Daniele Antonangeli

List of Publications by Year
in descending order

63	3,217	172457 29	149698 56
papers	citations	h-index	g-index

63	63	63	2222
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	The Fe-FeSi phase diagram at Mercuryâ€™s core conditions. Nature Communications, 2022, 13, 387.	12.8	13
2	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
3	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
4	InSight Constraints on the Global Character of the Martian Crust. Journal of Geophysical Research E: Planets, 2022, 127, .	3.6	45
5	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
6	Determination of indium melting curve at high pressure by picosecond acoustics. Physical Review Materials, 2022, 6, .	2.4	1
7	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
8	Sound velocities and thermodynamical properties of hcp iron at high pressure and temperature. Journal of Physics Condensed Matter, 2022, 34, 344002.	1.8	6
9	Highâ€Pressure Deformation of Ironâ€“Nickelâ€“Silicon Alloys and Implications for Earthâ€™s Inner Core. Journal of Geophysical Research: Solid Earth, 2021, 126, e2020JB021077.	3.4	7
10	Thermal expansion of liquid Fe-S alloy at high pressure. Earth and Planetary Science Letters, 2021, 563, 116884.	4.4	8
11	Thickness and structure of the martian crust from InSight seismic data. Science, 2021, 373, 438-443.	12.6	140
12	Seismic detection of the martian core. Science, 2021, 373, 443-448.	12.6	169
13	Low Velocity Zones in the Martian Upper Mantle Highlighted by Sound Velocity Measurements. Geophysical Research Letters, 2021, 48, e2021GL093977.	4.0	4
14	Equation of State of hcp Feâ€“Câ€“Si Alloys and the Effect of C Incorporation Mechanism on the Density of hcp Fe Alloys at 300ÂK. Journal of Geophysical Research: Solid Earth, 2020, 125, e2020JB020159.	3.4	10
15	Subsurface Structure at the InSight Landing Site From Compliance Measurements by Seismic and Meteorological Experiments. Journal of Geophysical Research E: Planets, 2020, 125, e2020JE006387.	3.6	44
16	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
17	Axial Compressibility and Thermal Equation of State of Hcp Feâ€“5wt% Niâ€“5wt% Si. Minerals (Basel,) Tj ETQq1 1 0.784314 rgBT /O	2.0	8
18	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

#	Article	IF	Citations
19	Constraints on the shallow elastic and anelastic structure of Mars from InSight seismic data. Nature Geoscience, 2020, 13, 213-220.	12.9	207
20	The seismicity of Mars. Nature Geoscience, 2020, 13, 205-212.	12.9	194
21	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
22	Initial results from the InSight mission on Mars. Nature Geoscience, 2020, 13, 183-189.	12.9	274
23	High-pressure transformations in liquid rubidium. Physical Review Materials, 2020, 4, .	2.4	10
24	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
25	Structure and elasticity of cubic Fe-Si alloys at high pressures. Physical Review B, 2019, 100, .	3.2	15
26	Velocityâ€Density Systematics of Feâ€5wt%Si: Constraints on Si Content in the Earth's Inner Core. Journal of Geophysical Research: Solid Earth, 2019, 124, 3436-3447.	3.4	23
27	Sound velocities and density measurements of solid hcp-Fe and hcp-Feâ€“Si (9 wt.%) alloy at high pressure: Constraints on the Si abundance in the Earth's inner core. Earth and Planetary Science Letters, 2018, 482, 446-453.	4.4	29
28	Liquid properties in the Fe-FeS system under moderate pressure: Tool box to model small planetary cores. American Mineralogist, 2018, , .	1.9	12
29	Sound velocity and equation of state in liquid cesium at high pressure and high temperature. Physical Review B, 2018, 98, .	3.2	10
30	Equation of State of SiC at Extreme Conditions: New Insight Into the Interior of Carbonâ€Rich Exoplanets. Journal of Geophysical Research E: Planets, 2018, 123, 2295-2309.	3.6	24
31	Feâ€“FeO and Feâ€“Fe3C melting relations at Earth's coreâ€“mantle boundary conditions: Implications for a volatile-rich or oxygen-rich core. Earth and Planetary Science Letters, 2017, 473, 94-103.	4.4	77
32	Structure and Density of Feâ€C Liquid Alloys Under High Pressure. Journal of Geophysical Research: Solid Earth, 2017, 122, 7813-7823.	3.4	28
33	Elasticity and Poisson's ratio of hexagonal close-packed hydrogen at high pressures. Physical Review B, 2017, 95, .	3.2	6
34	Phonon triggered rhombohedral lattice distortion in vanadium at high pressure. Scientific Reports, 2016, 6, 31887.	3.3	13
35	Dynamical and elastic properties of MgSiO₃ perovskite (bridgmanite). Geophysical Research Letters, 2016, 43, 2568-2575.	4.0	15
36	Toward a mineral physics reference model for the Moonâ€™s core. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 3916-3919.	7.1	62

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37	Sound velocity of hcp-Fe at high pressure: experimental constraints, extrapolations and comparison with seismic models. Progress in Earth and Planetary Science, 2015, 2, .	3.0	26
38	Melting of MORB at coreâ€“mantle boundary. Earth and Planetary Science Letters, 2015, 431, 247-255.	4.4	62
39	Sound velocity of iron up to 152 GPa by picosecond acoustics in diamond anvil cell. Geophysical Research Letters, 2014, 41, 1459-1464.	4.0	36
40	Density measurements and structural properties of liquid and amorphous metals under high pressure. High Pressure Research, 2014, 34, 9-21.	1.2	26
41	Properties of iron alloys under the Earth's core conditions. Comptes Rendus - Geoscience, 2014, 346, 130-139.	1.2	51
42	The Earth's core composition from high pressure density measurements of liquid iron alloys. Earth and Planetary Science Letters, 2013, 373, 169-178.	4.4	99
43	Terrestrial Accretion Under Oxidizing Conditions. Science, 2013, 339, 1194-1197.	12.6	180
44	Science under Extreme Conditions of Pressures and Temperatures at the ESRF. Synchrotron Radiation News, 2013, 26, 39-44.	0.8	5
45	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. Earth and Planetary Science Letters, 2012, 331-332, 210-214.	4.4	52
46	Spin Crossover in Ferropericlase at High Pressure: A Seismologically Transparent Transition?. Science, 2011, 331, 64-67.	12.6	118
47	Phonons of the anomalous element cerium. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 9342-9345.	7.1	47
48	Melting of Feâ€“Niâ€“Si and Feâ€“Niâ€“S alloys at megabar pressures: implications for the coreâ€“mantle boundary temperature. Physics and Chemistry of Minerals, 2011, 38, 767-776.	0.8	84
49	New host for carbon in the deep Earth. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 5184-5187.	7.1	118
50	Composition of the Earth's inner core from high-pressure sound velocity measurements in Feâ€“Niâ€“Si alloys. Earth and Planetary Science Letters, 2010, 295, 292-296.	4.4	128
51	Effect of composition, structure, and spin state on the thermal conductivity of the Earth's lower mantle. Physics of the Earth and Planetary Interiors, 2010, 180, 148-153.	1.9	48
52	Kinetics of the isostructural Î³ to Îµ transition in cerium investigated by ultrasonics. High Pressure Research, 2010, 30, 151-158.	1.2	5
53	Anomalous pressure evolution of the axial ratio câ•a in hcp cobalt: Interplay between structure, magnetism, and lattice dynamics. Applied Physics Letters, 2008, 92, .	3.3	31
54	An integrated method to determine melting temperatures in high-pressure laser-heating experiments. Applied Physics Letters, 2008, 92, .	3.3	13

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55	Elasticity of Hexagonal-Closed-Packed Cobalt at High Pressure and Temperature: A Quasiharmonic Case. Physical Review Letters, 2008, 100, 085501.	7.8	33
56	Effect of light elements on the sound velocities in solid iron: Implications for the composition of Earth's core. Earth and Planetary Science Letters, 2007, 254, 233-238.	4.4	222
57	Lattice preferred orientation and stress in polycrystalline hcp-Co plastically deformed under high pressure. Journal of Applied Physics, 2006, 100, 023510.	2.5	44
58	Elastic anisotropy in hcp metals at high pressure and the sound wave anisotropy of the Earth's inner core. Geophysical Research Letters, 2006, 33, .	4.0	39
59	Lattice Dynamics of Molybdenum at High Pressure. Physical Review Letters, 2006, 96, 115502.	7.8	38
60	Determination of the high pressure elasticity of cobalt from measured interfacial acoustic wave velocities. Applied Physics Letters, 2006, 89, 111920.	3.3	18
61	Preparation and characterization of single crystal samples for high-pressure experiments. High Pressure Research, 2006, 26, 1-10.	1.2	18
62	Elasticity of Cobalt at High Pressure Studied by Inelastic X-Ray Scattering. Physical Review Letters, 2004, 93, 215505.	7.8	56
63	Elastic anisotropy in textured hcp-iron to 112 GPa from sound wave propagation measurements. Earth and Planetary Science Letters, 2004, 225, 243-251.	4.4	120