

# Marius Millot

## List of Publications by Year in descending order

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Version: 2024-02-01

89  
papers

3,110  
citations

186254

28  
h-index

168376

53  
g-index

93  
all docs

93  
docs citations

93  
times ranked

2786  
citing authors

#	ARTICLE	IF	CITATIONS
1	Burning plasma achieved in inertial fusion. <i>Nature</i> , 2022, 601, 542-548.	27.8	233
2	Nanosecond X-ray diffraction of shock-compressed superionic water ice. <i>Nature</i> , 2019, 569, 251-255.	27.8	215
3	Ultrabright X-ray laser scattering for dynamic warm dense matter physics. <i>Nature Photonics</i> , 2015, 9, 274-279.	31.4	208
4	Fusion Energy Output Greater than the Kinetic Energy of an Imploding Shell at the National Ignition Facility. <i>Physical Review Letters</i> , 2018, 120, 245003.	7.8	205
5	Experimental evidence for superionic water ice using shock compression. <i>Nature Physics</i> , 2018, 14, 297-302.	16.7	165
6	Shock compression of stishovite and melting of silica at planetary interior conditions. <i>Science</i> , 2015, 347, 418-420.	12.6	123
7	Insulator-metal transition in dense fluid deuterium. <i>Science</i> , 2018, 361, 677-682.	12.6	108
8	Symmetry control of an indirectly driven high-density-carbon implosion at high convergence and high velocity. <i>Physics of Plasmas</i> , 2017, 24, .	1.9	106
9	The high velocity, high adiabat, "Bigfoot" campaign and tests of indirect-drive implosion scaling. <i>Physics of Plasmas</i> , 2018, 25, .	1.9	90
10	Design of inertial fusion implosions reaching the burning plasma regime. <i>Nature Physics</i> , 2022, 18, 251-258.	16.7	87
11	High-Performance Indirect-Drive Cryogenic Implosions at High Adiabatic on the National Ignition Facility. <i>Physical Review Letters</i> , 2018, 121, 135001.	7.8	86
12	Analysis of laser shock experiments on precompressed samples using a quartz reference and application to warm dense hydrogen and helium. <i>Journal of Applied Physics</i> , 2015, 118, .	2.5	69
13	Measurement of Body-Centered Cubic Gold and Melting under Shock Compression. <i>Physical Review Letters</i> , 2019, 123, 045701.	7.8	67
14	Achieving record hot spot energies with large HDC implosions on NIF in HYBRID-E. <i>Physics of Plasmas</i> , 2021, 28, .	1.9	55
15	Toward a burning plasma state using diamond ablator inertially confined fusion (ICF) implosions on the National Ignition Facility (NIF). <i>Plasma Physics and Controlled Fusion</i> , 2019, 61, 014023.	2.1	53
16	Establishing gold and platinum standards to 1 terapascal using shockless compression. <i>Science</i> , 2021, 372, 1063-1068.	12.6	53
17	Probing the Solid Phase of Noble Metal Copper at Terapascal Conditions. <i>Physical Review Letters</i> , 2020, 124, 015701.	7.8	43
18	Evidence of hydrogen-helium immiscibility at Jupiter-interior conditions. <i>Nature</i> , 2021, 593, 517-521.	27.8	41

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19	Absolute Equation-of-State Measurement for Polystyrene from 25 to 60ÂMbar Using a Spherically Converging Shock Wave. <i>Physical Review Letters</i> , 2018, 121, 025001.	7.8	39
20	Measuring the melting curve of iron at super-Earth core conditions. <i>Science</i> , 2022, 375, 202-205.	12.6	39
21	Electron cyclotron effective mass in indium nitride. <i>Applied Physics Letters</i> , 2010, 96, .	3.3	37
22	Anharmonic effects in ZnO optical phonons probed by Raman spectroscopy. <i>Applied Physics Letters</i> , 2010, 96, .	3.3	35
23	Determination of effective mass in InN by high-field oscillatory magnetoabsorption spectroscopy. <i>Physical Review B</i> , 2011, 83, .	3.2	34
24	Absolute calibration of the OMEGA streaked optical pyrometer for temperature measurements of compressed materials. <i>Review of Scientific Instruments</i> , 2016, 87, 114903.	1.3	34
25	Raman spectroscopy and magnetic properties of bulk ZnO:Co single crystal. <i>Journal of Alloys and Compounds</i> , 2006, 423, 224-227.	5.5	32
26	Examining the radiation drive asymmetries present in the high foot series of implosion experiments at the National Ignition Facility. <i>Physics of Plasmas</i> , 2017, 24, .	1.9	31
27	The Principal Hugoniot of Forsterite to 950 GPa. <i>Geophysical Research Letters</i> , 2018, 45, 3865-3872.	4.0	31
28	Thermodynamic properties of $\text{MgSiO}_3$ at super-Earth mantle conditions. <i>Physical Review B</i> , 2018, 97, .	3.2	28
29	Symmetric fielding of the largest diamond capsule implosions on the NIF. <i>Physics of Plasmas</i> , 2020, 27, .	1.9	28
30	Implications of the iron oxide phase transition on the interiors of rocky exoplanets. <i>Nature Geoscience</i> , 2021, 14, 121-126.	12.9	28
31	Energy transfer between lasers in low-gas-fill-density hohlraums. <i>Physical Review E</i> , 2018, 98, .	2.1	27
32	Electronic structure of indium selenide probed by magnetoabsorption spectroscopy under high pressure. <i>Physical Review B</i> , 2010, 81, .	3.2	26
33	Shock Compression of Liquid Deuterium up to 1ÂTPa. <i>Physical Review Letters</i> , 2019, 122, 255702.	7.8	26
34	Optimized x-ray sources for x-ray diffraction measurements at the Omega Laser Facility. <i>Review of Scientific Instruments</i> , 2019, 90, 125113.	1.3	25
35	Hotspot parameter scaling with velocity and yield for high-adiabat layered implosions at the National Ignition Facility. <i>Physical Review E</i> , 2020, 102, 023210.	2.1	25
36	Yield and compression trends and reproducibility at NIF*. <i>High Energy Density Physics</i> , 2020, 36, 100755.	1.5	25

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37	Equation of state, adiabatic sound speed, and Grüneisen coefficient of boron carbide along the principal Hugoniot to 700 GPa. <i>Physical Review B</i> , 2016, 94, .	3.2	24
38	Thermodynamic properties and neutron diffraction studies of silver ferrite AgFeO <sub>2</sub> . <i>Journal of Physics Condensed Matter</i> , 2010, 22, 016007.	1.8	22
39	Optical and transport properties of dense liquid silica. <i>Physics of Plasmas</i> , 2015, 22, 062706.	1.9	22
40	Measuring the shock impedance mismatch between high-density carbon and deuterium at the National Ignition Facility. <i>Physical Review B</i> , 2018, 97, .	3.2	21
41	Er <sup>3+</sup> luminescence as a sensor of high pressure and strong external magnetic fields. <i>High Pressure Research</i> , 2009, 29, 748-753.	1.2	20
42	A near one-dimensional indirectly driven implosion at convergence ratio 30. <i>Physics of Plasmas</i> , 2018, 25, .	1.9	20
43	Beryllium capsule implosions at a case-to-capsule ratio of 3.7 on the National Ignition Facility. <i>Physics of Plasmas</i> , 2018, 25, .	1.9	20
44	Achieving 280 Gbar hot spot pressure in DT-layered CH capsule implosions at the National Ignition Facility. <i>Physics of Plasmas</i> , 2020, 27, .	1.9	20
45	Recreating Giants Impacts in the Laboratory: Shock Compression of Bridgmanite to 14 Mbar. <i>Geophysical Research Letters</i> , 2020, 47, e2019GL085476.	4.0	19
46	Application of cross-beam energy transfer to control drive symmetry in ICF implosions in low gas fill <i>Hohlraums</i> at the National Ignition Facility. <i>Physics of Plasmas</i> , 2020, 27, .	1.9	18
47	Constraining computational modeling of indirect drive double shell capsule implosions using experiments. <i>Physics of Plasmas</i> , 2021, 28, .	1.9	17
48	Implosion shape control of high-velocity, large case-to-capsule ratio beryllium ablaters at the National Ignition Facility. <i>Physics of Plasmas</i> , 2018, 25, 072708.	1.9	16
49	Equation of State of $\text{CO}_2$ Shock Compressed to 1 ÅTPa. <i>Physical Review Letters</i> , 2020, 125, 165701.	1.9	16
50	Exploring implosion designs for increased compression on the National Ignition Facility using high density carbon ablaters. <i>Physics of Plasmas</i> , 2022, 29, .	1.9	15
51	High-field Zeeman and Paschen-Back effects at high pressure in oriented ruby. <i>Physical Review B</i> , 2008, 78, .	3.2	14
52	Red-green luminescence in indium gallium nitride alloys investigated by high pressure optical spectroscopy. <i>Applied Physics Letters</i> , 2012, 100, 162103.	3.3	14
53	Structural complexity in ramp-compressed sodium to 480 GPa. <i>Nature Communications</i> , 2022, 13, 2534.	12.8	14
54	Evidence of type-I direct recombination in InP/GaP quantum dots via magnetoluminescence. <i>Applied Physics Letters</i> , 2009, 95, 151105.	3.3	12

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55	Deficiencies in compression and yield in x-ray-driven implosions. <i>Physics of Plasmas</i> , 2020, 27, .	1.9	12
56	Pressure dependence of Raman modes in double wall carbon nanotubes filled with 1D Tellurium. <i>Carbon</i> , 2010, 48, 2566-2572.	10.3	11
57	Shock equation of state of $\text{LiH}$ to 1.1 TPa. <i>Physical Review B</i> , 2017, 96, .	3.2	11
58	Fuel convergence sensitivity in indirect drive implosions. <i>Physics of Plasmas</i> , 2021, 28, 042705.	1.9	11
59	Experiments to explore the influence of pulse shaping at the National Ignition Facility. <i>Physics of Plasmas</i> , 2020, 27, 112708.	1.9	11
60	Structure and density of silicon carbide to 1.5 TPa and implications for extrasolar planets. <i>Nature Communications</i> , 2022, 13, 2260.	12.8	11
61	Doping dependence of the G-band Raman spectra of an individual multiwall carbon nanotube. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2010, 42, 2466-2470.	2.7	10
62	Measurement of the sound speed in dense fluid deuterium along the cryogenic liquid Hugoniot. <i>Physics of Plasmas</i> , 2019, 26, .	1.9	10
63	Interferometric measurements of refractive index and dispersion at high pressure. <i>Scientific Reports</i> , 2021, 11, 5610.	3.3	9
64	Weak ferrimagnetism and multiple magnetization reversal in $\text{Cr}_3(\text{PO}_4)_2$ . <i>Physical Review B</i> , 2012, 85, .	3.2	8
65	Identifying and discriminating phase transitions along decaying shocks with line imaging Doppler interferometric velocimetry and streaked optical pyrometry. <i>Physics of Plasmas</i> , 2016, 23, .	1.9	8
66	Antiproliferative and antibiofilm potentials of endolichenic fungi associated with the lichen <i>Nephroma laevigatum</i> . <i>Journal of Applied Microbiology</i> , 2019, 126, 1044-1058.	3.1	8
67	Experimental measurement of two copropagating shocks interacting with an unstable interface. <i>Physical Review E</i> , 2020, 102, 043212.	2.1	8
68	Pressure dependence of Raman modes in double wall carbon nanotubes filled with $\text{Fe}$ . <i>High Pressure Research</i> , 2008, 28, 577-582.	1.2	7
69	High-precision shock equation of state measurements for metallic fluid carbon between 15 and 20 Mbar. <i>Physics of Plasmas</i> , 2020, 27, .	1.9	7
70	Principal factors in performance of indirect-drive laser fusion experiments. <i>Physics of Plasmas</i> , 2020, 27, .	1.9	7
71	Metastability of Liquid Water Freezing into Ice VII under Dynamic Compression. <i>Physical Review Letters</i> , 2021, 127, 135701.	7.8	7
72	Nonideal mixing effects in warm dense matter studied with first-principles computer simulations. <i>Journal of Chemical Physics</i> , 2020, 153, 184101.	3.0	7

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73	Mechanisms of shape transfer and preheating in indirect-drive double shell collisions. Physics of Plasmas, 2022, 29, .	1.9	7
74	Evidence for Dissociation and Ionization in Shock Compressed Nitrogen to 800ÅGPa. Physical Review Letters, 2022, 129, .	7.8	7
75	New diamond anvil cell for optical and transport measurements under high magnetic fields up to 60ÅT. High Pressure Research, 2008, 28, 627-631.	1.2	6
76	Trigonal field acting at the $\text{Cr}^{3+}$ $d$ states in ruby from magneto-optical measur. Physical Review B, 2010, 81, .	3.2	6
77	Response to Comment on "Insulator-metal transition in dense fluid deuterium". Science, 2019, 363, .	12.6	5
78	Equation-of-state, sound speed, and reshock of shock-compressed fluid carbon dioxide. Physics of Plasmas, 2021, 28, .	1.9	5
79	High pressure and high magnetic field behaviour of free and donor-bound exciton photoluminescence in InSe. Physica Status Solidi (B): Basic Research, 2009, 246, 532-535.	1.5	4
80	Nature of the bonded-to-atomic transition in liquid silica to TPa pressures. Journal of Applied Physics, 2022, 131, .	2.5	4
81	First graded metal pushed single shell capsule implosions on the National Ignition Facility. Physics of Plasmas, 2022, 29, .	1.9	4
82	Hydroscaling indirect-drive implosions on the National Ignition Facility. Physics of Plasmas, 2022, 29, .	1.9	4
83	Comparative Raman spectroscopy of individual and bundled double wall carbon nanotubes. Physica Status Solidi (B): Basic Research, 2011, 248, 974-979.	1.5	3
84	Techniques for studying materials under extreme states of high energy density compression. Physics of Plasmas, 2021, 28, 060901.	1.9	3
85	Upgrades to the VISAR-streaked optical pyrometer (SOP) system on NIF. Proceedings of SPIE, 2015, , .	0.8	2
86	The Principal Hugoniot of Iron-Bearing Olivine to 1465ÅGPa. Geophysical Research Letters, 2021, 48, e2021GL092471.	4.0	2
87	Photoluminescence of InP/GaP quantum dots under extreme conditions. High Pressure Research, 2009, 29, 488-494.	1.2	1
88	A theoretical approach for transient shock strengthening in high-energy-density laser compression experiments. Physics of Plasmas, 2021, 28, 082708.	1.9	1
89	Reply to: Reconsidering X-ray plasmons. Nature Photonics, 2019, 13, 751-753.	31.4	0