

scar Gomis

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

86

papers

2,166

citations

27

h-index

42

g-index

90

ext. papers

2,468

ext. citations

3.5

avg, IF

4.39

L-index

#	Paper	IF	Citations
86	Pressure-induced order-disorder transitions in ElnS: an experimental and theoretical study of structural and vibrational properties. <i>Physical Chemistry Chemical Physics</i> , 2021 , 23, 23625-23642	3.6	0
85	Transition path to a dense efficient-packed post-delafossite phase. Crystal structure and evolution of the chemical bonding. <i>Journal of Alloys and Compounds</i> , 2021 , 867, 159012	5.7	0
84	Experimental and theoretical study of dense YBO3 and the influence of non-hydrostaticity. <i>Journal of Alloys and Compounds</i> , 2021 , 850, 156562	5.7	5
83	Structural, vibrational and electronic properties of β -GaS under compression. <i>Physical Chemistry Chemical Physics</i> , 2021 , 23, 6841-6862	3.6	3
82	Pressure-induced band anticrossing in two adamantine ordered-vacancy compounds: CdGa2S4 and HgGa2S4. <i>Journal of Alloys and Compounds</i> , 2021 , 886, 161226	5.7	1
81	Characterization and Decomposition of the Natural van der Waals SnSbTe under Compression. <i>Inorganic Chemistry</i> , 2020 , 59, 9900-9918	5.1	11
80	Structural and Lattice-Dynamical Properties of TbO under Compression: A Comparative Study with Rare Earth and Related Sesquioxides. <i>Inorganic Chemistry</i> , 2020 , 59, 9648-9666	5.1	9
79	Orpiment under compression: metavalent bonding at high pressure. <i>Physical Chemistry Chemical Physics</i> , 2020 , 22, 3352-3369	3.6	14
78	Phase Stability of Natural Ni _{0.75} Mg _{0.22} Ca _{0.03} CO ₃ Gaspeite Mineral at High Pressure and Temperature. <i>Journal of Physical Chemistry C</i> , 2020 , 124, 19781-19792	3.8	6
77	Vibrational properties of CdGa2S4 at high pressure. <i>Journal of Applied Physics</i> , 2019 , 125, 115901	2.5	4
76	Elastic and thermodynamic properties of β -Bi2O3 at high pressures: Study of mechanical and dynamical stability. <i>Journal of Physics and Chemistry of Solids</i> , 2019 , 124, 111-120	3.9	8
75	Experimental and Theoretical Study of Bi2O2Se Under Compression. <i>Journal of Physical Chemistry C</i> , 2018 , 122, 8853-8867	3.8	32
74	Bandgap behavior and singularity of the domain-induced light scattering through the pressure-induced ferroelectric transition in relaxor ferroelectric AxBa _{1-x} Nb ₂ O ₆ (A: Sr,Ca). <i>Applied Physics Letters</i> , 2018 , 112, 042901	3.4	2
73	High-pressure structural and vibrational properties of monazite-type BiPO, LaPO, CePO, and PrPO. <i>Journal of Physics Condensed Matter</i> , 2018 , 30, 065401	1.8	15
72	High-pressure structural, elastic, and thermodynamic properties of zircon-type HoPO and TmPO. <i>Journal of Physics Condensed Matter</i> , 2017 , 29, 095401	1.8	31
71	Pressure Impact on the Stability and Distortion of the Crystal Structure of CeScO. <i>Inorganic Chemistry</i> , 2017 , 56, 8363-8371	5.1	12
70	Structural, vibrational, and electrical study of compressed BiTeBr. <i>Physical Review B</i> , 2016 , 93,	3.3	19

69	Ordered helium trapping and bonding in compressed arsenolite: Synthesis of As ₄ O ₆ ⊂He. <i>Physical Review B</i> , 2016 , 93,	3.3	23
68	Bi ₂ O ₃ under compression: Optical and elastic properties and electron density topology analysis. <i>Physical Review B</i> , 2016 , 93,	3.3	15
67	Structural and electrical study of the topological insulator SnBi ₂ Te ₄ at high pressure. <i>Journal of Alloys and Compounds</i> , 2016 , 685, 962-970	5.7	19
66	Pressure-induced amorphization of YVO ₄ :Eu ³⁺ nanoboxes. <i>Nanotechnology</i> , 2016 , 27, 025701	3.4	14
65	InBO ₃ and ScBO ₃ at high pressures: An ab initio study of elastic and thermodynamic properties. <i>Journal of Physics and Chemistry of Solids</i> , 2016 , 98, 198-208	3.9	6
64	Vibrational and elastic properties of As ₄ O ₆ and As ₄ O ₆ ⊂He at high pressures: Study of dynamical and mechanical stability. <i>Journal of Applied Physics</i> , 2016 , 120, 155901	2.5	7
63	Structural, Vibrational, and Electronic Study of Sb ₂ S ₃ at High Pressure. <i>Journal of Physical Chemistry C</i> , 2016 , 120, 10547-10558	3.8	52
62	High-Pressure Crystal Structure, Lattice Vibrations, and Band Structure of BiSbO ₄ . <i>Inorganic Chemistry</i> , 2016 , 55, 4958-69	5.1	47
61	Structural, Vibrational, and Electronic Study of BiAs ₂ Te ₃ under Compression. <i>Journal of Physical Chemistry C</i> , 2016 , 120, 19340-19352	3.8	28
60	Experimental and Theoretical Investigations on Structural and Vibrational Properties of Melilite-Type Sr ₂ ZnGe ₂ O ₇ at High Pressure and Delineation of a High-Pressure Monoclinic Phase. <i>Inorganic Chemistry</i> , 2015 , 54, 6594-605	5.1	17
59	Crystal Structure of Sinalite MgAlBO ₄ under High Pressure. <i>Journal of Physical Chemistry C</i> , 2015 , 119, 6777-6784	3.8	4
58	High-pressure structural phase transition in MnWO ₄ . <i>Physical Review B</i> , 2015 , 91,	3.3	12
57	Exploring the high-pressure behavior of the three known polymorphs of BiPO ₄ : Discovery of a new polymorph. <i>Journal of Applied Physics</i> , 2015 , 117, 105902	2.5	49
56	HgGa ₂ Se ₄ under high pressure: An optical absorption study. <i>Physica Status Solidi (B): Basic Research</i> , 2015 , 252, 2043-2051	1.3	9
55	Synthesis and High-Pressure Study of Corundum-Type In ₂ O ₃ . <i>Journal of Physical Chemistry C</i> , 2015 , 119, 29076-29087	3.8	16
54	Broadband, site selective and time resolved photoluminescence spectroscopic studies of finely size-modulated Y ₂ O ₃ :Eu ³⁺ phosphors synthesized by a complex based precursor solution method. <i>Current Applied Physics</i> , 2014 , 14, 72-81	2.6	21
53	Pbca-Type In ₂ O ₃ : The High-Pressure Post-Corundum phase at Room Temperature.. <i>Journal of Physical Chemistry C</i> , 2014 , 118, 20545-20552	3.8	24
52	Isostructural Second-Order Phase Transition of Bi ₂ O ₃ at High Pressures: An Experimental and Theoretical Study. <i>Journal of Physical Chemistry C</i> , 2014 , 118, 23189-23201	3.8	50

51	Structural and Vibrational Properties of CdAl ₂ S ₄ under High Pressure: Experimental and Theoretical Approach. <i>Journal of Physical Chemistry C</i> , 2014 , 118, 15363-15374	3.8	6
50	Compressibility Systematics of Calcite-Type Borates: An Experimental and Theoretical Structural Study on ABO ₃ (A = Al, Sc, Fe, and In). <i>Journal of Physical Chemistry C</i> , 2014 , 118, 4354-4361	3.8	19
49	Quasi-hydrostatic X-ray powder diffraction study of the low- and high-pressure phases of CaWO ₄ up to 28 GPa. <i>Solid State Sciences</i> , 2014 , 36, 16-23	3.4	13
48	Pressure effects on the vibrational properties of Bi ₂ O ₃ : an experimental and theoretical study. <i>Journal of Physics Condensed Matter</i> , 2014 , 26, 225401	1.8	17
47	High-pressure structural and elastic properties of Ti ₂ O ₃ . <i>Journal of Applied Physics</i> , 2014 , 116, 133521	2.5	15
46	Room-temperature vibrational properties of multiferroic MnWO ₄ under quasi-hydrostatic compression up to 39 GPa. <i>Journal of Applied Physics</i> , 2014 , 115, 043510	2.5	19
45	Structural and Vibrational Study of Pseudocubic CdIn ₂ Se ₄ under Compression. <i>Journal of Physical Chemistry C</i> , 2014 , 118, 26987-26999	3.8	7
44	Structural and elastic properties of defect chalcopyrite HgGa ₂ S ₄ under high pressure. <i>Journal of Alloys and Compounds</i> , 2014 , 583, 70-78	5.7	25
43	(AB) ₂ Se ₄ Ordered-Vacancy Compounds at High Pressures. <i>Springer Series in Materials Science</i> , 2014 , 163-184	0.9	3
42	Lattice Dynamics Study of HgGa ₂ Se ₄ at High Pressures. <i>Journal of Physical Chemistry C</i> , 2013 , 117, 15773-15781	3.8	19
41	X-ray diffraction study on pressure-induced phase transformations and the equation of state of ZnGa ₂ Te ₄ . <i>Journal of Applied Physics</i> , 2013 , 114, 233507	2.5	25
40	High-pressure Raman scattering study of defect chalcopyrite and defect stannite ZnGa ₂ Se ₄ . <i>Journal of Applied Physics</i> , 2013 , 113, 233501	2.5	14
39	Vibrational study of HgGa ₂ S ₄ under high pressure. <i>Journal of Applied Physics</i> , 2013 , 113, 093512	2.5	18
38	Thermally activated cation ordering in ZnGa ₂ Se ₄ single crystals studied by Raman scattering, optical absorption, and ab initio calculations. <i>Journal of Physics Condensed Matter</i> , 2013 , 25, 165802	1.8	8
37	Structural study of Bi ₂ O ₃ under pressure. <i>Journal of Physics Condensed Matter</i> , 2013 , 25, 475402	1.8	27
36	Crystal structure of HgGa ₂ Se ₄ under compression. <i>Materials Research Bulletin</i> , 2013 , 48, 2128-2133	5.1	17
35	Order-disorder processes in adamantite ternary ordered-vacancy compounds. <i>Physica Status Solidi (B): Basic Research</i> , 2013 , 250, 1496-1504	1.3	10
34	Phase Behavior of Ag ₂ CrO ₄ under Compression: Structural, Vibrational, and Optical Properties. <i>Journal of Physical Chemistry C</i> , 2013 , 117, 12239-12248	3.8	21

33	New polymorph of InVO ₄ : a high-pressure structure with six-coordinated vanadium. <i>Inorganic Chemistry</i> , 2013 , 52, 12790-8	5.1	51
32	Synthesis of a novel zeolite through a pressure-induced reconstructive phase transition process. <i>Angewandte Chemie - International Edition</i> , 2013 , 52, 10458-62	16.4	36
31	High-pressure studies of topological insulators Bi ₂ Se ₃ , Bi ₂ Te ₃ , and Sb ₂ Te ₃ . <i>Physica Status Solidi (B): Basic Research</i> , 2013 , 250, 669-676	1.3	61
30	High-pressure study of the structural and elastic properties of defect-chalcopyrite HgGa ₂ Se ₄ . <i>Journal of Applied Physics</i> , 2013 , 113, 073510	2.5	24
29	High-pressure lattice dynamical study of bulk and nanocrystalline In ₂ O ₃ . <i>Journal of Applied Physics</i> , 2012 , 112, 123511	2.5	49
28	Compressibility and structural stability of ultra-incompressible bimetallic interstitial carbides and nitrides. <i>Physical Review B</i> , 2012 , 85,	3.3	14
27	Raman scattering study of bulk and nanocrystalline PbMoO ₄ at high pressures. <i>Journal of Applied Physics</i> , 2012 , 112, 103510	2.5	17
26	High-pressure optical and vibrational properties of CdGa ₂ Se ₄ : Order-disorder processes in adamantane compounds. <i>Journal of Applied Physics</i> , 2012 , 111, 013518	2.5	36
25	Compression of silver sulfide: X-ray diffraction measurements and total-energy calculations. <i>Inorganic Chemistry</i> , 2012 , 51, 5289-98	5.1	31
24	Complex high-pressure polymorphism of barium tungstate. <i>Physical Review B</i> , 2012 , 86,	3.3	61
23	New high-pressure phase and equation of state of Ce ₂ Zr ₂ O ₈ . <i>Journal of Applied Physics</i> , 2012 , 111, 053519	3.3	21
22	Structural and vibrational study of Bi ₂ Se ₃ under high pressure. <i>Physical Review B</i> , 2011 , 84,	3.3	115
21	Lattice dynamics of Sb ₂ Te ₃ at high pressures. <i>Physical Review B</i> , 2011 , 84,	3.3	81
20	High-pressure vibrational and optical study of Bi ₂ Te ₃ . <i>Physical Review B</i> , 2011 , 84,	3.3	83
19	Production of Oxidants by Ion Bombardment of Icy Moons in the Outer Solar System. <i>Advances in Astronomy</i> , 2011 , 2011, 1-10	0.9	8
18	High-pressure study of the behavior of mineral barite by x-ray diffraction. <i>Physical Review B</i> , 2011 , 84,	3.3	59
17	High-pressure Raman spectroscopy and lattice-dynamics calculations on scintillating MgWO ₄ : Comparison with isomorphous compounds. <i>Physical Review B</i> , 2011 , 83,	3.3	61
16	High-pressure theoretical and experimental study of HgWO ₄ . <i>High Pressure Research</i> , 2011 , 31, 58-63	1.6	1

15	Nonlinear pressure dependence of the direct band gap in adamantine ordered-vacancy compounds. <i>Physical Review B</i> , 2010 , 81,	3.3	24
14	High-pressure structural and lattice dynamical study of HgWO ₄ . <i>Physical Review B</i> , 2010 , 82,	3.3	11
13	High-pressure x-ray diffraction and ab initio study of Ni ₂ Mo ₃ N, Pd ₂ Mo ₃ N, Pt ₂ Mo ₃ N, Co ₃ Mo ₃ N, and Fe ₃ Mo ₃ N: Two families of ultra-incompressible bimetallic interstitial nitrides. <i>Physical Review B</i> , 2010 , 82,	3.3	80
12	Theoretical and experimental study of the structural stability of TbPO ₄ at high pressures. <i>Physical Review B</i> , 2010 , 81,	3.3	40
11	The origin of sulfur-bearing species on the surfaces of icy satellites. <i>Advances in Space Research</i> , 2009 , 43, 1442-1445	2.4	11
10	Ion irradiation of astrophysical ices. <i>Journal of Physics: Conference Series</i> , 2008 , 101, 012002	0.3	20
9	Ion irradiation of H ₂ O ice on top of sulfurous solid residues and its relevance to the Galilean satellites. <i>Icarus</i> , 2008 , 194, 146-152	3.8	16
8	H-implantation in SO ₂ and CO ₂ ices. <i>Planetary and Space Science</i> , 2008 , 56, 1300-1308	2	34
7	Infrared studies at the ice laboratory of Alcoy. <i>Planetary and Space Science</i> , 2008 , 56, 1744-1747	2	1
6	Hydrate sulfuric acid after sulfur implantation in water ice. <i>Icarus</i> , 2007 , 192, 623-628	3.8	32
5	CO ₂ production by ion irradiation of H ₂ O ice on top of carbonaceous materials and its relevance to the Galilean satellites. <i>Icarus</i> , 2005 , 177, 570-576	3.8	39
4	Production of oxidants by ion irradiation of water/carbon dioxide frozen mixtures. <i>Astrobiology</i> , 2005 , 5, 612-21	3.7	24
3	Hydrogen peroxide production by ion irradiation of thin water ice films. <i>Astronomy and Astrophysics</i> , 2004 , 420, 405-410	5.1	42
2	Hydrogen peroxide formation by ion implantation in water ice and its relevance to the Galilean satellites. <i>Planetary and Space Science</i> , 2004 , 52, 371-378	2	66
1	Implantation of carbon and nitrogen ions in water ice. <i>Icarus</i> , 2003 , 164, 163-169	3.8	49