Surinder M Sharma

List of Publications by Year
in descending order

109	2,731	147566	223531
papers	citations	31 h-index	46 g-index

110	110	110	2995
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Pressure induced amorphization of materials. Progress in Materials Science, 1996, 40, 1-77.	16.0	322
2	Preparation, XRD and Raman spectroscopic studies on new compounds RE2Hf2O7 (RE=Dy, Ho, Er, Tm, Lu,) Tj ETQq0 0 0 rgBT /Overlock	1.4	132
3	Î±-Glycine under high pressures: a Raman scattering study. Physica B: Condensed Matter, 2003, 339, 23-30.	1.3	126
4	Pressure-induced noncrystalline phase ofLiKSO4. Physical Review B, 1988, 38, 170-173.	1.1	73
5	Transformation of shock-compressed graphite to hexagonal diamond in nanoseconds. Science Advances, 2017, 3, eaao3561.	4.7	61
6	The hydrogen bond under pressure. Phase Transitions, 2008, 81, 907-934.	0.6	53
7	Protein crystallography beamline (PX-BL21) at Indus-2 synchrotron. Journal of Synchrotron Radiation, 2016, 23, 629-634.	1.0	53
8	High pressure phase transitions in BaWO4. Solid State Communications, 2004, 130, 203-208.	0.9	52
9	Raman spectroscopic investigations of dl-serine and dl-valine under pressure. Chemical Physics, 2006, 331, 77-84.	0.9	51
10	Crystal Structure Engineering by Fine-Tuning the Surface Energy: The Case of CdE (E = S/Se) Nanocrystals. Journal of Physical Chemistry Letters, 2011, 2, 706-712.	2.1	51
11	Solubility of ThO2 in Gd2Zr2O7 pyrochlore: XRD, SEM and Raman spectroscopic studies. Journal of Nuclear Materials, 2009, 392, 95-99.	1.3	50
12	High-pressure behavior of Î²-Ni (OH)2â€”A Raman scattering study. Physica B: Condensed Matter, 2001, 307, 111-116.	1.3	48
13	Theoretical analysis ofR-line shifts of ruby subjected to different deformation conditions. Physical Review B, 1991, 43, 879-893.	1.1	46
14	High-pressure x-ray-diffraction study ofÎ±â^'AlPO4. Physical Review B, 2000, 62, 8824-8827.	1.1	45
15	Anomalous high pressure behaviour in nanosized rare earth sesquioxides. Nanotechnology, 2008, 19, 115703.	1.3	45
16	Crystal Structure and Melting of Fe Shock Compressed to 273 GPa: In Situ X-Ray Diffraction. Physical Review Letters, 2020, 125, 215702.	2.9	44
17	Wurtzite-to-rocksalt structural transformation in cadmium sulphide shocked along theaaxis. Physical Review B, 1998, 58, 5964-5971.	1.1	37
18	Phase transition and possible metallization in CeVO4 under pressure. Journal of Solid State Chemistry, 2013, 203, 273-280.	1.4	37

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19	Correlation between Structure and Ferromagnetism in Nano-BiFeO₃. Journal of Physical Chemistry C, 2016, 120, 8411-8416.	1.5	37
20	Hydrogen Bond Symmetrization in Glycinium Oxalate under Pressure. Journal of Physical Chemistry B, 2016, 120, 851-859.	1.2	37
21	Structure of a New High Pressure Phase inÎ±-Quartz Determined by Molecular Dynamics Studies. Physical Review Letters, 1994, 73, 98-101.	2.9	35
22	Raman and x-ray diffraction investigations on BaMoO4under high pressures. Journal of Physics Condensed Matter, 2006, 18, 3917-3929.	0.7	35
23	Nature of Vn+ ions in SnO2: EPR and photoluminescence studies. Materials Research Bulletin, 2007, 42, 1293-1300.	2.7	35
24	Proton transfer aiding phase transitions in oxalic acid dihydrate under pressure. Physical Chemistry Chemical Physics, 2016, 18, 8065-8074.	1.3	35
25	Nanosecond Melting and Recrystallization in Shock-Compressed Silicon. Physical Review Letters, 2018, 121, 135701.	2.9	35
26	Pressureâ€induced anomalous phase transformation in nanoâ€crystalline dysprosium sesquioxide. Journal of Raman Spectroscopy, 2011, 42, 438-444.	1.2	34
27	Pressure-induced amorphization in Y2(WO4)3: in situ X-ray diffraction and Raman studies. Journal of Solid State Chemistry, 2004, 177, 4087-4092.	1.4	33
28	Pressure-Induced Structural Transformations in Bis(glycinium)oxalate. Journal of Physical Chemistry B, 2010, 114, 17084-17091.	1.2	33
29	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
30	Raman spectroscopic investigation of Î±-glycine at different temperatures. Physica B: Condensed Matter, 2005, 364, 233-238.	1.3	32
31	High Pressure Raman Spectroscopic Study of Deuterated Î³-Glycine. Journal of Physical Chemistry B, 2008, 112, 15867-15874.	1.2	32
32	Transformation of shock-compressed copper to the body-centered-cubic structure at 180 GPa. Physical Review B, 2020, 102, .	1.1	32
33	Multiferroic CuCrO2 under high pressure: In situ X-ray diffraction and Raman spectroscopic studies. Journal of Applied Physics, 2014, 116, 133514.	1.1	31
34	HIGH-PRESSURE PHYSICS: Enhanced: Shocking Matter to Extreme Conditions. Science, 1997, 277, 909-910.	6.0	29
35	Pressure Effects on Single Wall Carbon Nanotube Bundles. Physica Status Solidi (B): Basic Research, 2001, 223, 479-487.	0.7	28
36	Phase progression via phonon modes in lanthanide dioxides under pressure. Vibrational Spectroscopy, 2014, 70, 193-199.	1.2	27

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37	Hydrogen bonds and polymerization in acrylamide under pressure. Journal of Raman Spectroscopy, 2013, 44, 785-790.	1.2	25
38	Pressure-induced phase transitions in Al2(WO4)3. Journal of Solid State Chemistry, 2005, 178, 998-1002.	1.4	24
39	The behaviour of alpha -quartz and pressure-induced SiO2glass under pressure: a molecular dynamical study. Journal of Physics Condensed Matter, 1993, 5, 6345-6356.	0.7	23
40	Pressure induced crystallization in amorphous silicon. Journal of Applied Physics, 2011, 109, .	1.1	23
41	Analysis of the absorption spectrum of ruby at high pressures. Physical Review B, 1989, 40, 3329-3332.	1.1	22
42	First-Principles Study of the Effect of Organic Ligands on the Crystal Structure of CdS Nanoparticles. Journal of Physical Chemistry C, 2012, 116, 6507-6511.	1.5	22
43	Reinvestigation of high pressure polymorphism in hafnium metal. Journal of Applied Physics, 2014, 115, 233513.	1.1	22
44	Pressure induced phase transformations in NaZr2(PO4)3 studied by X-ray diffraction and Raman spectroscopy. Journal of Solid State Chemistry, 2015, 221, 285-290.	1.4	22
45	High pressure structural stability of BaLiF3. Journal of Applied Physics, 2011, 110, .	1.1	21
46	Lattice dynamical analysis of Î² â†" Î³ phase transformation in silicon under high pressure. Journal of Physics and Chemistry of Solids, 1985, 46, 477-479.	1.9	20
47	Ring-Opening Polymerization in Carnosine under Pressure. Journal of Physical Chemistry B, 2012, 116, 4671-4676.	1.2	20
48	High pressure phase transformations in Bis(glycinium)oxalate â€" An infrared absorption study. Chemical Physics Letters, 2012, 532, 57-62.	1.2	20
49	High pressure phase transformations in Î±-AlPO4: an x-ray diffraction investigation. Journal of Physics Condensed Matter, 2000, 12, 6683-6692.	0.7	19
50	Ruby R-line shifts for shock compression along (11Ì„02). Journal of Applied Physics, 1998, 84, 1947-1952.	1.1	18
51	Structural phase transitions in Zn(CN)2 under high pressures. Journal of Solid State Chemistry, 2009, 182, 136-140.	1.4	18
52	High pressure behavior of nano-crystalline CeO₂up to 35 GPa: a Raman investigation. High Pressure Research, 2011, 31, 292-303.	0.4	18
53	Hydrogenâ€bonding interactions in fully deuterated Î±â€glycine at high pressures. Journal of Raman Spectroscopy, 2012, 43, 138-145.	1.2	18
54	The synthesis of unconventional stoichiometric compounds in the Kâ€"Br system at high pressures. Physical Chemistry Chemical Physics, 2017, 19, 7996-8007.	1.3	17

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55	An orthorhombic structure for the high temperature lock-in phase of LiKSO4. Solid State Communications, 1988, 66, 7-9.	0.9	16
56	A molecular dynamical investigation of high pressure phase transformations in berlinite (alpha-AlPO4). Journal of Physics Condensed Matter, 2000, 12, 375-397.	0.7	15
57	Highâ€pressure behavior of Niâ€filled and Feâ€filled multiwalled carbon nanotubes. Physica Status Solidi (B): Basic Research, 2007, 244, 3612-3619.	0.7	15
58	Pressure induced phase transitions in multiferroic BiFeO3. Solid State Communications, 2013, 154, 72-76.	0.9	15
59	High-pressure Raman investigations of phase transformations in pentaerythritol (C(CH2OH)4). Journal of Physics Condensed Matter, 2002, 14, 10367-10375.	0.7	13
60	Structural evolution of double perovskite Sr2MgWO6 under high pressure. Physica Status Solidi (B): Basic Research, 2010, 247, 1773-1777.	0.7	13
61	Conformation and Hydrogen-Bond-Assisted Polymerization in Glycine Lithium Sulfate at High Pressures. Journal of Physical Chemistry A, 2013, 117, 5734-5741.	1.1	13
62	Equation of state of scheelite-structured ZrGeO4and HfGeO4. Journal of Physics Condensed Matter, 2006, 18, 8241-8250.	0.7	12
63	Investigation of structure and hydrogen bonding of superhydrous phase B (HT) under pressure using first-principles density functional calculations. High Pressure Research, 2010, 30, 198-206.	0.4	12
64	Structural phase transitions in Li2S, Na2S and K2S under compression. Journal of Alloys and Compounds, 2017, 710, 460-467.	2.8	12
65	Body-centred tetragonal to HCP phase transformation in Cd-Hg alloys under pressure. Journal of Physics F: Metal Physics, 1986, 16, 831-835.	1.6	11
66	Oscillator strength of rubyR1line under high pressure. Applied Physics Letters, 1989, 54, 84-85.	1.5	11
67	Classical molecular dynamical simulations of high pressure behavior of alpha cristobalite (SiO₂). Journal of Physics Condensed Matter, 2007, 19, 456201.	0.7	11
68	Structural phase transitions in trigonal Selenium induce the formation of a disordered phase. Journal of Physics Condensed Matter, 2015, 27, 415404.	0.7	11
69	The role of Jahnâ€“Teller distortion in insulator to semiconductor phase transition in organicâ€“inorganic hybrid compound (p-chloroanilinium)₂CuCl₄at high pressure. Physical Chemistry Chemical Physics, 2015, 17, 32204-32210.	1.3	11
70	Study of Phase Transformation in BaTe2O6 by in Situ High-Pressure X-ray Diffraction, Raman Spectroscopy, and First-Principles Calculations. Inorganic Chemistry, 2016, 55, 227-238.	1.9	11
71	Raman spectroscopy of laser shocked polystyrene. Journal of Raman Spectroscopy, 2017, 48, 458-464.	1.2	11
72	Comment on â€œPressure-Induced Transformations of the Low-Cristobalite Phase of GaPO4â€. Physical Review Letters, 1995, 74, 3301-3301.	2.9	10

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73	Pressure induced structural phase transition in triglycine sulfate and triglycine selenate. Journal of Chemical Physics, 2007, 127, 154712.	1.2	10
74	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}MnO₃. Journal of Physics Condensed Matter, 2012, 24, 336001.	0.7	10
75	High-pressure investigations on Piplia Kalan eucrite meteorite using in-situ X-ray diffraction and 57 Fe MÃ¶ssbauer spectroscopic technique up to 16ÂGPa. Geoscience Frontiers, 2016, 7, 265-271.	4.3	10
76	K-shell X-ray spectroscopy of laser produced aluminum plasma. Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 187, 20-29.	1.1	10
77	Pressure-Induced Structural Phase Transformations in Silicon Nanowires. Journal of Nanoscience and Nanotechnology, 2005, 5, 729-732.	0.9	9
78	High pressure study of pentaerythritol: A synchrotron infrared study. Infrared Physics and Technology, 2006, 49, 82-87.	1.3	9
79	In-situ energy dispersive x-ray diffraction study of the growth of CuO nanowires by annealing method. Journal of Applied Physics, 2013, 114, 144303.	1.1	9
80	Pressure-induced structural transformations in the low-cristobalite form of AlPO4. American Mineralogist, 2013, 98, 285-291.	0.9	9
81	Investigation of short-range structural order in Zr_{69.5}Cu₁₂Ni₁₁Al_{7.5}and Zr_{41.5}Ti_{41.5}Ni₁₇glasses, using X-ray absorption spectroscopy andab initiomolecular dynamics simulations. Journal of Synchrotron Radiation, 2014, 21, 1296-1304.	1.0	9
82	Hydrogen Bonds and Ionic Forms versus Polymerization of Imidazole at High Pressures. Journal of Physical Chemistry B, 2015, 119, 372-378.	1.2	9
83	Acoustic phonon behavior of PbWO4 and BaWO4 probed by low temperature Brillouin spectroscopy. Solid State Communications, 2015, 202, 78-84.	0.9	9
84	High pressure iso-structural phase transition in BiMn₂O₅. Journal of Physics Condensed Matter, 2013, 25, 325401.	0.7	8
85	Two-strain mechanism of pressure-induced body-centered-tetragonal to hexagonal-close-packed transition in Hg andHgxCd1â^'xalloys. Physical Review B, 1987, 36, 7730-7732.	1.1	7
86	A structural and spectroscopic investigation of reduced graphene oxide under high pressure. Carbon, 2014, 70, 199-206.	5.4	7
87	Critical resistivity of deviations from Matthiessen's rule of polyvalent metals. Physical Review B, 1979, 20, 1514-1518.	1.1	6
88	Amorphization under shock loading. High Pressure Research, 1992, 10, 675-680.	0.4	6
89	High pressure phase transitions in scheelite structured fluoride: ErLiF4. Journal of Solid State Chemistry, 2015, 229, 164-172.	1.4	6
90	The low-temperature phase of sodium: an intermediate orthorhombic distortion?. Journal of Physics Condensed Matter, 1992, 4, L61-L66.	0.7	5

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91	Total-energy calculations for crystalline approximants of quasicrystalline structures: Occupation of the centers of the icosahedral units. Physical Review B, 1993, 47, 2878-2881.	1.1	5
92	Determination of the structure of the high-pressure phase of AuAl₂with the help of first-principles calculations. Journal of Physics Condensed Matter, 2008, 20, 325215.	0.7	5
93	Laser heated diamond anvil cell facility for high temperature high pressure research: application to material synthesis and melting studies. Indian Journal of Physics, 2018, 92, 1259-1269.	0.9	5
94	Effect of CDW on positron annihilation characteristics in alkali metals. Journal of Physics F: Metal Physics, 1983, 13, L7-L11.	1.6	4
95	Pressure induced phase transformation in U2O(PO4)2. Journal of Solid State Chemistry, 2008, 181, 1240-1248.	1.4	4
96	High pressure investigations on hydrous magnesium silicate-phase A using first principles calculations: H---H repulsion and changes in hydrogen bond geometry with compression. High Pressure Research, 2009, 29, 405-413.	0.4	4
97	First principles calculations on the effect of pressure on SiH4(H2)2. Solid State Communications, 2012, 152, 873-877.	0.9	4
98	Determination of the third-order elastic constants of diamond by shock wave simulations. Europhysics Letters, 2015, 110, 56003.	0.7	4
99	Electron-phonon interaction and deviations from Matthiessen's rule at high temperatures. Journal of Physics F: Metal Physics, 1981, 11, 2367-2370.	1.6	3
100	Raman scattering studies on mercuric iodide at high pressures and at low temperatures. Physica B: Condensed Matter, 2005, 369, 287-292.	1.3	3
101	Investigation of equation of states and electronic properties of Am and Cm metals in their gamma plutonium phase using GGA+SO+U method. Solid State Communications, 2013, 164, 22-26.	0.9	3
102	Role of substrate in melting behavior of Langmuirâ€“Blodgett films. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2015, 471, 159-163.	2.3	3
103	Statistical analysis of positron annihilation and Compton profile experiments using normal probability plots. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 1982, 45, 317-322.	0.6	2
104	Observation of the volume discontinuity in the insulator-to-metal transition in CsI in x-ray diffraction experiments. Physical Review B, 1986, 33, 3543-3544.	1.1	2
105	Materials response to high pressures. Bulletin of Materials Science, 1999, 22, 153-163.	0.8	2
106	Investigations of pressure induced structural phase transformations in pentaerythritol. Solid State Communications, 2005, 136, 56-61.	0.9	2
107	Comparative studies of Laser induced plasma in TEOS and MTMS based aerogels and solid quartz. MRS Advances, 2017, 2, 3531-3536.	0.5	2
108	Many-body enhancement of positron annihilation in metals: the choice of electron density parameter rs. Journal of Physics F: Metal Physics, 1984, 14, 873-877.	1.6	1

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109	Ascertaining the nanocluster formation within an ion-irradiated Pt/Ni/C multi-trilayer with X-ray absorption spectroscopy. Journal of Synchrotron Radiation, 2013, 20, 137-144.	1.0	1