Placida Rodrguez-Hernandez

List of Publications by Citations

192 papers	5,046 citations	42 h-index	59 g-index
204 ext. papers	5,727 ext. citations	3.3 avg, IF	5.32 L-index

#	Paper	IF	Citations
192	High-pressure structural study of the scheelite tungstates CaWO4 and SrWO4. *Physical Review B*, **2005**, 72,	3.3	152
191	The electronic structure of zircon-type orthovanadates: Effects of high-pressure and cation substitution. *Journal of Applied Physics*, **2011**, 110, 043723	2.5	132
190	Elastic constants and electronic structure of beryllium chalcogenides BeS, BeSe, and BeTefrom first-principles calculations. *Physical Review B*, **1997**, 55, 14043-14046	3.3	117
189	Structural and vibrational study of Bi2Se3 under high pressure. *Physical Review B*, **2011**, 84,	3.3	115
188	Electronic and structural properties of cubic BN and BP. *Physical Review B*, **1995**, 51, 14705-14708	3.3	111
187	Pressure effects on the electronic and optical properties of AWO4 wolframites (A = Cd, Mg, Mn, and Zn): The distinctive behavior of multiferroic MnWO4. *Physical Review B*, **2012**, 86,	3.3	96
186	Determination of the high-pressure crystal structure of BaWO4 and PbWO4. *Physical Review B*, **2006**, 73,	3.3	88
185	Pressure and temperature dependence of the lattice dynamics of CuAlO2 investigated by Raman scattering experiments and ab initio calculations. *Physical Review B*, **2006**, 74,	3.3	87
184	Lattice dynamics study of scheelite tungstates under high pressure I. BaWO4. *Physical Review B*, **2006**, 74,	3.3	85
183	High-pressure vibrational and optical study of Bi2Te3. *Physical Review B*, **2011**, 84,	3.3	83
182	Lattice dynamics of Sb2Te3 at high pressures. *Physical Review B*, **2011**, 84,	3.3	81
181	High-pressure x-ray diffraction and ab initio study of Ni2Mo3N, Pd2Mo3N, Pt2Mo3N, Co3Mo3N, and Fe3Mo3N: Two families of ultra-incompressible bimetallic interstitial nitrides. *Physical Review B* , **2010**, 82,	3.3	80
180	Combined Raman scattering and ab initio investigation of pressure-induced structural phase transitions in the scintillator ZnWO4. *Physical Review B*, **2008**, 78,	3.3	80
179	On the band gap of CuAlO2 delafossite. *Applied Physics Letters*, **2006**, 88, 181904	3.4	79
178	Theoretical and Experimental Study of the Crystal Structures, Lattice Vibrations, and Band Structures of Monazite-Type PbCrO4, PbSeO4, SrCrO4, and SrSeO4. *Inorganic Chemistry*, **2015**, 54, 7524-35	5.1	78
177	Zircon to monazite phase transition in CeVO4: X-ray diffraction and Raman-scattering measurements. *Physical Review B*, **2011**, 84,	3.3	71
176	A combined high-pressure experimental and theoretical study of the electronic band-structure of scheelite-type AWO4 (A = Ca, Sr, Ba, Pb) compounds. *Journal of Applied Physics*, **2011**, 110, 043703	2.5	68

175	Ground-state properties and high-pressure phase of beryllium chalcogenides BeSe, BeTe, and BeS. *Physical Review B*, **1996**, 54, 11861-11864	3.3	66
174	Structural evolution of the CuGaO2 delafossite under high pressure. *Physical Review B*, **2004**, 69,	3.3	63
173	Phase transitions in wolframite-type CdWO4 at high pressure studied by Raman spectroscopy and density-functional theory. *Physical Review B*, **2009**, 79,	3.3	62
172	High-pressure studies of topological insulators Bi2Se3, Bi2Te3, and Sb2Te3. *Physica Status Solidi (B): Basic Research*, **2013**, 250, 669-676	1.3	61
171	High-pressure Raman spectroscopy and lattice-dynamics calculations on scintillating MgWO4: Comparison with isomorphic compounds. *Physical Review B*, **2011**, 83,	3.3	61
170	High-pressure structural phase transitions in CuWO4. *Physical Review B*, **2010**, 81,	3.3	60
169	Experimental and theoretical investigations on the polymorphism and metastability of BiPO4. *Dalton Transactions*, **2013**, 42, 14999-5015	4.3	56
168	High-pressure phase transitions and compressibility of wolframite-type tungstates. *Journal of Applied Physics*, **2010**, 107, 083506	2.5	54
167	Lattice dynamics of YVO4 at high pressures. *Physical Review B*, **2010**, 81,	3.3	52
166	Structural, Vibrational, and Electronic Study of Sb2S3 at High Pressure. *Journal of Physical Chemistry C*, **2016**, 120, 10547-10558	3.8	52
165	Isostructural Second-Order Phase Transition of □Bi2O3 at High Pressures: An Experimental and Theoretical Study. *Journal of Physical Chemistry C*, **2014**, 118, 23189-23201	3.8	50
164	Structural and dielectric properties of AlN under pressure. *Physica B: Condensed Matter*, **2008**, 403, 4059-4062	2.8	50
163	Exploring the high-pressure behavior of the three known polymorphs of BiPO4: Discovery of a new polymorph. *Journal of Applied Physics*, **2015**, 117, 105902	2.5	49
162	High-pressure lattice dynamical study of bulk and nanocrystalline In2O3. *Journal of Applied Physics*, **2012**, 112, 123511	2.5	49
161	High-pressure study of ScVO4 by Raman scattering and ab initio calculations. *Physical Review B*, **2011**, 83,	3.3	49
160	First-principles study of the high-pressure phase transition in ZnAl2O4 and ZnGa2O4: From cubic spinel to orthorhombic post-spinel structures. *Physical Review B*, **2009**, 79,	3.3	49
159	High-pressure structural behaviour of HoVO4: combined XRD experiments and ab initio calculations. *Journal of Physics Condensed Matter*, **2014**, 26, 265402	1.8	47
158	First-principles study of high-pressure phonon dispersions of wurtzite, zinc-blende, and rocksalt AlN. *Journal of Applied Physics*, **2008**, 103, 013506	2.5	47

157	Lattice dynamics study of scheelite tungstates under high pressure II. PbWO4. *Physical Review B*, **2006**, 74,	3.3	47
156	High-Pressure Crystal Structure, Lattice Vibrations, and Band Structure of BiSbO4. *Inorganic Chemistry*, **2016**, 55, 4958-69	5.1	47
155	Tuning the band gap of PbCrO4 through high-pressure: Evidence of wide-to-narrow semiconductor transitions. *Journal of Alloys and Compounds*, **2014**, 587, 14-20	5.7	46
154	Structural stability of Fe5Si3 and Ni2Si studied by high-pressure x-ray diffraction and ab initio total-energy calculations. *Physical Review B*, **2008**, 77,	3.3	46
153	Ab initio lattice dynamics and piezoelectric properties of MgS and MgSe alkaline earth chalcogenides. *European Physical Journal B*, **2010**, 73, 185-193	1.2	45
152	Theoretical Study of the Elastic Properties of III-P Compounds. *Physica Status Solidi (B): Basic Research*, **2001**, 223, 411-415	1.3	45
151	Electronic and Structural Properties of BeSe, BeTe, and BeS: Comparison between ab-initio Theory and Experiments. *Physica Status Solidi (B): Basic Research*, **1996**, 198, 439-446	1.3	45
150	Theoretical and experimental study of the structural stability of TbPO4 at high pressures. *Physical Review B*, **2010**, 81,	3.3	40
149	High-pressure polymorphs of TbVO4: A Raman and ab initio study. *Journal of Alloys and Compounds*, **2013**, 577, 327-335	5.7	39
148	Crystal Chemistry of CdIn2S4, MgIn2S4, and MnIn2S4 Thiospinels under High Pressure. *Journal of Physical Chemistry C*, **2012**, 116, 14078-14087	3.8	38
147	High-pressure optical and vibrational properties of CdGa2Se4: Order-disorder processes in adamantine compounds. *Journal of Applied Physics*, **2012**, 111, 013518	2.5	36
146	Lattice dynamics of ZnAl2O4 and ZnGa2O4 under high pressure. *Annalen Der Physik*, **2011**, 523, 157-167	2.6	36
145	Experimental and theoretical study of structural properties and phase transitions in YAsO4 and YCrO4. *Physical Review B*, **2011**, 83,	3.3	36
144	Phase Stability of Lanthanum Orthovanadate at High Pressure. *Journal of Physical Chemistry C*, **2016**, 120, 13749-13762	3.8	36
143	Electronic structure of CuAlO2 and CuScO2 delafossites under pressure. *Physica Status Solidi (B): Basic Research*, **2007**, 244, 309-314	1.3	33
142	Experimental and Theoretical Study of Bi2O2Se Under Compression. *Journal of Physical Chemistry C* , **2018**, 122, 8853-8867	3.8	32
141	High-pressure phase transformations, pressure-induced amorphization, and polyamorphic transition of the clathrate Rb6.15Si46. *Physical Review B*, **2009**, 79,	3.3	32
140	AlX (X = As, P, Sb) Compounds under Pressure. *Physica Status Solidi (B): Basic Research*, **1999**, 211, 39-43	1.3	32

139	High-pressure structural, elastic, and thermodynamic properties of zircon-type HoPO and TmPO. *Journal of Physics Condensed Matter*, **2017**, 29, 095401	1.8	31
138	Ab initio calculations of electronic structure and elastic constants in AlP. *Semiconductor Science and Technology*, **1992**, 7, 1437-1440	1.8	31
137	Lattice Dynamics Study of Nanocrystalline Yttrium Gallium Garnet at High Pressure. *Journal of Physical Chemistry C*, **2014**, 118, 13177-13185	3.8	30
136	First-principles study of lithium-doped carbon clathrates under pressure. *Journal of Physics Condensed Matter*, **2008**, 20, 215218	1.8	30
135	Crystal stability and pressure-induced phase transitions in scheelite AWO4 (A = Ca, Sr, Ba, Pb, Eu) binary oxides. II: Towards a systematic understanding. *Physica Status Solidi (B): Basic Research*, **2007**, 244, 295-302	1.3	30
134	Crystal stability and pressure-induced phase transitions in scheelite AWO4 (A = Ca, Sr, Ba, Pb, Eu) binary oxides. I: A review of recent ab initio calculations, ADXRD, XANES, and Raman studies. *Physica Status Solidi (B): Basic Research*, **2007**, 244, 325-330	1.3	28
133	Theoretical study of the pressure-induced structural phase transition of ScSb and YSb. *International Journal of Quantum Chemistry*, **2005**, 101, 770-773	2.1	28
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130	Polymorphs of CaSeO4 under pressure: a first-principles study of structural, electronic, and vibrational properties. *Inorganic Chemistry*, **2015**, 54, 1765-77	5.1	27
129	Effects of pressure on the structure and lattice dynamics of TmPO4: Experiments and calculations. *Physical Review B*, **2012**, 85,	3.3	27
128	Trapping of three-dimensional electrons and transition to two-dimensional transport in the three-dimensional topological insulator Bi2Se3 under high pressure. *Physical Review B*, **2012**, 85,	3.3	27
127	Monazite-type SrCrO4 under compression. *Physical Review B*, **2016**, 94,	3.3	26
126	High-pressure Raman scattering of CaWO up to 46.3 GPa: evidence of a new high-pressure phase. *Inorganic Chemistry*, **2014**, 53, 9729-38	5.1	26
125	Structural and elastic properties of defect chalcopyrite HgGa2S4 under high pressure. *Journal of Alloys and Compounds*, **2014**, 583, 70-78	5.7	25
124	Pressure-Driven Isostructural Phase Transition in InNbO: In Situ Experimental and Theoretical Investigations. *Inorganic Chemistry*, **2017**, 56, 5420-5430	5.1	24
123	Pbca-Type In2O3: The High-Pressure Post-Corundum phase at Room Temperature.. *Journal of Physical Chemistry C*, **2014**, 118, 20545-20552	3.8	24
122	High-pressure study of the structural and elastic properties of defect-chalcopyrite HgGa2Se4. *Journal of Applied Physics*, **2013**, 113, 073510	2.5	24

121	Nonlinear pressure dependence of the direct band gap in adamantine ordered-vacancy compounds. *Physical Review B*, **2010**, 81,	3.3	24
120	Theoretical and experimental study of CaWO4 and SrWO4 under pressure. *Journal of Physics and Chemistry of Solids*, **2006**, 67, 2164-2171	3.9	24
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116	Experimental and Theoretical Studies on SnSe at High Pressure. *Inorganic Chemistry*, **2018**, 57, 8241-8252	5.1	22
115	Phase Behavior of Ag2CrO4 under Compression: Structural, Vibrational, and Optical Properties. *Journal of Physical Chemistry C*, **2013**, 117, 12239-12248	3.8	21
114	First-principles calculations of electronic, vibrational, and structural properties of scheelite EuWO4 under pressure. *Physical Review B*, **2011**, 84,	3.3	21
113	Ab initiolattice dynamics of zinc-blende GaxIn1−xN alloys. *Journal of Physics Condensed Matter*, **2007**, 19, 486209	1.8	21
112	High-pressure lattice-dynamics of NdVO4. *Journal of Physics and Chemistry of Solids*, **2017**, 100, 126-133	3.9	20
111	Lattice dynamics properties of zinc-blende and Nickel arsenide phases of AlP. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **2008**, 372, 5340-5345	2.3	20
110	Experimental and theoretical study on the optical properties of LaVO crystals under pressure. *Physical Chemistry Chemical Physics*, **2018**, 20, 27314-27328	3.6	20
109	ScVO under non-hydrostatic compression: a new metastable polymorph. *Journal of Physics Condensed Matter*, **2017**, 29, 055401	1.8	19
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104	Correspondence: Strongly-driven Re+CO redox reaction at high-pressure and high-temperature. *Nature Communications*, **2016**, 7, 13647	17.4	19

103	First-Principles Study of InVO under Pressure: Phase Transitions from CrVO- to AgMnO-Type Structure. *Inorganic Chemistry*, **2017**, 56, 2697-2711	5.1	18
102	High pressure luminescence of Nd in YAlO perovskite nanocrystals: A crystal-field analysis. *Journal of Chemical Physics*, **2018**, 148, 044201	3.9	18
101	Pressure-induced phase transformation in zircon-type orthovanadate SmVO4 from experiment and theory. *Journal of Physics Condensed Matter*, **2016**, 28, 035402	1.8	18
100	Vibrational study of HgGa2S4 under high pressure. *Journal of Applied Physics*, **2013**, 113, 093512	2.5	18
99	High-pressure transition to the post-barite phase in BaCrO4 hashemite. *Physical Review B*, **2012**, 86,	3.3	18
98	Experimental and Theoretical Investigations on Structural and Vibrational Properties of Melilite-Type Sr2ZnGe2O7 at High Pressure and Delineation of a High-Pressure Monoclinic Phase. *Inorganic Chemistry*, **2015**, 54, 6594-605	5.1	17
97	Experimental and ab Initio Study of Catena(bis(μ2-iodo)-6-methylquinoline-copper(I)) under Pressure: Synthesis, Crystal Structure, Electronic, and Luminescence Properties. *Inorganic Chemistry* , **2016**, 55, 7476-84	5.1	17
96	Exploring the Chemical Reactivity between Carbon Dioxide and Three Transition Metals (Au, Pt, and Re) at High-Pressure, High-Temperature Conditions. *Inorganic Chemistry*, **2016**, 55, 10793-10799	5.1	17
95	Stability of FeVO under Pressure: An X-ray Diffraction and First-Principles Study. *Inorganic Chemistry*, **2018**, 57, 7860-7876	5.1	17
94	Pressure effects on the vibrational properties of □Bi(2)O(3): an experimental and theoretical study. *Journal of Physics Condensed Matter*, **2014**, 26, 225401	1.8	17
93	Crystal structure of HgGa2Se4 under compression. *Materials Research Bulletin*, **2013**, 48, 2128-2133	5.1	17
92	Optical and structural study of the pressure-induced phase transition of CdWO4. *Physical Review B*, **2017**, 95,	3.3	17
91	Raman scattering study of bulk and nanocrystalline PbMoO4 at high pressures. *Journal of Applied Physics*, **2012**, 112, 103510	2.5	17
90	Synthesis and High-Pressure Study of Corundum-Type In2O3. *Journal of Physical Chemistry C*, **2015**, 119, 29076-29087	3.8	16
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88	High-pressure structural and vibrational properties of monazite-type BiPO, LaPO, CePO, and PrPO. *Journal of Physics Condensed Matter*, **2018**, 30, 065401	1.8	15
87	□i2O3 under compression: Optical and elastic properties and electron density topology analysis. *Physical Review B*, **2016**, 93,	3.3	15
86	Effect of High Pressure on the Crystal Structure and Vibrational Properties of Olivine-Type LiNiPO. *Inorganic Chemistry*, **2018**, 57, 10265-10276	5.1	15

85	High-pressure structural and elastic properties of Tl2O3. *Journal of Applied Physics*, **2014**, 116, 133521	2.5	15
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83	High-pressure Raman scattering study of defect chalcopyrite and defect stannite ZnGa2Se4. *Journal of Applied Physics*, **2013**, 113, 233501	2.5	14
82	Elastic modulus and thermal properties of InN in the rocksalt phase. *Computational Materials Science*, **2014**, 81, 374-377	3.2	14
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80	Orpiment under compression: metavalent bonding at high pressure. *Physical Chemistry Chemical Physics*, **2020**, 22, 3352-3369	3.6	14
79	An Ultrahigh CO-Loaded Silicalite-1 Zeolite: Structural Stability and Physical Properties at High Pressures and Temperatures. *Inorganic Chemistry*, **2018**, 57, 6447-6455	5.1	13
78	Electronic and elastic properties of yttrium gallium garnet under pressure from ab initio studies. *Journal of Applied Physics*, **2013**, 113, 183505	2.5	13
77	Negative pressures in CaWO4 nanocrystals. *Journal of Applied Physics*, **2009**, 105, 094321	2.5	13
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74	Structural, elastic and vibrational properties of nanocrystalline lutetium gallium garnet under high pressure. *Physical Chemistry Chemical Physics*, **2015**, 17, 9454-64	3.6	12
73	Lattice dynamics of CuAlO2 under high pressure from ab initio calculations. *Physica Status Solidi (B): Basic Research*, **2007**, 244, 342-346	1.3	12
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71	High-Pressure Single-Crystal X-ray Diffraction of Lead Chromate: Structural Determination and Reinterpretation of Electronic and Vibrational Properties. *Inorganic Chemistry*, **2019**, 58, 5966-5979	5.1	11
70	Characterization and Decomposition of the Natural van der Waals SnSbTe under Compression. *Inorganic Chemistry*, **2020**, 59, 9900-9918	5.1	11
69	First-Order Isostructural Phase Transition Induced by High Pressure in Fe(IO3)3. *Journal of Physical Chemistry C*, **2020**, 124, 8669-8679	3.8	11
68	High-pressure structural and lattice dynamical study of HgWO4. *Physical Review B*, **2010**, 82,	3.3	11

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66	Lattice vibration spectrum of GaN from first-principle calculations. *Semiconductor Science and Technology*, **2009**, 24, 025007	1.8	11
65	Ab initio study of high-pressure structural properties of the LuVO4 and ScVO4 zircon-type orthovanadates. *High Pressure Research*, **2009**, 29, 582-586	1.6	11
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63	Ab Initio Study of the Mechanical Stability Criteria in BeSe and BeTe under Hydrostatic Pressure. *Physica Status Solidi (B): Basic Research*, **1999**, 211, 23-28	1.3	10
62	High-Pressure Raman Study of Fe(IO3)3: Soft-Mode Behavior Driven by Coordination Changes of Iodine Atoms. *Journal of Physical Chemistry C*, **2020**, 124, 21329-21337	3.8	10
61	Lattice dynamics study of cubic Tb2O3. *Journal of Raman Spectroscopy*, **2018**, 49, 2021-2027	2.3	10
60	High-pressure polymorphs of gadolinium orthovanadate: X-ray diffraction, Raman spectroscopy, and ab initio calculations. *Physical Review B*, **2019**, 100,	3.3	9
59	Structural and Lattice-Dynamical Properties of TbO under Compression: A Comparative Study with Rare Earth and Related Sesquioxides. *Inorganic Chemistry*, **2020**, 59, 9648-9666	5.1	9
58	Yttrium aluminium garnet under pressure: Structural, elastic, and vibrational properties from ab initio studies. *Journal of Applied Physics*, **2015**, 118, 245902	2.5	9
57	HgGa2Se4 under high pressure: An optical absorption study. *Physica Status Solidi (B): Basic Research* , **2015**, 252, 2043-2051	1.3	9
56	High Pressure Phases of AlSb from ab-initio Theory. *Physica Status Solidi (B): Basic Research*, **1996**, 198, 455-459	1.3	9
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54	Structural and vibrational properties of corundum-type InO nanocrystals under compression. *Nanotechnology*, **2017**, 28, 205701	3.4	8
53	High pressure theoretical and experimental analysis of the bandgap of BaMoO4, PbMoO4, and CdMoO4. *Applied Physics Letters*, **2019**, 115, 012102	3.4	8
52	Thermally activated cation ordering in ZnGa2Se4 single crystals studied by Raman scattering, optical absorption, and ab initio calculations. *Journal of Physics Condensed Matter*, **2013**, 25, 165802	1.8	8
51	Structural, Vibrational, and Elastic Properties of Yttrium Orthoaluminate Nanoperovskite at High Pressures. *Journal of Physical Chemistry C*, **2017**, 121, 15353-15367	3.8	8
50	High pressure phase transitions in NdVO4 **2015**,		8

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44	Vibrational and elastic properties of As4O6 and As4O6·2He at high pressures: Study of dynamical and mechanical stability. *Journal of Applied Physics*, **2016**, 120, 155901	2.5	7
43	Structural and Vibrational Properties of CdAl2S4 under High Pressure: Experimental and Theoretical Approach. *Journal of Physical Chemistry C*, **2014**, 118, 15363-15374	3.8	6
42	InBO3 and ScBO3 at high pressures: An ab initio study of elastic and thermodynamic properties. *Journal of Physics and Chemistry of Solids*, **2016**, 98, 198-208	3.9	6
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38	Effect of pressure on La2(WO4)3 with a modulated scheelite-type structure. *Physical Review B*, **2014**, 89,	3.3	5
37	A High-Pressure Investigation of the Synthetic Analogue of Chalcomenite, CuSeO3·H2O. *Crystals*, **2019**, 9, 643	2.3	5
36	Experimental and theoretical study of dense YBO3 and the influence of non-hydrostaticity. *Journal of Alloys and Compounds*, **2021**, 850, 156562	5.7	5
35	Anomalous Raman modes in tellurides. *Journal of Materials Chemistry C*,	7.1	5
34	Structural and vibrational study of Zn(IO3)2 combining high-pressure experiments and density-functional theory. *Physical Review B*, **2021**, 103,	3.3	5
33	Electronic properties and high-pressure behavior of wolframite-type CoWO4. *Materials Advances*, **2021**, 2, 5955-5966	3.3	5
32	Vibrational properties of CdGa2S4 at high pressure. *Journal of Applied Physics*, **2019**, 125, 115901	2.5	4

31	Dense Post-Barite-type Polymorph of PbSO Anglesite at High Pressures. *Inorganic Chemistry*, **2019**, 58, 2708-2716	5.1	4
30	Crystal Structure of Sinhalite MgAlBO4 under High Pressure. *Journal of Physical Chemistry C*, **2015**, 119, 6777-6784	3.8	4
29	Experimental and theoretical study of Eu2(MoO4)3 under compression. *Journal of Physics Condensed Matter*, **2015**, 27, 465401	1.8	4
28	Ab initio study of BAs under pressure. *Physica Status Solidi (B): Basic Research*, **2003**, 235, 446-451	1.3	4
27	High-pressure monoclinic-monoclinic transition in fergusonite-type HoNbO. *Journal of Physics Condensed Matter*, **2021**, 33,	1.8	4
26	Giant conductivity enhancement: Pressure-induced semiconductor-metal phase transition in Cd0.90Zn0.1Te. *Physical Review B*, **2019**, 99,	3.3	3
25	Arsenolite: a quasi-hydrostatic solid pressure-transmitting medium. *Journal of Physics Condensed Matter*, **2016**, 28, 475403	1.8	3
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