

# David Santamaria-Perez

## 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.

100  
papers

1,968  
citations

25  
h-index

38  
g-index

110  
ext. papers

2,221  
ext. citations

3.7  
avg, IF

4.55  
L-index

#	Paper	IF	Citations
100	Pressure-Induced Phase Transition and Band Gap Decrease in Semiconducting ECuVO.. <i>Inorganic Chemistry</i> , <b>2022</b> ,	5.1	2
99	Phase stability and dense polymorph of the BaCa(CO) barytocalcite carbonate.. <i>Scientific Reports</i> , <b>2022</b> , 12, 7413	4.9	1
98	Crystal Structure of BaCa(CO) Alstonite Carbonate and Its Phase Stability upon Compression.. <i>ACS Earth and Space Chemistry</i> , <b>2021</b> , 5, 1130-1139	3.2	7
97	Compressibility and Phase Stability of Iron-Rich Ankerite. <i>Minerals (Basel, Switzerland)</i> , <b>2021</b> , 11, 607	2.4	3
96	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> , <b>2021</b> , 867, 159012	5.7	0
95	Comparative study of the high-pressure behavior of ZnV2O6, Zn2V2O7, and Zn3V2O8. <i>Journal of Alloys and Compounds</i> , <b>2020</b> , 837, 155505	5.7	15
94	Structural and vibrational behavior of cubic Cu1.80(3)Se cuprous selenide, berzelianite, under compression. <i>Journal of Alloys and Compounds</i> , <b>2020</b> , 830, 154646	5.7	0
93	Experimental and Theoretical Study of SbPO under Compression. <i>Inorganic Chemistry</i> , <b>2020</b> , 59, 287-307	5.1	9
92	Pressure and Temperature Effects on Low-Density Mg3Ca(CO3)4 Huntite Carbonate. <i>Journal of Physical Chemistry C</i> , <b>2020</b> , 124, 1077-1087	3.8	7
91	Experimental and theoretical confirmation of an orthorhombic phase transition in niobium at high pressure and temperature. <i>Communications Materials</i> , <b>2020</b> , 1,	6	32
90	Phase Stability of Natural Ni0.75Mg0.22Ca0.03CO3 Gaspeite Mineral at High Pressure and Temperature. <i>Journal of Physical Chemistry C</i> , <b>2020</b> , 124, 19781-19792	3.8	6
89	High-pressure polymorphs of gadolinium orthovanadate: X-ray diffraction, Raman spectroscopy, and ab initio calculations. <i>Physical Review B</i> , <b>2019</b> , 100,	3.3	9
88	Post-tilleyite, a dense calcium silicate-carbonate phase. <i>Scientific Reports</i> , <b>2019</b> , 9, 7898	4.9	11
87	Gold(i) sulfide: unusual bonding and an unexpected computational challenge in a simple solid. <i>Chemical Science</i> , <b>2019</b> , 10, 6467-6475	9.4	8
86	High-pressure phase transformations in NdVO under hydrostatic, conditions: a structural powder x-ray diffraction study. <i>Journal of Physics Condensed Matter</i> , <b>2019</b> , 31, 235401	1.8	10
85	Dense Post-Barite-type Polymorph of PbSO Anglesite at High Pressures. <i>Inorganic Chemistry</i> , <b>2019</b> , 58, 2708-2716	5.1	4
84	Melting curve and phase diagram of vanadium under high-pressure and high-temperature conditions. <i>Physical Review B</i> , <b>2019</b> , 100,	3.3	26

83	Oxidation of High Yield Strength Metals Tungsten and Rhenium in High-Pressure High-Temperature Experiments of Carbon Dioxide and Carbonates. <i>Crystals</i> , <b>2019</b> , 9, 676	2.3	7
82	Pressure-induced changes of the structure and properties of monoclinic chalcocite Cu <sub>2</sub> S. <i>Physical Review B</i> , <b>2018</b> , 97,	3.3	6
81	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
80	An Ultrahigh CO-Loaded Silicalite-1 Zeolite: Structural Stability and Physical Properties at High Pressures and Temperatures. <i>Inorganic Chemistry</i> , <b>2018</b> , 57, 6447-6455	5.1	13
79	Structural Behavior of Natural Silicate-Carbonate Spurrite Mineral, Ca(SiO)(CO), under High-Pressure, High-Temperature Conditions. <i>Inorganic Chemistry</i> , <b>2018</b> , 57, 98-105	5.1	11
78	High-Pressure High-Temperature Stability and Thermal Equation of State of Zircon-Type Erbium Vanadate. <i>Inorganic Chemistry</i> , <b>2018</b> , 57, 14005-14012	5.1	10
77	Peptide metal-organic frameworks under pressure: flexible linkers for cooperative compression. <i>Dalton Transactions</i> , <b>2018</b> , 47, 10654-10659	4.3	25
76	Compressibility and structural behavior of pure and Fe-doped SnO <sub>2</sub> nanocrystals. <i>Solid State Sciences</i> , <b>2017</b> , 64, 91-98	3.4	11
75	Structural Evolution of CO <sub>2</sub> -Filled Pure Silica LTA Zeolite under High-Pressure High-Temperature Conditions. <i>Chemistry of Materials</i> , <b>2017</b> , 29, 4502-4510	9.6	16
74	Pressure Impact on the Stability and Distortion of the Crystal Structure of CeScO <sub>4</sub> . <i>Inorganic Chemistry</i> , <b>2017</b> , 56, 8363-8371	5.1	12
73	Isothermal equation of state and phase stability of Fe <sub>5</sub> Si <sub>3</sub> up to 96 GPa and 3000 K. <i>Journal of Geophysical Research: Solid Earth</i> , <b>2017</b> , 122, 4328-4335	3.6	6
72	Ordered helium trapping and bonding in compressed arsenolite: Synthesis of As <sub>4</sub> O <sub>6</sub> ·2He. <i>Physical Review B</i> , <b>2016</b> , 93,	3.3	23
71	Metastable structural transformations and pressure-induced amorphization in natural (Mg,Fe) <sub>2</sub> SiO <sub>4</sub> olivine under static compression: a raman spectroscopic study. <i>American Mineralogist</i> , <b>2016</b> , 101, 1642-1650	2.9	17
70	Exploring the Chemical Reactivity between Carbon Dioxide and Three Transition Metals (Au, Pt, and Re) at High-Pressure, High-Temperature Conditions. <i>Inorganic Chemistry</i> , <b>2016</b> , 55, 10793-10799	5.1	17
69	Pressure-induced amorphization of YVO <sub>4</sub> ·Eu <sup>3+</sup> nanoboxes. <i>Nanotechnology</i> , <b>2016</b> , 27, 025701	3.4	14
68	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
67	Correspondence: Strongly-driven Re+CO redox reaction at high-pressure and high-temperature. <i>Nature Communications</i> , <b>2016</b> , 7, 13647	17.4	19
66	Infrared study of BiO <sub>2</sub> single crystal under high pressure. <i>Journal of Applied Physics</i> , <b>2016</b> , 119, 055902	2.5	1

65	Polymorphism in Strontium Tungstate SrWO under Quasi-Hydrostatic Compression. <i>Inorganic Chemistry</i> , <b>2016</b> , 55, 10406-10414	5.1	22
64	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
63	Crystal Structure of Sinhalite MgAlBO <sub>4</sub> under High Pressure. <i>Journal of Physical Chemistry C</i> , <b>2015</b> , 119, 6777-6784	3.8	4
62	High-pressure structural phase transition in MnWO <sub>4</sub> . <i>Physical Review B</i> , <b>2015</b> , 91,	3.3	12
61	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
60	Crystal behavior of potassium bromate under compression. <i>Acta Crystallographica Section B: Structural Science, Crystal Engineering and Materials</i> , <b>2015</b> , 71, 798-804	1.8	2
59	Experimental evidence for pressure-driven isostructural and symmetry-breaking phase transitions on Bi <sub>14</sub> CrO <sub>24</sub> . <i>Solid State Communications</i> , <b>2014</b> , 182, 50-54	1.6	4
58	Pressure-induced Pr <sup>3+</sup> 3P <sub>0</sub> luminescence in cubic Y <sub>2</sub> O <sub>3</sub> . <i>Journal of Luminescence</i> , <b>2014</b> , 146, 27-32	3.8	24
57	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
56	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
55	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
54	Effect of pressure on La <sub>2</sub> (WO <sub>4</sub> ) <sub>3</sub> with a modulated scheelite-type structure. <i>Physical Review B</i> , <b>2014</b> , 89,	3.3	5
53	High-pressure structural and elastic properties of Tl <sub>2</sub> O <sub>3</sub> . <i>Journal of Applied Physics</i> , <b>2014</b> , 116, 133521	2.5	15
52	Structural and Vibrational Study of Pseudocubic CdIn <sub>2</sub> Se <sub>4</sub> under Compression. <i>Journal of Physical Chemistry C</i> , <b>2014</b> , 118, 26987-26999	3.8	7
51	Pressure-induced phase transformations in mineral chalcocite, Cu <sub>2</sub> S, under hydrostatic conditions. <i>Journal of Alloys and Compounds</i> , <b>2014</b> , 610, 645-650	5.7	14
50	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
49	First-principles study of structure and stability in Si <sub>100</sub> -based materials. <i>Highlights in Theoretical Chemistry</i> , <b>2014</b> , 197-201		
48	First-principles study of structure and stability in Si <sub>100</sub> -based materials. <i>Theoretical Chemistry Accounts</i> , <b>2013</b> , 132, 1	1.9	7

47	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
46	Quantitative Raman spectroscopy as a tool to study the kinetics and formation mechanism of carbonates. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , <b>2013</b> , 116, 26-30	4.4	19
45	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
44	Structural phase transitions on AgCuS stromeyerite mineral under compression. <i>Inorganic Chemistry</i> , <b>2013</b> , 52, 355-61	5.1	22
43	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
42	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
41	Compressibility and structural stability of ultra-incompressible bimetallic interstitial carbides and nitrides. <i>Physical Review B</i> , <b>2012</b> , 85,	3.3	14
40	High-pressure transition to the post-barite phase in BaCrO <sub>4</sub> hashemite. <i>Physical Review B</i> , <b>2012</b> , 86,	3.3	18
39	High-pressure investigation of Li <sub>2</sub> MnSiO <sub>4</sub> and Li <sub>2</sub> CoSiO <sub>4</sub> electrode materials for lithium-ion batteries. <i>Inorganic Chemistry</i> , <b>2012</b> , 51, 5779-86	5.1	30
38	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
37	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
36	Compression of mineral barite, BaSO <sub>4</sub> : a structural study. <i>High Pressure Research</i> , <b>2012</b> , 32, 81-88	1.6	16
35	Crystal Chemistry of CdIn <sub>2</sub> S <sub>4</sub> , MgIn <sub>2</sub> S <sub>4</sub> , and MnIn <sub>2</sub> S <sub>4</sub> Thiospinels under High Pressure. <i>Journal of Physical Chemistry C</i> , <b>2012</b> , 116, 14078-14087	3.8	38
34	Effects of high-pressure on the structural, vibrational, and electronic properties of monazite-type PbCrO <sub>4</sub> . <i>Physical Review B</i> , <b>2012</b> , 85,	3.3	53
33	Structural and vibrational study of cubic Sb <sub>2</sub> O <sub>3</sub> under high pressure. <i>Physical Review B</i> , <b>2012</b> , 85,	3.3	57
32	Tuning the Propagation Constant by the Anticrossing Bandgap Prism Coupling Technique. <i>Plasmonics</i> , <b>2012</b> , 7, 665-675	2.4	4
31	Characterization of Salting-Out Processes during CO <sub>2</sub> -Clathrate Formation Using Raman Spectroscopy: Planetological Application. <i>Spectroscopy Letters</i> , <b>2012</b> , 45, 407-412	1.1	3
30	Four-mode plasmonic structure based on a prism-grating anticrossing bandgap. <i>Applied Physics Letters</i> , <b>2012</b> , 100, 063301	3.4	7

29	Reversibility of the zinc-blende to rock-salt phase transition in cadmium sulfide nanocrystals. <i>Journal of Applied Physics</i> , <b>2012</b> , 111, 063516	2.5	11
28	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
27	Zircon to monazite phase transition in CeVO <sub>4</sub> : X-ray diffraction and Raman-scattering measurements. <i>Physical Review B</i> , <b>2011</b> , 84,	3.3	71
26	High-pressure x-ray diffraction study of CdMoO <sub>4</sub> and EuMoO <sub>4</sub> . <i>Journal of Applied Physics</i> , <b>2011</b> , 109, 043510-043510-5	2.5	27
25	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
24	High-pressure experimental study on Rb <sub>2</sub> S: antifluorite to Ni <sub>2</sub> In-type phase transitions. <i>Acta Crystallographica Section B: Structural Science</i> , <b>2011</b> , 67, 109-15		36
23	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
22	Structural behaviour of alkaline sulfides under compression: high-pressure experimental study on Cs <sub>2</sub> S. <i>Journal of Chemical Physics</i> , <b>2011</b> , 135, 054511	3.9	25
21	High-pressure x-ray diffraction study of bulk and nanocrystalline PbMoO <sub>4</sub> . <i>Journal of Applied Physics</i> , <b>2010</b> , 108, 073518	2.5	29
20	High-pressure structural and lattice dynamical study of HgWO <sub>4</sub> . <i>Physical Review B</i> , <b>2010</b> , 82,	3.3	11
19	Structural Relationships Between Intermetallic Clathrates, Porous Tectosilicates and Clathrate Hydrates. <i>Structure and Bonding</i> , <b>2010</b> , 1-29	0.9	3
18	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
17	High-pressure melting curve of helium and neon: Deviations from corresponding states theory. <i>Physical Review B</i> , <b>2010</b> , 81,	3.3	34
16	New high-pressure phase of HfTiO <sub>4</sub> and ZrTiO <sub>4</sub> ceramics. <i>Materials Research Bulletin</i> , <b>2010</b> , 45, 1732-1735	3.1	27
15	X-ray diffraction measurements of Mo melting to 119 GPa and the high pressure phase diagram. <i>Journal of Chemical Physics</i> , <b>2009</b> , 130, 124509	3.9	68
14	Structural stability of Fe <sub>5</sub> Si <sub>3</sub> and Ni <sub>2</sub> Si studied by high-pressure x-ray diffraction and ab initio total-energy calculations. <i>Physical Review B</i> , <b>2008</b> , 77,	3.3	46
13	Melting, density, and anisotropy of iron at core conditions: new x-ray measurements to 150 GPa. <i>Journal of Physics: Conference Series</i> , <b>2008</b> , 121, 022018	0.3	66
12	FeSi melting curve up to 70 GPa. <i>Earth and Planetary Science Letters</i> , <b>2008</b> , 265, 743-747	5.3	24

11	Phase diagram studies on iron and nickel silicides: high-pressure experiments and ab initio calculations. <i>Journal of Physics: Conference Series</i> , <b>2008</b> , 121, 022013	0.3	1
10	Structure, metastability, and electron density of Al lattices in light of the model of anions in metallic matrices. <i>Journal of Physical Chemistry B</i> , <b>2006</b> , 110, 18609-18	3.4	8
9	Anions in metallic matrices model: application to the aluminium crystal chemistry. <i>Acta Crystallographica Section B: Structural Science</i> , <b>2006</b> , 62, 220-7		21
8	Structural characterization of a new high-pressure phase of GaAsO <sub>4</sub> . <i>Acta Crystallographica Section B: Structural Science</i> , <b>2006</b> , 62, 1019-24		16
7	A new description of the crystal structures of tin oxide fluorides. <i>Solid State Sciences</i> , <b>2005</b> , 7, 479-485	3.4	6
6	Iron silicides and their corresponding oxides: a high-pressure study of Fe <sub>5</sub> Si <sub>3</sub> . <i>Solid State Sciences</i> , <b>2004</b> , 6, 673-678	3.4	13
5	Structural similarities between Ti metal and titanium oxides: implications on the high-pressure behavior of oxygen in metallic matrices. <i>Solid State Sciences</i> , <b>2004</b> , 6, 809-814	3.4	10
4	The structures of ZrNCl, TiOCl and AlOCl in the light of the Zintl-Klemm concept. <i>Zeitschrift Fur Kristallographie - Crystalline Materials</i> , <b>2003</b> , 218, 466-469	1	8
3	The Zintl-Klemm concept applied to cations in oxides. I. The structures of ternary aluminates. <i>Acta Crystallographica Section B: Structural Science</i> , <b>2003</b> , 59, 305-23		36
2	Experimentos a alta presión y alta temperatura: Ventanas al universo. <i>Revista De La Tierra</i> , <b>1970</b> , 23, 11		
1	The Zintl-Klemm Concept Applied to Cations in Oxides. II. The Structures of Silicates		121-177 31