

Alessandra Benuzzi Mounaix

List of Publications by Year in descending order

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105
papers

2,758
citations

136950

32
h-index

189892

50
g-index

108
all docs

108
docs citations

108
times ranked

2128
citing authors

#	ARTICLE	IF	CITATIONS
1	Hugoniot and released state of calcite above 200 GPa with implications for hypervelocity planetary impacts. <i>Icarus</i> , 2022, 377, 114901.	2.5	3
2	Metallization of Shock-Compressed Liquid Ammonia. <i>Physical Review Letters</i> , 2021, 126, 025003.	7.8	21
3	Electrical conductivity of warm dense silica from double-shock experiments. <i>Nature Communications</i> , 2021, 12, 840.	12.8	9
4	Measuring the structure and equation of state of polyethylene terephthalate at megabar pressures. <i>Scientific Reports</i> , 2021, 11, 12883.	3.3	10
5	X-ray powder diffraction in reflection geometry on multi-beam kJ-type laser facilities. <i>Review of Scientific Instruments</i> , 2021, 92, 013902.	1.3	6
6	Direct Observation of Shock-Induced Disorder of Enstatite Below the Melting Temperature. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL088887.	4.0	9
7	White-line evolution in shocked solid Ta evidenced by synchrotron x-ray absorption spectroscopy. <i>Physical Review B</i> , 2020, 102, .	3.2	3
8	In situ X-ray diffraction of silicate liquids and glasses under dynamic and static compression to megabar pressures. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 11981-11986.	7.1	20
9	Laser-driven shock compression of synthetic planetary mixtures of water, ethanol, and ammonia. <i>Scientific Reports</i> , 2019, 9, 10155.	3.3	19
10	X-ray absorption near edge spectroscopy study of warm dense MgO. <i>Physics of Plasmas</i> , 2019, 26, 112703.	1.9	3
11	Characterizing equation of state and optical properties of dynamically pre-compressed materials. <i>Physics of Plasmas</i> , 2019, 26, 042704.	1.9	6
12	Ab initio calculations of the B1-B2 phase transition in MgO. <i>Physical Review B</i> , 2019, 99, .	3.2	30
13	Measurement of iron characteristics under ramp compression. <i>Chinese Physics B</i> , 2017, 26, 115205.	1.4	4
14	Decaying shock studies of phase transitions in MgO-SiO ₂ systems: Implications for the super-Earths' interiors. <i>Geophysical Research Letters</i> , 2016, 43, 9475-9483.	4.0	48
15	High-pressure structural changes in liquid silica. <i>Physical Review E</i> , 2016, 94, 031201.	2.1	16
16	Kinetics of the iron transition at high-strain rates: Experiment and model. <i>Physical Review B</i> , 2016, 93, .	3.2	16
17	Probing local and electronic structure in Warm Dense Matter: single pulse synchrotron x-ray absorption spectroscopy on shocked Fe. <i>Scientific Reports</i> , 2016, 6, 26402.	3.3	50
18	Dynamic X-ray diffraction observation of shocked solid iron up to 170 GPa. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 7745-7749.	7.1	33

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19	Melting and metallization of silica in the cores of gas giants, ice giants, and super Earths. Physical Review B, 2015, 92, .	3.2	18
20	X-ray absorption spectroscopy of iron at multimegabar pressures in laser shock experiments. Physical Review B, 2015, 92, .	3.2	51
21	X-ray absorption K edge as a diagnostic of the electronic temperature in warm dense aluminum. Physical Review B, 2015, 92, .	3.2	27
22	Refraction index of shock compressed water in the megabar pressure range. Europhysics Letters, 2015, 112, 36001.	2.0	4
23	Production and Diagnostics of Dense Matter. Contributions To Plasma Physics, 2015, 55, 67-77.	1.1	3
24	Probing iron at Super-Earth core conditions. Physics of Plasmas, 2015, 22, .	1.9	9
25	<i>Ab initio</i> calculation of x-ray absorption of iron up to 3 Mbar and 8000 K. Physical Review B, 2014, 89, .	3.2	13
26	Metallization of Warm Dense SiO_2 by XANES Spectroscopy. Physical Review Letters, 2014, 113, 116404.	3.2	54
27	Characterization of laser-driven ultrafast shockless compression using gold targets. Journal of Applied Physics, 2014, 116, 043521.	2.5	0
28	Progress in warm dense matter study with applications to planetology. Physica Scripta, 2014, T161, 014060.	2.5	54
29	Experimental Demonstration of an Inertial Collimation Mechanism in Nested Outflows. Physical Review Letters, 2014, 112, 155001.	7.8	17
30	Modeling HEDLA magnetic field generation experiments on laser facilities. High Energy Density Physics, 2013, 9, 172-177.	1.5	16
31	Direct laser-driven ramp compression studies of iron: A first step toward the reproduction of planetary core conditions. High Energy Density Physics, 2013, 9, 243-246.	1.5	21
32	Laser-driven quasi-isentropic compression experiments and numerical studies of the iron alpha-epsilon transition in the context of planetology. , 2012, , .		4
33	X-Ray Diagnosis of the Pressure Induced Mott Nonmetal-Metal Transition. Physical Review Letters, 2012, 108, 055002.	7.8	37
34	Generation of scaled protogalactic seed magnetic fields in laser-produced shock waves. Nature, 2012, 481, 480-483.	27.8	113
35	Electronic Structure Investigation of Highly Compressed Aluminum with K Edge Absorption Spectroscopy. Physical Review Letters, 2011, 107, 165006.	7.8	58
36	Simulating earth core using high energy lasers. High Energy Density Physics, 2010, 6, 210-214.	1.5	7

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37	EOS measurements of pressure standard materials using laser-driven ramp-wave compression technique. Journal of Physics: Conference Series, 2010, 215, 012199.	0.4	3
38	Optical interferometry and data analysis of laser-produced plasmas. , 2010, , .		0
39	High-power laser shock-induced dynamic fragmentation of iron foils. Physical Review B, 2010, 82, .	3.2	14
40	Proton radiography of a shock-compressed target. Physical Review E, 2010, 82, 016407.	2.1	23
41	X-ray source studies for radiography of dense matter. Physics of Plasmas, 2009, 16, 033101.	1.9	32
42	Direct density measurement of shock-compressed iron using hard x rays generated by a short laser pulse. Physical Review E, 2009, 80, 056407.	2.1	29
43	LASER-driven fast electron dynamics in gaseous media under the influence of large electric fields. Physics of Plasmas, 2009, 16, 033104.	1.9	12
44	Highly efficient, easily spectrally tunable X-ray backlighting for the study of extreme matter states. Laser and Particle Beams, 2009, 27, 601-609.	1.0	14
45	Measurement of Short-Range Correlations in Shock-Compressed Plastic by Short-Pulse X-Ray Scattering. Physical Review Letters, 2009, 102, 165004.	7.8	47
46	STUDY OF IRON UNDER HIGH PRESSURE CONDITIONS USING ISENTROPIC COMPRESSION. , 2009, , .		2
47	MICROSTRUCTURAL INVESTIGATION OF LASER-SHOCKED IRON FOILS. , 2009, , .		0
48	Modeling of laser-driven proton radiography of dense matter. High Energy Density Physics, 2008, 4, 26-40.	1.5	25
49	Coronal hydrodynamics of laser-produced plasmas. Physical Review E, 2008, 78, 046404.	2.1	6
50	Hard x-ray radiography for density measurement in shock compressed matter. Physics of Plasmas, 2008, 15, .	1.9	39
51	Hydrodynamics of laser-produced plasma corona measured by optical interferometry. Plasma Physics and Controlled Fusion, 2008, 50, 105013.	2.1	8
52	Inhibition of fast electron energy deposition due to preplasma filling of cone-attached targets. Physics of Plasmas, 2008, 15, .	1.9	85
53	Density measurement of low-Zshocked material from monochromatic x-ray two-dimensional images. Physical Review E, 2008, 77, 045402.	2.1	14
54	Laboratory astrophysics using high energy lasers: need for 2D simulation. Journal of Physics: Conference Series, 2008, 112, 042012.	0.4	2

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55	Heating of solid target in electron refluxing dominated regime with ultra-intense laser. Journal of Physics: Conference Series, 2008, 112, 022063.	0.4	8
56	Plasma jet experiments in vacuum and in ambient medium using high energy lasers. Journal of Physics: Conference Series, 2008, 112, 042022.	0.4	2
57	Radiative Shocks And Plasma Jets As Laboratory Astrophysics Experiments. AIP Conference Proceedings, 2007, , .	0.4	0
58	Direct Observation of Strong Ion Coupling in Laser-Driven Shock-Compressed Targets. Physical Review Letters, 2007, 99, 135006.	7.8	50
59	Supersonic-Jet Experiments Using a High-Energy Laser. Physical Review Letters, 2007, 99, 265001.	7.8	58
60	Relativistic electron transport and confinement within charge-insulated, mass-limited targets. High Energy Density Physics, 2007, 3, 358-364.	1.5	36
61	Laser-shock compression of diamond and evidence of a negative-slope melting curve. Nature Materials, 2007, 6, 274-277.	27.5	98
62	Density Measurements of Shock Compressed Matter Using Short Pulse Laser Diagnostics. Astrophysics and Space Science, 2007, 307, 257-261.	1.4	1
63	Theoretical and Experimental Studies of Radiative Shocks. Astrophysics and Space Science, 2007, 307, 159-164.	1.4	11
64	Plasma Jet Experiments Using LULI 2000 Laser Facility. Astrophysics and Space Science, 2007, 307, 103-107.	1.4	7
65	Radiative shocks: An opportunity to study laboratory astrophysics. Physics of Plasmas, 2006, 13, 056504.	1.9	54
66	Laser-driven shock waves for the study of extreme matter states. Plasma Physics and Controlled Fusion, 2006, 48, B347-B358.	2.1	38
67	Laser-driven flyer impact experiments at the LULI 2000 laser facility. European Physical Journal Special Topics, 2006, 133, 1101-1105.	0.2	6
68	High density energy physics experiments on LULI 2000 facility. European Physical Journal Special Topics, 2006, 133, 1065-1070.	0.2	0
69	Radiative shocks: New results for laboratory astrophysics. European Physical Journal Special Topics, 2006, 133, 1039-1041.	0.2	4
70	Laser-driven shock experiments on precompressed water: Implications for exoplanet giant planets. Journal of Chemical Physics, 2006, 125, 014701.	3.0	77
71	Temperature and electron density measurements on laser driven radiative shocks. Physics of Plasmas, 2006, 13, 010702.	1.9	20
72	Study of the propagation of ultra-intense laser-produced fast electrons in gas jets. European Physical Journal Special Topics, 2006, 133, 367-370.	0.2	1

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73	Behaviour of fast electron transport in solid targets. European Physical Journal Special Topics, 2006, 133, 405-408.	0.2	2
74	Laser-driven shocks in precompressed water samples. European Physical Journal Special Topics, 2006, 133, 1093-1095.	0.2	3
75	Experimental and numerical studies of radiative shocks. European Physical Journal Special Topics, 2006, 133, 1013-1017.	0.2	2
76	Radiative Shock Experiments At Luli. Astrophysics and Space Science, 2005, 298, 69-74.	1.4	15
77	Density and Temperature Measurements on Laser Generated Radiative Shocks. Astrophysics and Space Science, 2005, 298, 333-336.	1.4	6
78	Optical shadowgraphy and proton imaging as diagnostics tools for fast electron propagation in ultrahigh-intensity laser-matter interaction. Radiation Effects and Defects in Solids, 2005, 160, 575-585.	1.2	3
79	X-ray scattering from dense plasmas. Plasma Physics and Controlled Fusion, 2005, 47, B491-B501.	2.1	11
80	Recent experiments on electron transport in high-intensity laser matter interaction. Plasma Physics and Controlled Fusion, 2005, 47, B777-B789.	2.1	13
81	Temperature and melting of laser-shocked iron releasing into an LiF window. Physics of Plasmas, 2005, 12, 060701.	1.9	46
82	Progress in the study of warm dense matter. Plasma Physics and Controlled Fusion, 2005, 47, B441-B449.	2.1	120
83	Shock velocity and temperature measurements of plastic foams compressed by smoothed laser beams. Physics of Plasmas, 2005, 12, 012706.	1.9	18
84	Observation of Laser Driven Supercritical Radiative Shock Precursors. Physical Review Letters, 2004, 92, 225001.	7.8	108
85	Generation of a double shock driven by laser. Physical Review E, 2004, 70, 045401.	2.1	13
86	Hugoniot Data for Carbon at Megabar Pressures. Physical Review Letters, 2004, 92, 065503.	7.8	41
87	Interface velocity of laser shocked Fe/LiF targets. Physics of Plasmas, 2004, 11, L61-L64.	1.9	10
88	Proton radiography as an electromagnetic field and density perturbation diagnostic (invited). Review of Scientific Instruments, 2004, 75, 3531-3536.	1.3	159
89	High pressures generated by laser driven shocks: applications to planetary physics. Nuclear Fusion, 2004, 44, S208-S214.	3.5	30
90	Electronic conduction in shock-compressed water. Physics of Plasmas, 2004, 11, L41-L44.	1.9	96

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91	Coupling static and dynamic compressions: first measurements in dense hydrogen. High Pressure Research, 2004, 24, 25-31.	1.2	96
92	<title>Carbon hugoniot at megabar pressures driven by laser-induced shocks</title>. , 2004, , .		0
93	Production of high quality shocks for equation of state experiments. European Physical Journal D, 2003, 23, 99-107.	1.3	12
94	Optical properties of highly compressed polystyrene using laser-driven shockwaves. Physics of Plasmas, 2003, 10, 3026-3029.	1.9	33
95	Interaction of soft-x-ray thermal radiation with foam-layered targets. Physical Review E, 2002, 65, 066404.	2.1	4
96	Pressure amplification in thermal X-ray irradiated foam layered gold targets. Laser and Particle Beams, 2002, 20, 165-169.	1.0	5
97	A laser experiment for studying radiative shocks in astrophysics. Laser and Particle Beams, 2002, 20, 263-268.	1.0	46
98	Shock pressure measurements in thermal radiation irradiated foam layered targets. , 2002, 4760, 309.		0
99	Equation of State Data for Iron at Pressures beyond 10 Mbar. Physical Review Letters, 2002, 88, 235502.	7.8	73
100	Absolute equation of state measurements of iron using laser driven shocks. Physics of Plasmas, 2002, 9, 2466-2469.	1.9	54
101	<title>Preliminary results on the EOS of water in the megabar range</title>. , 2001, , .		0
102	Supernovae Rayleigh-Taylor Instability Experiments on the CEA-PhÃ©bus Laser Facility. Astrophysics and Space Science, 2001, 277, 143-146.	1.4	6
103	Foam-induced smoothing studied through laser-driven shock waves. Physical Review E, 2000, 62, 8573-8582.	2.1	26
104	Laser driven shock wave acceleration experiments using plastic foams. Applied Physics Letters, 1999, 75, 3026-3028.	3.3	17
105	Chirped pulse reflectivity and frequency domain interferometry in laser driven shock experiments. Physical Review E, 1999, 60, R2488-R2491.	2.1	52