

# scar Gomis

## List of Publications by Citations

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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	Structural and vibrational study of Bi <sub>2</sub> Se <sub>3</sub> under high pressure. <i>Physical Review B</i> , <b>2011</b> , 84,	3.3	115
85	High-pressure vibrational and optical study of Bi <sub>2</sub> Te <sub>3</sub> . <i>Physical Review B</i> , <b>2011</b> , 84,	3.3	83
84	Lattice dynamics of Sb <sub>2</sub> Te <sub>3</sub> at high pressures. <i>Physical Review B</i> , <b>2011</b> , 84,	3.3	81
83	High-pressure x-ray diffraction and ab initio study of Ni <sub>2</sub> Mo <sub>3</sub> N, Pd <sub>2</sub> Mo <sub>3</sub> N, Pt <sub>2</sub> Mo <sub>3</sub> N, Co <sub>3</sub> Mo <sub>3</sub> N, and Fe <sub>3</sub> Mo <sub>3</sub> N: Two families of ultra-incompressible bimetallic interstitial nitrides. <i>Physical Review B</i> , <b>2010</b> , 82,	3.3	80
82	Hydrogen peroxide formation by ion implantation in water ice and its relevance to the Galilean satellites. <i>Planetary and Space Science</i> , <b>2004</b> , 52, 371-378	2	66
81	Complex high-pressure polymorphism of barium tungstate. <i>Physical Review B</i> , <b>2012</b> , 86,	3.3	61
80	High-pressure studies of topological insulators Bi <sub>2</sub> Se <sub>3</sub> , Bi <sub>2</sub> Te <sub>3</sub> , and Sb <sub>2</sub> Te <sub>3</sub> . <i>Physica Status Solidi (B): Basic Research</i> , <b>2013</b> , 250, 669-676	1.3	61
79	High-pressure Raman spectroscopy and lattice-dynamics calculations on scintillating MgWO <sub>4</sub> : Comparison with isomorphous compounds. <i>Physical Review B</i> , <b>2011</b> , 83,	3.3	61
78	High-pressure study of the behavior of mineral barite by x-ray diffraction. <i>Physical Review B</i> , <b>2011</b> , 84,	3.3	59
77	Structural, Vibrational, and Electronic Study of Sb <sub>2</sub> S <sub>3</sub> at High Pressure. <i>Journal of Physical Chemistry C</i> , <b>2016</b> , 120, 10547-10558	3.8	52
76	New polymorph of InVO <sub>4</sub> : a high-pressure structure with six-coordinated vanadium. <i>Inorganic Chemistry</i> , <b>2013</b> , 52, 12790-8	5.1	51
75	Isostructural Second-Order Phase Transition of Bi <sub>2</sub> O <sub>3</sub> at High Pressures: An Experimental and Theoretical Study. <i>Journal of Physical Chemistry C</i> , <b>2014</b> , 118, 23189-23201	3.8	50
74	Exploring the high-pressure behavior of the three known polymorphs of BiPO <sub>4</sub> : Discovery of a new polymorph. <i>Journal of Applied Physics</i> , <b>2015</b> , 117, 105902	2.5	49
73	High-pressure lattice dynamical study of bulk and nanocrystalline In <sub>2</sub> O <sub>3</sub> . <i>Journal of Applied Physics</i> , <b>2012</b> , 112, 123511	2.5	49
72	Implantation of carbon and nitrogen ions in water ice. <i>Icarus</i> , <b>2003</b> , 164, 163-169	3.8	49
71	High-Pressure Crystal Structure, Lattice Vibrations, and Band Structure of BiSbO <sub>4</sub> . <i>Inorganic Chemistry</i> , <b>2016</b> , 55, 4958-69	5.1	47
70	Hydrogen peroxide production by ion irradiation of thin water ice films. <i>Astronomy and Astrophysics</i> , <b>2004</b> , 420, 405-410	5.1	42

69	Theoretical and experimental study of the structural stability of TbPO <sub>4</sub> at high pressures. <i>Physical Review B</i> , <b>2010</b> , 81,	3.3	40
68	CO <sub>2</sub> production by ion irradiation of H <sub>2</sub> O ice on top of carbonaceous materials and its relevance to the Galilean satellites. <i>Icarus</i> , <b>2005</b> , 177, 570-576	3.8	39
67	High-pressure optical and vibrational properties of CdGa <sub>2</sub> Se <sub>4</sub> : Order-disorder processes in adamantine compounds. <i>Journal of Applied Physics</i> , <b>2012</b> , 111, 013518	2.5	36
66	Synthesis of a novel zeolite through a pressure-induced reconstructive phase transition process. <i>Angewandte Chemie - International Edition</i> , <b>2013</b> , 52, 10458-62	16.4	36
65	H-implantation in SO <sub>2</sub> and CO <sub>2</sub> ices. <i>Planetary and Space Science</i> , <b>2008</b> , 56, 1300-1308	2	34
64	Experimental and Theoretical Study of Bi <sub>2</sub> O <sub>2</sub> Se Under Compression. <i>Journal of Physical Chemistry C</i> , <b>2018</b> , 122, 8853-8867	3.8	32
63	Hydrate sulfuric acid after sulfur implantation in water ice. <i>Icarus</i> , <b>2007</b> , 192, 623-628	3.8	32
62	High-pressure structural, elastic, and thermodynamic properties of zircon-type HoPO and TmPO. <i>Journal of Physics Condensed Matter</i> , <b>2017</b> , 29, 095401	1.8	31
61	Compression of silver sulfide: X-ray diffraction measurements and total-energy calculations. <i>Inorganic Chemistry</i> , <b>2012</b> , 51, 5289-98	5.1	31
60	Structural, Vibrational, and Electronic Study of BiAs <sub>2</sub> Te <sub>3</sub> under Compression. <i>Journal of Physical Chemistry C</i> , <b>2016</b> , 120, 19340-19352	3.8	28
59	Structural study of Bi <sub>2</sub> O <sub>3</sub> under pressure. <i>Journal of Physics Condensed Matter</i> , <b>2013</b> , 25, 475402	1.8	27
58	X-ray diffraction study on pressure-induced phase transformations and the equation of state of ZnGa <sub>2</sub> Te <sub>4</sub> . <i>Journal of Applied Physics</i> , <b>2013</b> , 114, 233507	2.5	25
57	Structural and elastic properties of defect chalcopyrite HgGa <sub>2</sub> S <sub>4</sub> under high pressure. <i>Journal of Alloys and Compounds</i> , <b>2014</b> , 583, 70-78	5.7	25
56	Pbca-Type In <sub>2</sub> O <sub>3</sub> : The High-Pressure Post-Corundum phase at Room Temperature.. <i>Journal of Physical Chemistry C</i> , <b>2014</b> , 118, 20545-20552	3.8	24
55	High-pressure study of the structural and elastic properties of defect-chalcopyrite HgGa <sub>2</sub> Se <sub>4</sub> . <i>Journal of Applied Physics</i> , <b>2013</b> , 113, 073510	2.5	24
54	Nonlinear pressure dependence of the direct band gap in adamantine ordered-vacancy compounds. <i>Physical Review B</i> , <b>2010</b> , 81,	3.3	24
53	Production of oxidants by ion irradiation of water/carbon dioxide frozen mixtures. <i>Astrobiology</i> , <b>2005</b> , 5, 612-21	3.7	24
52	Ordered helium trapping and bonding in compressed arsenolite: Synthesis of As <sub>4</sub> O <sub>6</sub> ⊃He. <i>Physical Review B</i> , <b>2016</b> , 93,	3.3	23

51	Broadband, site selective and time resolved photoluminescence spectroscopic studies of finely size-modulated Y <sub>2</sub> O <sub>3</sub> :Eu <sup>3+</sup> phosphors synthesized by a complex based precursor solution method. <i>Current Applied Physics</i> , <b>2014</b> , 14, 72-81	2.6	21
50	Phase Behavior of Ag <sub>2</sub> CrO <sub>4</sub> under Compression: Structural, Vibrational, and Optical Properties. <i>Journal of Physical Chemistry C</i> , <b>2013</b> , 117, 12239-12248	3.8	21
49	New high-pressure phase and equation of state of Ce <sub>2</sub> Zr <sub>2</sub> O <sub>8</sub> . <i>Journal of Applied Physics</i> , <b>2012</b> , 111, 053519	3.9	21
48	Ion irradiation of astrophysical ices. <i>Journal of Physics: Conference Series</i> , <b>2008</b> , 101, 012002	0.3	20
47	Structural, vibrational, and electrical study of compressed BiTeBr. <i>Physical Review B</i> , <b>2016</b> , 93,	3.3	19
46	Structural and electrical study of the topological insulator SnBi <sub>2</sub> Te <sub>4</sub> at high pressure. <i>Journal of Alloys and Compounds</i> , <b>2016</b> , 685, 962-970	5.7	19
45	Compressibility Systematics of Calcite-Type Borates: An Experimental and Theoretical Structural Study on ABO <sub>3</sub> (A = Al, Sc, Fe, and In). <i>Journal of Physical Chemistry C</i> , <b>2014</b> , 118, 4354-4361	3.8	19
44	Lattice Dynamics Study of HgGa <sub>2</sub> Se <sub>4</sub> at High Pressures. <i>Journal of Physical Chemistry C</i> , <b>2013</b> , 117, 15773-15781	3.8	19
43	Room-temperature vibrational properties of multiferroic MnWO <sub>4</sub> under quasi-hydrostatic compression up to 39 GPa. <i>Journal of Applied Physics</i> , <b>2014</b> , 115, 043510	2.5	19
42	Vibrational study of HgGa <sub>2</sub> S <sub>4</sub> under high pressure. <i>Journal of Applied Physics</i> , <b>2013</b> , 113, 093512	2.5	18
41	Experimental and Theoretical Investigations on Structural and Vibrational Properties of Melilite-Type Sr <sub>2</sub> ZnGe <sub>2</sub> O <sub>7</sub> at High Pressure and Delineation of a High-Pressure Monoclinic Phase. <i>Inorganic Chemistry</i> , <b>2015</b> , 54, 6594-605	5.1	17
40	Pressure effects on the vibrational properties of Bi <sub>2</sub> O <sub>3</sub> : an experimental and theoretical study. <i>Journal of Physics Condensed Matter</i> , <b>2014</b> , 26, 225401	1.8	17
39	Crystal structure of HgGa <sub>2</sub> Se <sub>4</sub> under compression. <i>Materials Research Bulletin</i> , <b>2013</b> , 48, 2128-2133	5.1	17
38	Raman scattering study of bulk and nanocrystalline PbMoO <sub>4</sub> at high pressures. <i>Journal of Applied Physics</i> , <b>2012</b> , 112, 103510	2.5	17
37	Synthesis and High-Pressure Study of Corundum-Type In <sub>2</sub> O <sub>3</sub> . <i>Journal of Physical Chemistry C</i> , <b>2015</b> , 119, 29076-29087	3.8	16
36	Ion irradiation of H <sub>2</sub> O ice on top of sulfuric solid residues and its relevance to the Galilean satellites. <i>Icarus</i> , <b>2008</b> , 194, 146-152	3.8	16
35	High-pressure structural and vibrational properties of monazite-type BiPO <sub>4</sub> , LaPO <sub>4</sub> , CePO <sub>4</sub> , and PrPO <sub>4</sub> . <i>Journal of Physics Condensed Matter</i> , <b>2018</b> , 30, 065401	1.8	15
34	Bi <sub>2</sub> O <sub>3</sub> under compression: Optical and elastic properties and electron density topology analysis. <i>Physical Review B</i> , <b>2016</b> , 93,	3.3	15

33	High-pressure structural and elastic properties of $Tl_2O_3$ . <i>Journal of Applied Physics</i> , <b>2014</b> , 116, 133521	2.5	15
32	Pressure-induced amorphization of $YVO_4:Eu^{2+}$ nanoboxes. <i>Nanotechnology</i> , <b>2016</b> , 27, 025701	3.4	14
31	High-pressure Raman scattering study of defect chalcopyrite and defect stannite $ZnGa_2Se_4$ . <i>Journal of Applied Physics</i> , <b>2013</b> , 113, 233501	2.5	14
30	Compressibility and structural stability of ultra-incompressible bimetallic interstitial carbides and nitrides. <i>Physical Review B</i> , <b>2012</b> , 85,	3.3	14
29	Orpiment under compression: metavalent bonding at high pressure. <i>Physical Chemistry Chemical Physics</i> , <b>2020</b> , 22, 3352-3369	3.6	14
28	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> , <b>2014</b> , 36, 16-23	3.4	13
27	High-pressure structural phase transition in $MnWO_4$ . <i>Physical Review B</i> , <b>2015</b> , 91,	3.3	12
26	Pressure Impact on the Stability and Distortion of the Crystal Structure of $CeScO$ . <i>Inorganic Chemistry</i> , <b>2017</b> , 56, 8363-8371	5.1	12
25	Characterization and Decomposition of the Natural van der Waals $SnSbTe$ under Compression. <i>Inorganic Chemistry</i> , <b>2020</b> , 59, 9900-9918	5.1	11
24	High-pressure structural and lattice dynamical study of $HgWO_4$ . <i>Physical Review B</i> , <b>2010</b> , 82,	3.3	11
23	The origin of sulfur-bearing species on the surfaces of icy satellites. <i>Advances in Space Research</i> , <b>2009</b> , 43, 1442-1445	2.4	11
22	Order-disorder processes in adamantane ternary ordered-vacancy compounds. <i>Physica Status Solidi (B): Basic Research</i> , <b>2013</b> , 250, 1496-1504	1.3	10
21	Structural and Lattice-Dynamical Properties of $TbO$ under Compression: A Comparative Study with Rare Earth and Related Sesquioxides. <i>Inorganic Chemistry</i> , <b>2020</b> , 59, 9648-9666	5.1	9
20	$HgGa_2Se_4$ under high pressure: An optical absorption study. <i>Physica Status Solidi (B): Basic Research</i> , <b>2015</b> , 252, 2043-2051	1.3	9
19	Thermally activated cation ordering in $ZnGa_2Se_4$ single crystals studied by Raman scattering, optical absorption, and ab initio calculations. <i>Journal of Physics Condensed Matter</i> , <b>2013</b> , 25, 165802	1.8	8
18	Production of Oxidants by Ion Bombardment of Icy Moons in the Outer Solar System. <i>Advances in Astronomy</i> , <b>2011</b> , 2011, 1-10	0.9	8
17	Elastic and thermodynamic properties of $Bi_2O_3$ at high pressures: Study of mechanical and dynamical stability. <i>Journal of Physics and Chemistry of Solids</i> , <b>2019</b> , 124, 111-120	3.9	8
16	Structural and Vibrational Study of Pseudocubic $CdIn_2Se_4$ under Compression. <i>Journal of Physical Chemistry C</i> , <b>2014</b> , 118, 26987-26999	3.8	7

15	Vibrational and elastic properties of As <sub>4</sub> O <sub>6</sub> and As <sub>4</sub> O <sub>6</sub> ∩He at high pressures: Study of dynamical and mechanical stability. <i>Journal of Applied Physics</i> , <b>2016</b> , 120, 155901	2.5	7
14	Structural and Vibrational Properties of CdAl <sub>2</sub> S <sub>4</sub> under High Pressure: Experimental and Theoretical Approach. <i>Journal of Physical Chemistry C</i> , <b>2014</b> , 118, 15363-15374	3.8	6
13	Phase Stability of Natural Ni <sub>0.75</sub> Mg <sub>0.22</sub> Ca <sub>0.03</sub> CO <sub>3</sub> Gaspeite Mineral at High Pressure and Temperature. <i>Journal of Physical Chemistry C</i> , <b>2020</b> , 124, 19781-19792	3.8	6
12	InBO <sub>3</sub> and ScBO <sub>3</sub> at high pressures: An ab initio study of elastic and thermodynamic properties. <i>Journal of Physics and Chemistry of Solids</i> , <b>2016</b> , 98, 198-208	3.9	6
11	Experimental and theoretical study of dense YBO <sub>3</sub> and the influence of non-hydrostaticity. <i>Journal of Alloys and Compounds</i> , <b>2021</b> , 850, 156562	5.7	5
10	Vibrational properties of CdGa <sub>2</sub> S <sub>4</sub> at high pressure. <i>Journal of Applied Physics</i> , <b>2019</b> , 125, 115901	2.5	4
9	Crystal Structure of Sihalite MgAlBO <sub>4</sub> under High Pressure. <i>Journal of Physical Chemistry C</i> , <b>2015</b> , 119, 6777-6784	3.8	4
8	( $\text{AB}_{2}\text{Se}_{4}$ ) Ordered-Vacancy Compounds at High Pressures. <i>Springer Series in Materials Science</i> , <b>2014</b> , 163-184	0.9	3
7	Structural, vibrational and electronic properties of ∩GaS under compression. <i>Physical Chemistry Chemical Physics</i> , <b>2021</b> , 23, 6841-6862	3.6	3
6	Bandgap behavior and singularity of the domain-induced light scattering through the pressure-induced ferroelectric transition in relaxor ferroelectric AxBa <sub>1-∩</sub> Nb <sub>2</sub> O <sub>6</sub> (A: Sr,Ca). <i>Applied Physics Letters</i> , <b>2018</b> , 112, 042901	3.4	2
5	High-pressure theoretical and experimental study of HgWO <sub>4</sub> . <i>High Pressure Research</i> , <b>2011</b> , 31, 58-63	1.6	1
4	Infrared studies at the ice laboratory of Alcoy. <i>Planetary and Space Science</i> , <b>2008</b> , 56, 1744-1747	2	1
3	Pressure-induced band anticrossing in two adamantine ordered-vacancy compounds: CdGa <sub>2</sub> S <sub>4</sub> and HgGa <sub>2</sub> S <sub>4</sub> . <i>Journal of Alloys and Compounds</i> , <b>2021</b> , 886, 161226	5.7	1
2	Pressure-induced order-disorder transitions in ∩nS: an experimental and theoretical study of structural and vibrational properties. <i>Physical Chemistry Chemical Physics</i> , <b>2021</b> , 23, 23625-23642	3.6	0
1	Transition path to a dense efficient-packed post-delafoosite phase. Crystal structure and evolution of the chemical bonding. <i>Journal of Alloys and Compounds</i> , <b>2021</b> , 867, 159012	5.7	0