Ryosuke Sinmyo

List of Publications by Year
in descending order

53 papers	1,856 citations	257450 24 h-index	265206 42 g-index
53 all docs	53 docs citations	53 times ranked	1435 citing authors

#	Article	IF	Citations
1	The electrical conductivity of Fe4O5, Fe5O6, and Fe7O9 up to 60 GPa. Physics and Chemistry of Minerals, 2022, 49, .	0.8	2
2	Discovery of Elgoresyite, (Mg,Fe)5Si2O9: Implications for Novel Iron-Magnesium Silicates in Rocky Planetary Interiors. ACS Earth and Space Chemistry, 2021, 5, 2124-2130.	2.7	6
3	Anomalous compressibility in (Fe,Al)-bearing bridgmanite: implications for the spin state of iron. Physics and Chemistry of Minerals, 2020, 47, 1.	0.8	3
4	Siliconâ€Depleted Presentâ€Day Earth's Outer Core Revealed by Sound Velocity Measurements of Liquid Feâ€Si Alloy. Journal of Geophysical Research: Solid Earth, 2020, 125, e2020JB019399.	3.4	10
5	Discovery of Newâ€Structured Postâ€Spinel MgFe 2 O 4 : Crystal Structure and Highâ€Pressure Phase Relations. Geophysical Research Letters, 2020, 47, e2020GL087490.	4.0	6
6	A portable on-axis laser-heating system for near-90Â° X-ray spectroscopy: application to ferropericlase and iron silicide. Journal of Synchrotron Radiation, 2020, 27, 414-424.	2.4	14
7	Phase transition boundary between fcc and hcp structures in Fe-Si alloy and its implications for terrestrial planetary cores. American Mineralogist, 2019, 104, 94-99.	1.9	17
8	Effect of Fe 3+ on Phase Relations in the Lower Mantle: Implications for Redox Melting in Stagnant Slabs. Journal of Geophysical Research: Solid Earth, 2019, 124, 12484-12497.	3.4	8
9	The stability of Fe5O6 and Fe4O5 at high pressure and temperature. American Mineralogist, 2019, 104, 1356-1359.	1.9	16
10	Melting Temperature of Iron Determined in an Internal-Resistance-Heated Diamond-Anvil Cell. Review of High Pressure Science and Technology/Koatsuryoku No Kagaku To Gijutsu, 2019, 29, 113-120.	0.0	0
11	Melting curve of iron to 290 GPa determined in a resistance-heated diamond-anvil cell. Earth and Planetary Science Letters, 2019, 510, 45-52.	4.4	81
12	Effect of spin transition of iron on the thermal conductivity of (Fe, Al)-bearing bridgmanite. Earth and Planetary Science Letters, 2019, 520, 188-198.	4.4	13
13	Hydrogen Limits Carbon in Liquid Iron. Geophysical Research Letters, 2019, 46, 5190-5197.	4.0	42
14	Melting Experiments on Liquidus Phase Relations in the Feâ€Sâ€O Ternary System Under Core Pressures. Geophysical Research Letters, 2019, 46, 5137-5145.	4.0	16
15	Melting Curve and Equation of State of Î²â€Fe 7 N 3 : Nitrogen in the Core?. Journal of Geophysical Research: Solid Earth, 2019, 124, 3448-3457.	3.4	11
16	Melting experiments on the Feâ€“C binary system up to 255 GPa: Constraints on the carbon content in the Earth's core. Earth and Planetary Science Letters, 2019, 515, 135-144.	4.4	43
17	Phase relations in the system Feâ€“Niâ€“Si to 200 GPa and 3900 K and implications for Earth's core. Earth and Planetary Science Letters, 2019, 512, 83-88.	4.4	17
18	Physical and chemical properties of the mantle minerals explored by high-pressure and high-temperature experiments. Ganseki Kobutsu Kagaku, 2019, 48, 36-45.	0.1	0

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19	Sound velocities of skiagiteâ€"ironâ€"majorite solid solution to 56ÂGPa probed by nuclear inelastic scattering. Physics and Chemistry of Minerals, 2018, 45, 397-404.	0.8	8
20	Experimental Determination of Eutectic Liquid Compositions in the MgOâ€SiO₂ System to the Lowermost Mantle Pressures. Geophysical Research Letters, 2018, 45, 9552-9558.	4.0	8
21	Melting experiments on Feâ€"Siâ€"S alloys to core pressures: Silicon in the core?. American Mineralogist, 2018, 103, 742-748.	1.9	22
22	Crystallization of silicon dioxide and compositional evolution of the Earthâ€™s core. Nature, 2017, 543, 99-102.	27.8	161
23	Melting experiments on Feâ€"Fe 3 S system to 254 GPa. Earth and Planetary Science Letters, 2017, 464, 135-141.	4.4	73
24	The spin state of Fe³⁺in lower mantle bridgmanite. American Mineralogist, 2017, 102, 1263-1269.	1.9	21
25	Electrical conductivity of NaCl-bearing aqueous fluids to 600ÂÂ°C and 1ÂGPa. Contributions To Mineralogy and Petrology, 2017, 172, 1.	3.1	72
26	Synthesis and crystal structure of LiNbO3-type Mg3Al2Si3O12: A possible indicator of shock conditions of meteorites. American Mineralogist, 2017, 102, 1947-1952.	1.9	14
27	The effect of iron and aluminum incorporation on lattice thermal conductivity of bridgmanite at the Earth's lower mantle. Earth and Planetary Science Letters, 2017, 474, 25-31.	4.4	25
28	Perovskite in Earthâ€™s deep interior. Science, 2017, 358, 734-738.	12.6	54
29	Critical behavior of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi mathvariant="normal">M</mml:mi><mml:msub><mml:mi mathvariant="normal">g</mml:mi><mml:mrow><mml:mn>1</mml:mn><mml:mo>â€"</mml:mo><mml:mi>x</mml:mi></mml:mrow> mathvariant="normal">F</mml:mi><mml:msub><mml:mi mathvariant="normal">e</mml:mi><mml:mi>x</mml:mi></mml:msub><mml:mi mathvariant="normal">O	3.2	8
30	Stability of Fe,Al-bearing bridgmanite in the lower mantle and synthesis of pure Fe-bridgmanite. Science Advances, 2016, 2, e1600427.	10.3	31
31	Discovery of Fe7O9: a new iron oxide with a complex monoclinic structure. Scientific Reports, 2016, 6, 32852.	3.3	50
32	Sound velocities of bridgmanite from density of states determined by nuclear inelastic scattering and first-principles calculations. Progress in Earth and Planetary Science, 2016, 3, .	3.0	6
33	Oxidation state of the lower mantle: In situ observations of the iron electronic configuration in bridgmanite at extreme conditions. Earth and Planetary Science Letters, 2015, 423, 78-86.	4.4	30
34	Fate of MgSiO ₃ melts at coreâ€"mantle boundary conditions. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 14186-14190.	7.1	72
35	High Poisson's ratio of Earth's inner core explained by carbon alloying. Nature Geoscience, 2015, 8, 220-223.	12.9	113
36	Lower mantle electrical conductivity based on measurements of Al,â€‰Fe-bearing perovskite under lower mantle conditions. Earth and Planetary Science Letters, 2014, 393, 165-172.	4.4	41

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37	Crystal chemistry of Fe3+-bearing (Mg, Fe)SiO3 perovskite: a single-crystal X-ray diffraction study. Physics and Chemistry of Minerals, 2014, 41, 409-417.	0.8	16
38	Electronic spin state of Fe,Al-containing MgSiO3 perovskite at lower mantle conditions. Lithos, 2014, 189, 167-172.	1.4	19
39	The influence of solid solution on elastic wave velocity determination in (Mg,Fe)O using nuclear inelastic scattering. Physics of the Earth and Planetary Interiors, 2014, 229, 16-23.	1.9	7
40	Iron spin state in silicate glass at high pressure: Implications for melts in the EarthÊ¼s lower mantle. Earth and Planetary Science Letters, 2014, 385, 130-136.	4.4	16
41	Iron partitioning in pyrolitic lower mantle. Physics and Chemistry of Minerals, 2013, 40, 107-113.	0.8	42
42	Iron spin state in silicate perovskite at conditions of the Earth's deep interior. High Pressure Research, 2013, 33, 663-672.	1.2	27
43	Effect of iron oxidation state on the electrical conductivity of the Earthâ€™s lower mantle. Nature Communications, 2013, 4, 1427.	12.8	60
44	Portable double-sided laser-heating system for MÃ¶ssbauer spectroscopy and X-ray diffraction experiments at synchrotron facilities with diamond anvil cells. Review of Scientific Instruments, 2012, 83, 124501.	1.3	50
45	The valence state and partitioning of iron in the Earth's lowermost mantle. Journal of Geophysical Research, 2011, 116, .	3.3	54
46	The Soret diffusion in laser-heated diamond-anvil cell. Physics of the Earth and Planetary Interiors, 2010, 180, 172-178.	1.9	74
47	The advanced ion-milling method for preparation of thin film using ion slicer: Application to a sample recovered from diamond-anvil cell. Review of Scientific Instruments, 2009, 80, 013901.	1.3	22
48	Partitioning of iron between perovskite/postperovskite and ferropericlase in the lower mantle. Journal of Geophysical Research, 2008, 113, .	3.3	73
49	The Electrical Conductivity of Post-Perovskite in Earth's D'' Layer. Science, 2008, 320, 89-91.	12.6	127
50	Ferric iron content in (Mg,Fe)SiO3 perovskite and post-perovskite at deep lower mantle conditions. American Mineralogist, 2008, 93, 1899-1902.	1.9	17
51	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
52	Determination of post-perovskite phase transition boundary in MgSiO3using Au and MgO pressure standards. Geophysical Research Letters, 2006, 33, n/a-n/a.	4.0	94
53	Ferric iron in Al-bearing post-perovskite. Geophysical Research Letters, 2006, 33, .	4.0	44