

Daniele Antonangeli

List of Publications by Year in descending order

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63
papers

3,217
citations

172457

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56
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63
all docs

63
docs citations

63
times ranked

2222
citing authors

#	ARTICLE	IF	CITATIONS
1	Initial results from the InSight mission on Mars. <i>Nature Geoscience</i> , 2020, 13, 183-189.	12.9	274
2	Effect of light elements on the sound velocities in solid iron: Implications for the composition of Earth's core. <i>Earth and Planetary Science Letters</i> , 2007, 254, 233-238.	4.4	222
3	Constraints on the shallow elastic and anelastic structure of Mars from InSight seismic data. <i>Nature Geoscience</i> , 2020, 13, 213-220.	12.9	207
4	The seismicity of Mars. <i>Nature Geoscience</i> , 2020, 13, 205-212.	12.9	194
5	Terrestrial Accretion Under Oxidizing Conditions. <i>Science</i> , 2013, 339, 1194-1197.	12.6	180
6	Seismic detection of the martian core. <i>Science</i> , 2021, 373, 443-448.	12.6	169
7	Thickness and structure of the martian crust from InSight seismic data. <i>Science</i> , 2021, 373, 438-443.	12.6	140
8	Composition of the Earth's inner core from high-pressure sound velocity measurements in Fe-Ni-Si alloys. <i>Earth and Planetary Science Letters</i> , 2010, 295, 292-296.	4.4	128
9	Elastic anisotropy in textured hcp-iron to 112 GPa from sound wave propagation measurements. <i>Earth and Planetary Science Letters</i> , 2004, 225, 243-251.	4.4	120
10	Spin Crossover in Ferroperricite at High Pressure: A Seismologically Transparent Transition?. <i>Science</i> , 2011, 331, 64-67.	12.6	118
11	New host for carbon in the deep Earth. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011, 108, 5184-5187.	7.1	118
12	The Earth's core composition from high pressure density measurements of liquid iron alloys. <i>Earth and Planetary Science Letters</i> , 2013, 373, 169-178.	4.4	99
13	Melting of Fe-Ni-Si and Fe-Ni-S alloys at megabar pressures: implications for the core-mantle boundary temperature. <i>Physics and Chemistry of Minerals</i> , 2011, 38, 767-776.	0.8	84
14	Fe-FeO and Fe-Fe ₃ C melting relations at Earth's core-mantle boundary conditions: Implications for a volatile-rich or oxygen-rich core. <i>Earth and Planetary Science Letters</i> , 2017, 473, 94-103.	4.4	77
15	Toward a mineral physics reference model for the Moon's core. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 3916-3919.	7.1	62
16	Melting of MORB at core-mantle boundary. <i>Earth and Planetary Science Letters</i> , 2015, 431, 247-255.	4.4	62
17	Elasticity of Cobalt at High Pressure Studied by Inelastic X-Ray Scattering. <i>Physical Review Letters</i> , 2004, 93, 215505.	7.8	56
18	Simultaneous sound velocity and density measurements of hcp iron up to 93 GPa and 1100 K: An experimental test of the Birch's law at high temperature. <i>Earth and Planetary Science Letters</i> , 2012, 331-332, 210-214.	4.4	52

#	ARTICLE	IF	CITATIONS
19	Properties of iron alloys under the Earth's core conditions. <i>Comptes Rendus - Geoscience</i> , 2014, 346, 130-139.	1.2	51
20	Effect of composition, structure, and spin state on the thermal conductivity of the Earth's lower mantle. <i>Physics of the Earth and Planetary Interiors</i> , 2010, 180, 148-153.	1.9	48
21	Phonons of the anomalous element cerium. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011, 108, 9342-9345.	7.1	47
22	InSight Constraints on the Global Character of the Martian Crust. <i>Journal of Geophysical Research E: Planets</i> , 2022, 127, .	3.6	45
23	Lattice preferred orientation and stress in polycrystalline hcp-Co plastically deformed under high pressure. <i>Journal of Applied Physics</i> , 2006, 100, 023510.	2.5	44
24	Subsurface Structure at the InSight Landing Site From Compliance Measurements by Seismic and Meteorological Experiments. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2020JE006387.	3.6	44
25	Elastic anisotropy in hcp metals at high pressure and the sound wave anisotropy of the Earth's inner core. <i>Geophysical Research Letters</i> , 2006, 33, .	4.0	39
26	Lattice Dynamics of Molybdenum at High Pressure. <i>Physical Review Letters</i> , 2006, 96, 115502.	7.8	38
27	Sound velocity of iron up to 152 GPa by picosecond acoustics in diamond anvil cell. <i>Geophysical Research Letters</i> , 2014, 41, 1459-1464.	4.0	36
28	Elasticity of Hexagonal-Closed-Packed Cobalt at High Pressure and Temperature: A Quasiharmonic Case. <i>Physical Review Letters</i> , 2008, 100, 085501.	7.8	33
29	Anomalous pressure evolution of the axial ratio c/a in hcp cobalt: Interplay between structure, magnetism, and lattice dynamics. <i>Applied Physics Letters</i> , 2008, 92, .	3.3	31
30	Sound velocities and density measurements of solid hcp-Fe and hcp-Fe ϵ -Si (9 wt.%) alloy at high pressure: Constraints on the Si abundance in the Earth's inner core. <i>Earth and Planetary Science Letters</i> , 2018, 482, 446-453.	4.4	29
31	Structure and Density of Fe ϵ Liquid Alloys Under High Pressure. <i>Journal of Geophysical Research: Solid Earth</i> , 2017, 122, 7813-7823.	3.4	28
32	Density measurements and structural properties of liquid and amorphous metals under high pressure. <i>High Pressure Research</i> , 2014, 34, 9-21.	1.2	26
33	Sound velocity of hcp-Fe at high pressure: experimental constraints, extrapolations and comparison with seismic models. <i>Progress in Earth and Planetary Science</i> , 2015, 2, .	3.0	26
34	Equation of State of SiC at Extreme Conditions: New Insight Into the Interior of Carbon ϵ Rich Exoplanets. <i>Journal of Geophysical Research E: Planets</i> , 2018, 123, 2295-2309.	3.6	24
35	Velocity ϵ Density Systematics of Fe ϵ 5wt%Si: Constraints on Si Content in the Earth's Inner Core. <i>Journal of Geophysical Research: Solid Earth</i> , 2019, 124, 3436-3447.	3.4	23
36	Determination of the high pressure elasticity of cobalt from measured interfacial acoustic wave velocities. <i>Applied Physics Letters</i> , 2006, 89, 111920.	3.3	18

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37	Preparation and characterization of single crystal samples for high-pressure experiments. High Pressure Research, 2006, 26, 1-10.	1.2	18
38	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
39	Dynamical and elastic properties of MgSiO ₃ perovskite (bridgmanite). Geophysical Research Letters, 2016, 43, 2568-2575.	4.0	15
40	Structure and elasticity of cubic Fe-Si alloys at high pressures. Physical Review B, 2019, 100, .	3.2	15
41	An integrated method to determine melting temperatures in high-pressure laser-heating experiments. Applied Physics Letters, 2008, 92, .	3.3	13
42	Phonon triggered rhombohedral lattice distortion in vanadium at high pressure. Scientific Reports, 2016, 6, 31887.	3.3	13
43	The Fe-FeSi phase diagram at Mercury's core conditions. Nature Communications, 2022, 13, 387.	12.8	13
44	Liquid properties in the Fe-FeS system under moderate pressure: Tool box to model small planetary cores. American Mineralogist, 2018, , .	1.9	12
45	Sound velocity and equation of state in liquid cesium at high pressure and high temperature. Physical Review B, 2018, 98, .	3.2	10
46	Equation of State of hcp Fe-Ca-Si Alloys and the Effect of C Incorporation Mechanism on the Density of hcp Fe Alloys at 300ÅK. Journal of Geophysical Research: Solid Earth, 2020, 125, e2020JB020159.	3.4	10
47	High-pressure transformations in liquid rubidium. Physical Review Materials, 2020, 4, .	2.4	10
48	Eutectic melting of Fe-3 at% Si-4 at% C up to 200 GPa and implications for the Earth's core. Earth and Planetary Science Letters, 2020, 544, 116382.	4.4	9
49	Axial Compressibility and Thermal Equation of State of Hcp Fe-5wt% Ni-5wt% Si. Minerals (Basel,) Tj ETQq1 1.0,784314,rgBT /O	2.0	8
50	Thermal expansion of liquid Fe-S alloy at high pressure. Earth and Planetary Science Letters, 2021, 563, 116884.	4.4	8
51	High-Pressure Deformation of Iron-Nickel-Silicon Alloys and Implications for Earth's Inner Core. Journal of Geophysical Research: Solid Earth, 2021, 126, e2020JB021077.	3.4	7
52	Amorpheus: a Python-based software for the treatment of X-ray scattering data of amorphous and liquid systems. High Pressure Research, 2022, 42, 69-93.	1.2	7
53	Elasticity and Poisson's ratio of hexagonal close-packed hydrogen at high pressures. Physical Review B, 2017, 95, .	3.2	6
54	Sound velocities and thermodynamical properties of hcp iron at high pressure and temperature. Journal of Physics Condensed Matter, 2022, 34, 344002.	1.8	6

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55	Kinetics of the isostructural \hat{I}^3 to \hat{I}^\pm transition in cerium investigated by ultrasonics. High Pressure Research, 2010, 30, 151-158.	1.2	5
56	Science under Extreme Conditions of Pressures and Temperatures at the ESRF. Synchrotron Radiation News, 2013, 26, 39-44.	0.8	5
57	The Fe-Si-C system at extreme P-T conditions: A possible core crystallization pathway for reduced planets. Geochimica Et Cosmochimica Acta, 2022, 322, 129-142.	3.9	5
58	Low Velocity Zones in the Martian Upper Mantle Highlighted by Sound Velocity Measurements. Geophysical Research Letters, 2021, 48, e2021GL093977.	4.0	4
59	Picosecond Acoustics Technique to Measure the Sound Velocities of Fe-Si Alloys and Si Single-Crystals at High Pressure. Minerals (Basel, Switzerland), 2020, 10, 214.	2.0	3
60	TiC-MgO composite: an X-ray transparent and machinable heating element in a multi-anvil high pressure apparatus. High Pressure Research, 2020, 40, 257-266.	1.2	2
61	Picosecond acoustics: a new way to access elastic properties of materials at pressure and temperature conditions of planetary interiors. Physics and Chemistry of Minerals, 2022, 49, .	0.8	2
62	Determination of indium melting curve at high pressure by picosecond acoustics. Physical Review Materials, 2022, 6, .	2.4	1
63	X-ray diffraction study of phase transformation dynamics of Fe and Fe-Si alloys along the shock Hugoniot using an x-ray free electron laser. Physical Review B, 2022, 105, .	3.2	1