.3	35
17	Structural phase transitions in trigonal Selenium induce the formation of a disordered phase. <i>Journal of Physics Condensed Matter</i> , 2015, 27, 415404.	0.7	11
18	Hydrogen Bonds and Ionic Forms versus Polymerization of Imidazole at High Pressures. <i>Journal of Physical Chemistry B</i> , 2015, 119, 372-378.	1.2	9

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19	Role of substrate in melting behavior of Langmuir-Blodgett films. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2015, 471, 159-163.	2.3	3
20	High pressure phase transitions in scheelite structured fluoride: ErLiF ₄ . <i>Journal of Solid State Chemistry</i> , 2015, 229, 164-172.	1.4	6
21	Determination of the third-order elastic constants of diamond by shock wave simulations. <i>Europhysics Letters</i> , 2015, 110, 56003.	0.7	4
22	The role of Jahn-Teller distortion in insulator to semiconductor phase transition in organic-inorganic hybrid compound (p-chloroanilinium) ₂ CuCl ₄ at high pressure. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 32204-32210.	1.3	11
23	Acoustic phonon behavior of PbWO ₄ and BaWO ₄ probed by low temperature Brillouin spectroscopy. <i>Solid State Communications</i> , 2015, 202, 78-84.	0.9	9
24	Pressure induced phase transformations in NaZr ₂ (PO ₄) ₃ studied by X-ray diffraction and Raman spectroscopy. <i>Journal of Solid State Chemistry</i> , 2015, 221, 285-290.	1.4	22
25	Reinvestigation of high pressure polymorphism in hafnium metal. <i>Journal of Applied Physics</i> , 2014, 115, 233513.	1.1	22
26	Investigation of short-range structural order in Zr _{69.5} Cu ₁₂ Ni ₁₁ Al _{7.5} and Zr _{41.5} Ti _{41.5} Ni ₁₇ glasses, using X-ray absorption spectroscopy and <i>ab initio</i> molecular dynamics simulations. <i>Journal of Synchrotron Radiation</i> , 2014, 21, 1296-1304.	1.0	9
27	A structural and spectroscopic investigation of reduced graphene oxide under high pressure. <i>Carbon</i> , 2014, 70, 199-206.	5.4	7
28	Multiferroic CuCrO ₂ under high pressure: In situ X-ray diffraction and Raman spectroscopic studies. <i>Journal of Applied Physics</i> , 2014, 116, 133514.	1.1	31
29	Phase progression via phonon modes in lanthanide dioxides under pressure. <i>Vibrational Spectroscopy</i> , 2014, 70, 193-199.	1.2	27
30	High pressure iso-structural phase transition in BiMn ₂ O ₅ . <i>Journal of Physics Condensed Matter</i> , 2013, 25, 325401.	0.7	8
31	Phase transition and possible metallization in CeVO ₄ under pressure. <i>Journal of Solid State Chemistry</i> , 2013, 203, 273-280.	1.4	37
32	In-situ energy dispersive x-ray diffraction study of the growth of CuO nanowires by annealing method. <i>Journal of Applied Physics</i> , 2013, 114, 144303.	1.1	9
33	Ascertaining the nanocluster formation within an ion-irradiated Pt/Ni/C multi-trilayer with X-ray absorption spectroscopy. <i>Journal of Synchrotron Radiation</i> , 2013, 20, 137-144.	1.0	1
34	Investigation of equation of states and electronic properties of Am and Cm metals in their gamma plutonium phase using GGA+SO+U method. <i>Solid State Communications</i> , 2013, 164, 22-26.	0.9	3
35	Hydrogen bonds and polymerization in acrylamide under pressure. <i>Journal of Raman Spectroscopy</i> , 2013, 44, 785-790.	1.2	25
36	Pressure induced phase transitions in multiferroic BiFeO ₃ . <i>Solid State Communications</i> , 2013, 154, 72-76.	0.9	15

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37	Conformation and Hydrogen-Bond-Assisted Polymerization in Glycine Lithium Sulfate at High Pressures. <i>Journal of Physical Chemistry A</i> , 2013, 117, 5734-5741.	1.1	13
38	Pressure-induced structural transformations in the low-cristobalite form of AlPO ₄ . <i>American Mineralogist</i> , 2013, 98, 285-291.	0.9	9
39	Ring-Opening Polymerization in Carnosine under Pressure. <i>Journal of Physical Chemistry B</i> , 2012, 116, 4671-4676.	1.2	20
40	XAFS investigation of the role of orientational disorder in the stabilization of the ferromagnetic metallic phase in nanoparticles of La _{0.5} Ca _{0.5} MnO ₃ . <i>Journal of Physics Condensed Matter</i> , 2012, 24, 336001.	0.7	10
41	First-Principles Study of the Effect of Organic Ligands on the Crystal Structure of CdS Nanoparticles. <i>Journal of Physical Chemistry C</i> , 2012, 116, 6507-6511.	1.5	22
42	High pressure phase transformations in Bis(glycinium)oxalate – An infrared absorption study. <i>Chemical Physics Letters</i> , 2012, 532, 57-62.	1.2	20
43	First principles calculations on the effect of pressure on SiH ₄ (H ₂) ₂ . <i>Solid State Communications</i> , 2012, 152, 873-877.	0.9	4
44	Hydrogen-bonding interactions in fully deuterated L-glycine at high pressures. <i>Journal of Raman Spectroscopy</i> , 2012, 43, 138-145.	1.2	18
45	High pressure structural stability of BaLiF ₃ . <i>Journal of Applied Physics</i> , 2011, 110, .	1.1	21
46	Crystal Structure Engineering by Fine-Tuning the Surface Energy: The Case of CdE (E = S/Se) Nanocrystals. <i>Journal of Physical Chemistry Letters</i> , 2011, 2, 706-712.	2.1	51
47	High pressure behavior of nano-crystalline CeO ₂ up to 35 GPa: a Raman investigation. <i>High Pressure Research</i> , 2011, 31, 292-303.	0.4	18
48	Pressure-induced anomalous phase transformation in nano-crystalline dysprosium sesquioxide. <i>Journal of Raman Spectroscopy</i> , 2011, 42, 438-444.	1.2	34
49	Pressure induced crystallization in amorphous silicon. <i>Journal of Applied Physics</i> , 2011, 109, .	1.1	23
50	Structural evolution of double perovskite Sr ₂ MgWO ₆ under high pressure. <i>Physica Status Solidi (B): Basic Research</i> , 2010, 247, 1773-1777.	0.7	13
51	Pressure-Induced Structural Transformations in Bis(glycinium)oxalate. <i>Journal of Physical Chemistry B</i> , 2010, 114, 17084-17091.	1.2	33
52	Investigation of structure and hydrogen bonding of superhydrous phase B (HT) under pressure using first-principles density functional calculations. <i>High Pressure Research</i> , 2010, 30, 198-206.	0.4	12
53	High pressure investigations on hydrous magnesium silicate-phase A using first principles calculations: H–H repulsion and changes in hydrogen bond geometry with compression. <i>High Pressure Research</i> , 2009, 29, 405-413.	0.4	4
54	Structural phase transitions in Zn(CN) ₂ under high pressures. <i>Journal of Solid State Chemistry</i> , 2009, 182, 136-140.	1.4	18

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55	Solubility of ThO ₂ in Gd ₂ Zr ₂ O ₇ pyrochlore: XRD, SEM and Raman spectroscopic studies. Journal of Nuclear Materials, 2009, 392, 95-99.	1.3	50
56	Pressure induced phase transformation in U ₂ O(PO ₄) ₂ . Journal of Solid State Chemistry, 2008, 181, 1240-1248.	1.4	4
57	Determination of the structure of the high-pressure phase of AuAl ₂ with the help of first-principles calculations. Journal of Physics Condensed Matter, 2008, 20, 325215.	0.7	5
58	Anomalous high pressure behaviour in nanosized rare earth sesquioxides. Nanotechnology, 2008, 19, 115703.	1.3	45
59	The hydrogen bond under pressure. Phase Transitions, 2008, 81, 907-934.	0.6	53
60	High Pressure Raman Spectroscopic Study of Deuterated ¹³ C-Glycine. Journal of Physical Chemistry B, 2008, 112, 15867-15874.	1.2	32
61	Pressure induced structural phase transition in triglycine sulfate and triglycine selenate. Journal of Chemical Physics, 2007, 127, 154712.	1.2	10
62	Classical molecular dynamical simulations of high pressure behavior of alpha cristobalite (SiO ₂). Journal of Physics Condensed Matter, 2007, 19, 456201.	0.7	11
63	High pressure behavior of Ni-filled and Fe-filled multiwalled carbon nanotubes. Physica Status Solidi (B): Basic Research, 2007, 244, 3612-3619.	0.7	15
64	Nature of V ⁿ⁺ ions in SnO ₂ : EPR and photoluminescence studies. Materials Research Bulletin, 2007, 42, 1293-1300.	2.7	35
65	Equation of state of scheelite-structured ZrGeO ₄ and HfGeO ₄ . Journal of Physics Condensed Matter, 2006, 18, 8241-8250.	0.7	12
66	High pressure study of pentaerythritol: A synchrotron infrared study. Infrared Physics and Technology, 2006, 49, 82-87.	1.3	9
67	Raman spectroscopic investigations of dl-serine and dl-valine under pressure. Chemical Physics, 2006, 331, 77-84.	0.9	51
68	Raman and x-ray diffraction investigations on BaMoO ₄ under high pressures. Journal of Physics Condensed Matter, 2006, 18, 3917-3929.	0.7	35
69	Preparation, XRD and Raman spectroscopic studies on new compounds RE ₂ Hf ₂ O ₇ (RE=Dy, Ho, Er, Tm, Lu). J. Appl. Phys. 100, 114301 (2006)	1.4	132
70	Pressure-Induced Structural Phase Transformations in Silicon Nanowires. Journal of Nanoscience and Nanotechnology, 2005, 5, 729-732.	0.9	9
71	Pressure-induced phase transitions in Al ₂ (WO ₄) ₃ . Journal of Solid State Chemistry, 2005, 178, 998-1002.	1.4	24
72	Raman spectroscopic investigation of ¹³ C-glycine at different temperatures. Physica B: Condensed Matter, 2005, 364, 233-238.	1.3	32

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73	Raman scattering studies on mercuric iodide at high pressures and at low temperatures. Physica B: Condensed Matter, 2005, 369, 287-292.	1.3	3
74	Investigations of pressure induced structural phase transformations in pentaerythritol. Solid State Communications, 2005, 136, 56-61.	0.9	2
75	High pressure phase transitions in BaWO ₄ . Solid State Communications, 2004, 130, 203-208.	0.9	52
76	Pressure-induced amorphization in Y ₂ (WO ₄) ₃ : in situ X-ray diffraction and Raman studies. Journal of Solid State Chemistry, 2004, 177, 4087-4092.	1.4	33
77	β -Glycine under high pressures: a Raman scattering study. Physica B: Condensed Matter, 2003, 339, 23-30.	1.3	126
78	Structural changes in single-walled carbon nanotubes under non-hydrostatic pressures: x-ray and Raman studies. New Journal of Physics, 2003, 5, 143-143.	1.2	32
79	High-pressure Raman investigations of phase transformations in pentaerythritol (C(CH ₂ OH) ₄). Journal of Physics Condensed Matter, 2002, 14, 10367-10375.	0.7	13
80	High-pressure behavior of β -Ni(OH) ₂ : A Raman scattering study. Physica B: Condensed Matter, 2001, 307, 111-116.	1.3	48
81	Pressure Effects on Single Wall Carbon Nanotube Bundles. Physica Status Solidi (B): Basic Research, 2001, 223, 479-487.	0.7	28
82	A molecular dynamical investigation of high pressure phase transformations in berlinite (α -AlPO ₄). Journal of Physics Condensed Matter, 2000, 12, 375-397.	0.7	15
83	High-pressure x-ray-diffraction study of β -AlPO ₄ . Physical Review B, 2000, 62, 8824-8827.	1.1	45
84	High pressure phase transformations in β -AlPO ₄ : an x-ray diffraction investigation. Journal of Physics Condensed Matter, 2000, 12, 6683-6692.	0.7	19
85	Materials response to high pressures. Bulletin of Materials Science, 1999, 22, 153-163.	0.8	2
86	Wurtzite-to-rocksalt structural transformation in cadmium sulphide shocked along the a-axis. Physical Review B, 1998, 58, 5964-5971.	1.1	37
87	Ruby R-line shifts for shock compression along (11 $\bar{1}$,0 ₂). Journal of Applied Physics, 1998, 84, 1947-1952.	1.1	18
88	HIGH-PRESSURE PHYSICS: Enhanced: Shocking Matter to Extreme Conditions. Science, 1997, 277, 909-910.	6.0	29
89	Pressure induced amorphization of materials. Progress in Materials Science, 1996, 40, 1-77.	16.0	322
90	Comment on "Pressure-Induced Transformations of the Low-Cristobalite Phase of GaPO": Physical Review Letters, 1995, 74, 3301-3301.	2.9	10

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91	Structure of a New High Pressure Phase in α -Quartz Determined by Molecular Dynamics Studies. <i>Physical Review Letters</i> , 1994, 73, 98-101.	2.9	35
92	The behaviour of α -quartz and pressure-induced SiO_2 glass under pressure: a molecular dynamical study. <i>Journal of Physics Condensed Matter</i> , 1993, 5, 6345-6356.	0.7	23
93	Total-energy calculations for crystalline approximants of quasicrystalline structures: Occupation of the centers of the icosahedral units. <i>Physical Review B</i> , 1993, 47, 2878-2881.	1.1	5
94	The low-temperature phase of sodium: an intermediate orthorhombic distortion?. <i>Journal of Physics Condensed Matter</i> , 1992, 4, L61-L66.	0.7	5
95	Amorphization under shock loading. <i>High Pressure Research</i> , 1992, 10, 675-680.	0.4	6
96	Theoretical analysis of R-line shifts of ruby subjected to different deformation conditions. <i>Physical Review B</i> , 1991, 43, 879-893.	1.1	46
97	Oscillator strength of ruby R1 line under high pressure. <i>Applied Physics Letters</i> , 1989, 54, 84-85.	1.5	11
98	Analysis of the absorption spectrum of ruby at high pressures. <i>Physical Review B</i> , 1989, 40, 3329-3332.	1.1	22
99	An orthorhombic structure for the high temperature lock-in phase of LiKSO_4 . <i>Solid State Communications</i> , 1988, 66, 7-9.	0.9	16
100	Pressure-induced noncrystalline phase of LiKSO_4 . <i>Physical Review B</i> , 1988, 38, 170-173.	1.1	73
101	Two-strain mechanism of pressure-induced body-centered-tetragonal to hexagonal-close-packed transition in Hg and $\text{Hg}_x\text{Cd}_{1-x}$ alloys. <i>Physical Review B</i> , 1987, 36, 7730-7732.	1.1	7
102	Body-centred tetragonal to HCP phase transformation in Cd-Hg alloys under pressure. <i>Journal of Physics F: Metal Physics</i> , 1986, 16, 831-835.	1.6	11
103	Observation of the volume discontinuity in the insulator-to-metal transition in CsI in x-ray diffraction experiments. <i>Physical Review B</i> , 1986, 33, 3543-3544.	1.1	2
104	Lattice dynamical analysis of $\hat{\Gamma}_2^+$ to $\hat{\Gamma}_3^-$ phase transformation in silicon under high pressure. <i>Journal of Physics and Chemistry of Solids</i> , 1985, 46, 477-479.	1.9	20
105	Many-body enhancement of positron annihilation in metals: the choice of electron density parameter r_s . <i>Journal of Physics F: Metal Physics</i> , 1984, 14, 873-877.	1.6	1
106	Effect of CDW on positron annihilation characteristics in alkali metals. <i>Journal of Physics F: Metal Physics</i> , 1983, 13, L7-L11.	1.6	4
107	Statistical analysis of positron annihilation and Compton profile experiments using normal probability plots. <i>The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties</i> , 1982, 45, 317-322.	0.6	2
108	Electron-phonon interaction and deviations from Matthiessen's rule at high temperatures. <i>Journal of Physics F: Metal Physics</i> , 1981, 11, 2367-2370.	1.6	3

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109	Critical resistivity of deviations from Matthiessen's rule of polyvalent metals. Physical Review B, 1979, 20, 1514-1518.	1.1	6