

Valerio Cerantola

List of Publications by Year in descending order

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Version: 2024-02-01

54

papers

1,178

citations

361413

20

h-index

454955

30

g-index

55

all docs

55

docs citations

55

times ranked

1318

citing authors

#	ARTICLE	IF	CITATIONS
1	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msup><mml:mrow><mml:mi>Fe</mml:mi></mml:mrow> -hosting carbon phases in the deep Earth. Physical Review B, 2022, 105, .		
2	Structural and electron spin state changes in an x-ray heated iron carbonate system at the Earth's lower mantle pressures. Physical Review Research, 2022, 4, .	3.6	6
3	Revealing the Complex Nature of Bonding in the Binary High-Pressure Compound <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>FeO</mml:mi></mml:mrow><mml:mrow><mml:mi>2</mml:mi></mml:mrow><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math>. Physical Review Letters, 2021, 126, 106001.	7.8	21
4	Novel experimental setup for megahertz X-ray diffraction in a diamond anvil cell at the High Energy Density (HED) instrument of the European X-ray Free-Electron Laser (EuXFEL). Journal of Synchrotron Radiation, 2021, 28, 688-706.	2.4	21
5	New frontiers in extreme conditions science at synchrotrons and free electron lasers. Journal of Physics Condensed Matter, 2021, 33, 274003.	1.8	12
6	The High Energy Density Scientific Instrument at the European XFEL. Journal of Synchrotron Radiation, 2021, 28, 1393-1416.	2.4	33
7	Demonstration of an x-ray Raman spectroscopy setup to study warm dense carbon at the high energy density instrument of European XFEL. Physics of Plasmas, 2021, 28, 082701.	1.9	11
8	High-resolution inelastic x-ray scattering at the high energy density scientific instrument at the European X-Ray Free-Electron Laser. Review of Scientific Instruments, 2021, 92, 013101.	1.3	15
9	Effect of redox on Fe-Mg-Mn exchange between olivine and melt and an oxybarometer for basalts. Contributions To Mineralogy and Petrology, 2020, 175, 1.	3.1	42
10	Redox state determination of eclogite xenoliths from Udachnaya kimberlite pipe (Siberian craton), with some implications for the graphite/diamond formation. Contributions To Mineralogy and Petrology, 2020, 175, 1.	3.1	14
11	An approach for the measurement of the bulk temperature of single crystal diamond using an X-ray free electron laser. Scientific Reports, 2020, 10, 14564.	3.3	21
12	Seismic detectability of carbonates in the deep Earth: A nuclear inelastic scattering study. American Mineralogist, 2020, 105, 325-332.	1.9	9
13	Design and performance characterisation of the HAPG von HÄJmos Spectrometer at the High Energy Density Instrument of the European XFEL. Journal of Instrumentation, 2020, 15, P11033-P11033.	1.2	15
14	A portable on-axis laser-heating system for near-90° X-ray spectroscopy: application to ferropericlase and iron silicide. Journal of Synchrotron Radiation, 2020, 27, 414-424.	2.4	14
15	Experimental investigation of FeCO ₃ (siderite) stability in Earth's lower mantle using XANES spectroscopy. American Mineralogist, 2019, 104, 1083-1091.	1.9	11
16	Local Structure of Ferroic Iron Formates at Low Temperature and High Pressure Studied by Mössbauer Spectroscopy. Journal of Physical Chemistry C, 2019, 123, 21676-21684.	3.1	4
17	A versatile diamond anvil cell for X-ray inelastic, diffraction and imaging studies at synchrotron facilities. Review of Scientific Instruments, 2019, 90, 095107.	1.3	3
18	Carbon-Bearing Phases throughout Earth's Interior. , 2019, , 66-88.		7

#	ARTICLE	IF	CITATIONS
19	Combining X-ray K ² _{1,3}, valence-to-core, and X-ray Raman spectroscopy for studying Earth materials at high pressure and temperature: the case of siderite. <i>Journal of Analytical Atomic Spectrometry</i> , 2019, 34, 384-393.	3.0	17
20	Magnetism in cold subducting slabs at mantle transition zone depths. <i>Nature</i> , 2019, 570, 102-106.	27.8	33
21	Magnetic and electronic properties of magnetite across the high pressure anomaly. <i>Scientific Reports</i> , 2019, 9, 4464.	3.3	19
22	Comparative study of the influence of pulsed and continuous wave laser heating on the mobilization of carbon and its chemical reaction with iron in a diamond anvil cell. <i>Journal of Applied Physics</i> , 2019, 125, .	2.5	17
23	Phase Stability of Spin-Crossover Nanoparticles Investigated by Synchrotron MÃ¶ssbauer Spectroscopy and Small-Angle Neutron Scattering. <i>Journal of Physical Chemistry Letters</i> , 2019, 10, 1511-1515.	4.6	7
24	High-pressure synthesis and properties of iron oxides. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2019, 75, e253-e253.	0.1	0
25	Oxidized iron in garnets from the mantle transition zone. <i>Nature Geoscience</i> , 2018, 11, 144-147.	12.9	48
26	The high-pressure behavior of spherocobaltite (CoCO ₃): a single crystal Raman spectroscopy and XRD study. <i>Physics and Chemistry of Minerals</i> , 2018, 45, 59-68.	0.8	9
27	Sound velocities of skiaigiteâ€“ironâ€“majorite solid solution to 56 GPa probed by nuclear inelastic scattering. <i>Physics and Chemistry of Minerals</i> , 2018, 45, 397-404.	0.8	8
28	Beltrandoite, a new root-name in the hÃ¶gbomite supergroup: the Mg end-member magnesiobeltrandoite-2N3S. <i>European Journal of Mineralogy</i> , 2018, 30, 545-558.	1.3	3
29	Stability and nature of the volume collapse of μ -Fe ₂ O ₃ under extreme conditions. <i>Nature Communications</i> , 2018, 9, 4554.	12.8	28
30	Pressure tuning of charge ordering in iron oxide. <i>Nature Communications</i> , 2018, 9, 4142.	12.8	22
31	Pressure-mediated structural transitions in bulk Eu ₂ TiO ₅ . <i>Physical Review B</i> , 2018, 98, .	3.2	13
32	Effect of composition on compressibility of skiaigite-Fe-majorite garnet. <i>American Mineralogist</i> , 2017, 102, 184-191.	1.9	4
33	Direct tomography imaging for inelastic X-ray scattering experiments at high pressure. <i>Journal of Synchrotron Radiation</i> , 2017, 24, 269-275.	2.4	23
34	Magnetic and structural properties of FeC ₃ O ₄ at high pressures. <i>Physical Review B</i> , 2017, 96, .	3.2	13
35	Portable double-sided pulsed laser heating system for time-resolved geoscience and materials science applications. <i>Review of Scientific Instruments</i> , 2017, 88, 084501.	1.3	24
36	Stability of iron-bearing carbonates in the deep Earthâ€™s interior. <i>Nature Communications</i> , 2017, 8, 15960.	12.8	84

