Katsuya Shimizu

List of Publications by Year
in descending order

141 papers	3,990 citations	136950 32 h-index	128289 60 g-index
146 all docs	146 docs citations	146 times ranked	3141 citing authors

#	Article	IF	Citations
1	Room Temperature Superconductivity: Exploration and Prospects by Material Science at Extreme Conditions. Journal of the Institute of Electrical Engineers of Japan, 2022, 142, 89-92.	0.0	0
2	Insulator-metal transition and crossover from negative to positive magnetoresistance in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Cu</mml:mi><mml:mn>2</mml:mn></mml: under high pressure. Physical Review B, 2022, 105, .	3.2	3
3	Persistent Spinâ€“Orbit Mott Insulating State in Highly Compressed Post-Perovskite CaIrO₃. Journal of the Physical Society of Japan, 2022, 91, .	1.6	0
4	Mixed-valence state and structure changes of EuH (xâ€¯=â€¯2 and 2â€¯<â€¯xâ€¯â‰¤â€¯3) under high-pressure H2 atmosphere. Journal of Alloys and Compounds, 2021, 865, 158637.	5.5	2
5	Conical support for double-stage diamond anvil apparatus. High Pressure Research, 2020, 40, 12-21.	1.2	6
6	Surface structure on diamond foils generated by spatially nonuniform laser irradiation. Scientific Reports, 2020, 10, 9017.	3.3	1
7	Antiferromagnetism and Valence Fluctuation of EuCd11 at High Pressure. , 2020, , .		0
8	Investigation of Superconductivity in Hydrogen-rich Systems. Journal of the Physical Society of Japan, 2020, 89, 051005.	1.6	8
9	Superconductivity of lanthanum hydride synthesized using AlH₃ as a hydrogen source. Superconductor Science and Technology, 2020, 33, 114004.	3.5	11
10	Electrical transport measurements for superconducting sulfur hydrides using boron-doped diamond electrodes on beveled diamond anvil. Superconductor Science and Technology, 2020, 33, 124005.	3.5	7
11	Beryllium polyhydride <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Be</mml:mi><mml:mn>4</mml:mn></mml: mathvariant="normal">H</mml:mi><mml:mn>8</mml:mn></mml:msub><mml:msub><mml:mrow><mml:mo>(</mml:mo><mml:msub> synthesized at high pressure and temperature. Physical Review Materials, 2020, 4, .	2.4	8
12	Hydrogen-Storing Salt NaCl(H₂) Synthesized at High Pressure and High Temperature. Journal of Physical Chemistry C, 2019, 123, 25074-25080.	3.1	1
13	Materials informatics based on evolutionary algorithms: Application to search for superconducting hydrogen compounds. Physical Review B, 2019, 100, .	3.2	39
14	Superconductivity of the hydrogen-rich metal hydride <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi mathvariant="normal">L</mml:mi><mml:msub><mml:mi mathvariant="normal">i</mml:mi><mml:mn>5</mml:mn></mml:msub><mml:mi>Mo</mml:mi><mml:msub><mml:mi mathvariant="normal">H</mml:mi><mml:mn>11</mml:mn></mml:msub></mml:mrow></mml:math> under high pressure. Physical Review B, 2019, 99, .	3.2	39
15	Superconducting phaseÂdiagram of H3S under high magnetic fields. Nature Communications, 2019, 10, 2522.	12.8	62
16	Superconductivity of platinum hydride. Physical Review B, 2019, 99, .	3.2	23
17	Superconductivity of Pure H₃S Synthesized from Elemental Sulfur and Hydrogen. Journal of the Physical Society of Japan, 2019, 88, 123701.	1.6	33
18	Searching for Superconducting Hydrides â€"The Experimental Achievementsâ€". Review of High Pressure Science and Technology/Koatsuryoku No Kagaku To Gijutsu, 2018, 28, 268-280.	0.0	1

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19	First-Principles Study on Superconductivity of P- and Cl-Doped H₃S. Journal of the Physical Society of Japan, 2018, 87, 124711.	1.6	25
20	Recent Progress on High-Temperature Superconducting Sulfur Hydride. Review of High Pressure Science and Technology/Koatsuryoku No Kagaku To Gijutsu, 2018, 28, 251-259.	0.0	0
21	Superconductivity and structural studies of highly compressed hydrogen sulfide. Physica C: Superconductivity and Its Applications, 2018, 552, 27-29.	1.2	10
22	Superconducting elements under high pressure. Physica C: Superconductivity and Its Applications, 2018, 552, 30-33.	1.2	11
23	Two-year progress in experimental investigation on high-temperature superconductivity of sulfur hydride. Japanese Journal of Applied Physics, 2017, 56, 05FA13.	1.5	14
24	Lithium polyhydrides synthesized under high pressure and high temperature. Journal of Raman Spectroscopy, 2017, 48, 1222-1228.	2.5	7
25	Preparation and characterization of a new graphite superconductor: Ca0.5Sr0.5C6. Scientific Reports, 2017, 7, 7436.	3.3	5
26	Phase Stability and Superconductivity of Compressed Argonâ€“Hydrogen Compounds from First-Principles. Journal of the Physical Society of Japan, 2017, 86, 124711.	1.6	6
27	Structural phase transition of potassium under high-pressure and low-temperature condition. Journal of Physics: Conference Series, 2017, 950, 042020.	0.4	2
28	Electronic Properties of Elements at Mbar Pressure and Low Temperature. Review of High Pressure Science and Technology/Koatsuryoku No Kagaku To Gijutsu, 2017, 27, 144-148.	0.0	0
29	Origin of Pressure-induced Superconducting Phase in KxFe2â^'ySe2 studied by Synchrotron X-ray Diffraction and Spectroscopy. Scientific Reports, 2016, 6, 30946.	3.3	16
30	Crystal structure of the superconducting phase of sulfur hydride. Nature Physics, 2016, 12, 835-838.	16.7	392
31	Chemical Trend of Superconducting Critical Temperatures in Hole-Doped CuBO₂, CuAlO₂, CuGaO₂, and CuInO₂. Journal of the Physical Society of Japan, 2016, 85, 094711.	1.6	7
32	Pressure-induced polyamorphism in a main-group metallic glass. Physical Review B, 2016, 94, .	3.2	14
33	Superconducting H5S2 phase in sulfur-hydrogen system under high-pressure. Scientific Reports, 2016, 6, 23160.	3.3	56
34	Experimental determination of the electrical resistivity of iron at Earthâ€™s core conditions. Nature, 2016, 534, 95-98.	27.8	209
35	Fabrication of new superconducting materials, CaxK1â^'xCy (0Â<ÂxÂ<Â1). Carbon, 2016, 100, 641-646.	10.3	12
36	Pressure-Induced Valence Transition and Heavy Fermion State in Eu2Ni3Ge5 and EuRhSi3. Journal of the Physical Society of Japan, 2015, 84, 053701.	1.6	24

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37	Phase boundary of hot dense fluid hydrogen. Scientific Reports, 2015, 5, 16560.	3.3	72
38	Pressure dependence of superconductive transition temperature on KxFe2-ySe2. Journal of Physics: Conference Series, 2015, 592, 012070.	0.4	4
39	Electrical resistance of SrFeO2 at ultra high pressure. Journal of Physics: Conference Series, 2015, 592, 012041.	0.4	2
40	Multiferroicity in orthorhombicRMnO3(R=Dy,Tb, andGd) under high pressure. Physical Review B, 2015, 91, .	3.2	48
41	Superconductivity of compressed solid argon from first principles. Physical Review B, 2015, 91, .	3.2	3
42	Review on distorted face-centered cubic phase in yttrium via genetic algorithm. High Pressure Research, 2015, 35, 37-41.	1.2	7
43	Superconductivity from insulating elements under high pressure. Physica C: Superconductivity and Its Applications, 2015, 514, 46-49.	1.2	14
44	Superconductivity in aromatic hydrocarbons. Physica C: Superconductivity and Its Applications, 2015, 514, 199-205.	1.2	25
45	Superconductivity in room-temperature stable electride and high-pressure phases of alkali metals. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2015, 373, 20140450.	3.4	39
46	Magnetic-field-induced ferroelectric polarization flop under pressure in TbMnO₃. Journal of Physics: Conference Series, 2015, 592, 012118.	0.4	0
47	Emergence of double-dome superconductivity in ammoniated metal-doped FeSe. Scientific Reports, 2015, 5, 9477.	3.3	39
48	Simultaneous Measurements of Dielectric Properties and AC Calorimetry under High Pressure with Using Diamond Anvil Cell. Review of High Pressure Science and Technology/Koatsuryoku No Kagaku To Gijutsu, 2015, 25, 298-307.	0.0	0
49	Phase with pressure-induced shuttlewise deformation in dense solid atomic hydrogen. Physical Review B, 2014, 90, .	3.2	10
50	Collapse of CuO Double Chains and Suppression of Superconductivity in High-Pressure Phase of YBa₂Cu₄O₈. Journal of the Physical Society of Japan, 2014, 83, 093601.	1.6	10
51	Metallization of solid iodine in phase I: X-ray diffraction measurements, electrical resistance measurements, andab initiocalculations. High Pressure Research, 2013, 33, 186-190.	1.2	5
52	Pressure-induced stacking sequence variations in gold from first principles. Physical Review B, 2013, 88, .	3.2	15
53	Pressure-induced metal-insulator transition of the mott insulator Ba2IrO4. Journal of the Korean Physical Society, 2013, 63, 349-351.	0.7	4
54	Strong enhancement of superconductivity in inorganic electride 12CaOÂ·7Al2O3:eâ¯ under high pressure. Journal of the Korean Physical Society, 2013, 63, 477-480.	0.7	15

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55	Pressure effects on the magnetoelectric properties of a multiferroic triangular-lattice antiferromagnet CuCrO<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math>. Physical Review B, 2013, 87, .	3.2	31
56	Ca-VII: A Chain Ordered Host-Guest Structure of Calcium above 210ÂGPa. Physical Review Letters, 2013, 110, 235501.	7.8	38
57	First-principles study on superconductivity of the goldâ€“indium alloy under high pressure. High Pressure Research, 2013, 33, 152-157.	1.2	1
58	Valence ordering in the intermediate-valence magnet YbPd. Physical Review B, 2013, 88, .	3.2	19
59	Interplay between Charge and Magnetic Orderings in YbPd. Journal of the Physical Society of Japan, 2013, 82, 084706.	1.6	9
60	Superconducting and Martensitic Transitions of V₃Si and Nb₃Sn under High Pressure. Journal of the Physical Society of Japan, 2012, 81, SB026.	1.6	8
61	Pressure-induced novel superconductivity and heavy fermion state in rare earth compounds. Journal of Physics: Conference Series, 2012, 400, 022028.	0.4	3
62	Pressure-Induced Metallization of Yttrium Trihydride, YH3. Journal of the Physical Society of Japan, 2012, 81, SB041.	1.6	9
63	Crystal Structure of High-Pressure Phases V and VI of Potassium Dihydrogen Phosphate. Journal of the Physical Society of Japan, 2012, 81, 064706.	1.6	2
64	First-principles study on superconductivity of simple cubic, modulated and simple hexagonal phases in phosphorus. High Pressure Research, 2012, 32, 3-10.	1.2	6
65	The Novel Phase Diagram of YbPd. Journal of Physics: Conference Series, 2012, 391, 012045.	0.4	2
66	First-principles molecular dynamics study on simple cubic calcium: comparison with simple cubic phosphorus. High Pressure Research, 2012, 32, 11-17.	1.2	1
67	Development of the Valence Fluctuation in the Nearly Divalent Compound YbCu₂Ge₂under High Pressure. Journal of the Physical Society of Japan, 2012, 81, SB054.	1.6	8
68	Dielectric and AC-Calorimetry Measurements of SmMnO₃under High Pressure. Journal of the Physical Society of Japan, 2012, 81, SB036.	1.6	13
69	First-Principles Molecular Dynamics Simulation for Calcium under High-Pressure: Thermodynamic Effect on Simple Cubic Structure. Journal of the Physical Society of Japan, 2012, 81, 124601.	1.6	3
70	First-principles study on superconductivity of solid oxygen. High Pressure Research, 2012, 32, 457-463.	1.2	3
71	Experimental and Theoretical Evidence for Pressure-Induced Metallization in FeO with Rocksalt-Type Structure. Physical Review Letters, 2012, 108, 026403.	7.8	111
72	Observation of Superconductivity at Very High Pressure and Low Temperature -Pressure-Induced High Temperature Superconductivity of Calcium-. Zairyo/Journal of the Society of Materials Science, Japan, 2012, 61, 399-401.	0.2	0

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73	Superconducting state of Ca-VII below a critical temperature of 29 K at a pressure of 216 GPa. Physical Review B, 2011, 83, .	3.2	80
74	Structural and electrical transport properties of FeH_xunder high pressures and low temperatures. High Pressure Research, 2011, 31, 64-67.	1.2	9
75	(P,T) Phase Diagram of Clathrate Superconductor Ba24Ge100. Journal of Physics: Conference Series, 2011, 273, 012079.	0.4	0
76	Sample dependence of superconductivity for V₃Si under high pressure. Journal of Physics: Conference Series, 2011, 273, 012105.	0.4	1
77	Suppression of metal-insulator transition at high pressure and pressure-induced magnetic ordering in pyrochlore oxide Nd<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow /><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:msub></mml:mrow></mml:math>Ir<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow /><mml:mrow><mml:mn>2</mml:mn></mml:mrow	3.2	47
78	Cryogenic implementation of charging diamond anvil cells with H2 and D2. Review of Scientific Instruments, 2011, 82, 105109.	1.3	16
79	Electrical Resistance Measurement Techniques for Metal Hydrides under High-Pressure H2 Conditions & Electrical Transport and Structural Properties of FeHx. Review of High Pressure Science and Technology/Koatsuryoku No Kagaku To Gijutsu, 2011, 21, 190-196.	0.0	1
80	Pressure investigation of superconductivity of V₃Si. Journal of Physics: Conference Series, 2010, 200, 012202.	0.4	7
81	Superconductivity in Î±-boron at Mbar pressure. Physica C: Superconductivity and Its Applications, 2010, 470, S631-S632.	1.2	18
82	Pressure-induced superconductivity in non-centrosymmetric compound CeIrGe3. Physica C: Superconductivity and Its Applications, 2010, 470, S543-S544.	1.2	27
83	Review of High-Pressure Induced Superconductivity in Single Elements. Review of High Pressure Science and Technology/Koatsuryoku No Kagaku To Gijutsu, 2010, 20, 133-139.	0.0	0
84	High-pressure experimental evidence for metal FeO with normal NiAs-type structure. Physical Review B, 2010, 82, .	3.2	29
85	Pressure-induced phase transition, metallization, and superconductivity in boron triiodide. Physical Review B, 2010, 82, .	3.2	17
86	Ca-VI: A high-pressure phase of calcium above 158 GPa. Physical Review B, 2010, 81, .	3.2	39
87	Electrical conductivities of pyrolitic mantle and MORB materials up to the lowermost mantle conditions. Earth and Planetary Science Letters, 2010, 289, 497-502.	4.4	59
88	The electrical resistance measurements of (Mg,Fe)SiO3 perovskite at high pressures and implications for electronic spin transition of iron. Physics of the Earth and Planetary Interiors, 2010, 180, 154-158.	1.9	28
89	Pressure-induced superconducting state in crystalline boron nanowires. Physical Review B, 2009, 79, .	3.2	18
90	Magnetic Properties of RCoGe₃(R: Ce, Pr, and Nd) and Strong Anisotropy of the Upper Critical Field in Non-centrosymmetric Compound CeCoGe₃. Journal of the Physical Society of Japan, 2009, 78, 124713.	1.6	35

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91	Direct observation of a pressure-induced metal-to-semiconductor transition in lithium. Nature, 2009, 458, 186-189.	27.8	228
92	Crystal Structures of Calcium IV and V under High Pressure. Physical Review Letters, 2008, 101, 095503.	7.8	47
93	Appearance of Pressure-Induced Magnetic Phase in Î±-Manganese. Journal of the Physical Society of Japan, 2008, 77, 025001.	1.6	11
94	Pressure-Induced Superconductivity in Antiferromagnet CePd₅Al₂. Journal of the Physical Society of Japan, 2008, 77, 043701.	1.6	42
95	The Electrical Conductivity of Post-Perovskite in Earth's D'' Layer. Science, 2008, 320, 89-91.	12.6	127
96	Measurements of Electrical Conductivity of (Mg,Fe)SiO3 Post-Perovskite using Laser-Heated Diamond-Anvil Cell. Review of High Pressure Science and Technology/Koatsuryoku No Kagaku To Gijutsu, 2008, 18, 260-266.	0.0	0
97	Generation of Multi-Megabar Pressure Using Nano-Polycrystalline Diamond Anvils. Japanese Journal of Applied Physics, 2007, 46, L640-L641.	1.5	34
98	Measurement of Electrical Resistance and Raman Spectrum of Î±-Boron under High Pressure. Journal of the Physical Society of Japan, 2007, 76, 19-20.	1.6	14
99	Crystal Structure and Electrical Property of Calcium under Very High Pressure. Journal of the Physical Society of Japan, 2007, 76, 25-26.	1.6	12
100	Pressure Dependence of the Superconductivity in Strontium. Journal of the Physical Society of Japan, 2007, 76, 23-24.	1.6	6
101	The effect of iron spin transition on electrical conductivity of (Mg,Fe)O magnesiowuestite. Proceedings of the Japan Academy Series B: Physical and Biological Sciences, 2007, 83, 97-100.	3.8	33
102	New superconductors under very high pressure. Journal of Physics Condensed Matter, 2007, 19, 125207.	1.8	8
103	Electrical Properties of YH3under High Pressure. Journal of the Physical Society of Japan, 2007, 76, 86-87.	1.6	7
104	Pressure-Induced Metallization of Molecular Crystal BI3. Journal of the Physical Society of Japan, 2007, 76, 33-34.	1.6	1
105	Structural analysis of the filled skutterudite at high pressure and low temperature. Physica B: Condensed Matter, 2006, 378-380, 199-200.	2.7	0
106	Superconductivity from magnetic elements under high pressure. Physica B: Condensed Matter, 2006, 378-380, 632-635.	2.7	9
107	Superconductivity of Ca Exceeding 25 K at Megabar Pressures. Journal of the Physical Society of Japan, 2006, 75, 083703.	1.6	119
108	Pressure-Induced Superconductivity of the Filled Skutterudite. Review of High Pressure Science and Technology/Koatsuryoku No Kagaku To Gijutsu, 2006, 16, 350-356.	0.0	0

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109	The phase transition of PbHPO4. Physica B: Condensed Matter, 2005, 359-361, 1303-1305.	2.7	5
110	High-pressure effect on the electrical resistivity in and. Physica B: Condensed Matter, 2005, 359-361, 266-268.	2.7	3
111	The phase transition of CuCrZrS4 at high pressure. Physica B: Condensed Matter, 2005, 359-361, 1213-1215.	2.7	5
112	PRESSURE-INDUCED SUPERCONDUCTIVITY IN SYMPLE METALS. International Journal of Modern Physics B, 2005, 19, 259-261.	2.0	1
113	Pressure-induced Superconductivity in Elemental Materials. Journal of the Physical Society of Japan, 2005, 74, 1345-1357.	1.6	66
114	New High-Pressure Phase of Calcium. Journal of the Physical Society of Japan, 2005, 74, 2391-2392.	1.6	70
115	Compression of polyhedral graphite up to 43 GPa and x-ray diffraction study on elasticity and stability of the graphite phase. Applied Physics Letters, 2004, 84, 5112-5114.	3.3	26
116	Pressure-Induced Superconductivity in Filled Skutterudite PrRu4P12. Journal of the Physical Society of Japan, 2004, 73, 2370-2372.	1.6	38
117	Pressure-induced superconductivity in Li and Fe. Physica C: Superconductivity and Its Applications, 2004, 408-410, 750-753.	1.2	3
118	On the phase-transition in anthracene induced by high pressure. Solid State Communications, 2004, 129, 103-106.	1.9	27
119	Superconductivity in Compressed Lithium at 20 K.. ChemInform, 2003, 34, no-no.	0.0	0
120	Electrical resistivity of CeTIn5 (T=Rh, Ir) under high pressure. Physica C: Superconductivity and Its Applications, 2003, 388-389, 539-540.	1.2	29
121	Magnetic - nonmagnetic transition of U₃P₄ at high pressures. Journal of Nuclear Science and Technology, 2002, 39, 191-194.	1.3	8
122	Superconductivity in compressed lithium at 20â€‰K. Nature, 2002, 419, 597-599.	27.8	321
123	15 years of Searching for Superconductivity under Ultra-high Pressure.. Review of High Pressure Science and Technology/Koatsuryoku No Kagaku To Gijutsu, 2002, 12, 315-322.	0.0	0
124	Superconductivity of CeRhIn5 under High Pressure. Journal of the Physical Society of Japan, 2001, 70, 3362-3367.	1.6	98
125	Pressure-induced insulator-to-metal transition and superconductivity in iodanil, C6I4O2. Physica B: Condensed Matter, 2001, 304, 6-11.	2.7	10
126	Superconductivity in the non-magnetic state of iron under pressure. Nature, 2001, 412, 316-318.	27.8	269

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127	Specific heat and effect of pressure on the electrical resistivity of CePtGa single crystal. Physica B: Condensed Matter, 2000, 284-288, 1321-1322.	2.7	4
128	Molecular Solid. Metallization and Superconductivity in Oxygen under High Pressure.. Review of High Pressure Science and Technology/Koatsuryoku No Kagaku To Gijutsu, 2000, 10, 194-199.	0.0	1
129	Introduction to DAC Technique. II. Application of DAC for Exploring Superconductivity.. Review of High Pressure Science and Technology/Koatsuryoku No Kagaku To Gijutsu, 1999, 9, 293-299.	0.0	1
130	Enhancement of Superconducting Transition Temperature in CeCu2Ge2under High Pressures. Journal of the Physical Society of Japan, 1998, 67, 996-999.	1.6	26
131	Pressure-Induced Superconductivity of SnI4.. Review of High Pressure Science and Technology/Koatsuryoku No Kagaku To Gijutsu, 1998, 7, 595-597.	0.0	3
132	Introduction to DAC Techniques. Low Temperature Technique for DAC.. Review of High Pressure Science and Technology/Koatsuryoku No Kagaku To Gijutsu, 1998, 8, 41-48.	0.0	1
133	Observation of Pressure-Induced Superconductivity of Sulfur. Journal of the Physical Society of Japan, 1997, 66, 2564-2565.	1.6	59
134	Electrical Resistance Measurement of Oxygen under High Pressure. Journal of the Physical Society of Japan, 1996, 65, 1527-1528.	1.6	13
135	Pressure-Induced Superconductivity ofSnI4. Journal of the Physical Society of Japan, 1996, 65, 3400-3401.	1.6	15
136	Superconductivity of Calcium under High Pressures. Journal of the Physical Society of Japan, 1996, 65, 1924-1926.	1.6	57
137	Pressure-induced superconductivity of iodanil. European Physical Journal D, 1996, 46, 817-818.	0.4	19
138	Observation of superconductivity of calcium under high pressures. European Physical Journal D, 1996, 46, 869-870.	0.4	2
139	Hall Effect of Iodine in High Pressure. Journal of the Physical Society of Japan, 1994, 63, 3207-3209.	1.6	17
140	Experiments under Extreme Conditions of Very Low Temperature and Ultra High Pressure Using Diamond Anvil Cell.. Review of High Pressure Science and Technology/Koatsuryoku No Kagaku To Gijutsu, 1994, 3, 375-377.	0.0	0
141	Pressure-Induced Superconductivity of Iodine. Journal of the Physical Society of Japan, 1992, 61, 3853-3855.	1.6	36