

James M Lattimer

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

146
papers

20,977
citations

71
h-index

144
g-index

156
ext. papers

23,923
ext. citations

7.1
avg, IF

7.3
L-index

#	Paper	IF	Citations
146	Limiting masses and radii of neutron stars and their implications. <i>Physical Review C</i> , 2021 , 103,	2.7	21
145	The Radius of PSR J0740+6620 from NICER and XMM-Newton Data. <i>Astrophysical Journal Letters</i> , 2021 , 918, L28	7.9	107
144	A NICER View of the Massive Pulsar PSR J0740+6620 Informed by Radio Timing and XMM-Newton Spectroscopy. <i>Astrophysical Journal Letters</i> , 2021 , 918, L27	7.9	97
143	Constraints on the Dense Matter Equation of State and Neutron Star Properties from NICER's Mass-Radius Estimate of PSR J0740+6620 and Multimessenger Observations. <i>Astrophysical Journal Letters</i> , 2021 , 918, L29	7.9	32
142	NS 1987A in SN 1987A. <i>Astrophysical Journal</i> , 2020 , 898, 125	4.7	27
141	Equation of State Constraints from Nuclear Physics, Neutron Star Masses, and Future Moment of Inertia Measurements. <i>Astrophysical Journal</i> , 2020 , 901, 155	4.7	22
140	Equation of State from Neutron Star Mass and Radius Measurements 2020 ,		1
139	Quarkyonic matter equation of state in beta-equilibrium. <i>Physical Review D</i> , 2020 , 102,	4.9	30
138	Constraining the Dense Matter Equation of State with Joint Analysis of NICER and LIGO/Virgo Measurements. <i>Astrophysical Journal Letters</i> , 2020 , 893, L21	7.9	83
137	Neutron star masses and radii 2019 ,		3
136	Neutron Star Mass and Radius Measurements. <i>Universe</i> , 2019 , 5, 159	2.5	19
135	Impact of GW170817 for the nuclear physics of the EOS and the r-process. <i>Annals of Physics</i> , 2019 , 411, 167963	2.5	5
134	A NICER View of PSR J0030+0451: Implications for the Dense Matter Equation of State. <i>Astrophysical Journal Letters</i> , 2019 , 887, L22	7.9	101
133	A NICER View of PSR J0030+0451: Millisecond Pulsar Parameter Estimation. <i>Astrophysical Journal Letters</i> , 2019 , 887, L21	7.9	428
132	PSR J0030+0451 Mass and Radius from NICER Data and Implications for the Properties of Neutron Star Matter. <i>Astrophysical Journal Letters</i> , 2019 , 887, L24	7.9	456
131	Finding Exoplanets with Quantum Imaging. <i>Physics Magazine</i> , 2018 , 11,	1.1	1
130	Tidal deformabilities and neutron star mergers. <i>Physical Review D</i> , 2018 , 98,	4.9	61

129	Tidal Deformabilities and Radii of Neutron Stars from the Observation of GW170817. <i>Physical Review Letters</i> , 2018 , 121, 091102	7.4	334
128	Neutron stars are gold mines. <i>International Journal of Modern Physics E</i> , 2017 , 26, 1740014	0.7	7
127	Perspectives on the Equation of State in Neutron Stars 2017 ,		1
126	Neutron stars are gold mines 2017 , 159-191		1
125	Symmetry Parameter Constraints from a Lower Bound on Neutron-matter Energy. <i>Astrophysical Journal</i> , 2017 , 848, 105	4.7	167
124	Neutron star radii, universal relations, and the role of prior distributions. <i>European Physical Journal A</i> , 2016 , 52, 1	2.5	74
123	The equation of state of hot, dense matter and neutron stars. <i>Physics Reports</i> , 2016 , 621, 127-164	27.7	316
122	Neutron Star Physics and EOS. <i>EPJ Web of Conferences</i> , 2016 , 109, 07001	0.3	2
121	Thermal properties of hot and dense matter with finite range interactions. <i>Physical Review C</i> , 2015 , 92,	2.7	37
120	Introduction to neutron stars 2015 ,		9
119	Degenerate limit thermodynamics beyond leading order for models of dense matter. <i>Annals of Physics</i> , 2015 , 363, 533-555	2.5	10
118	Constraints on the symmetry energy using the mass-radius relation of neutron stars. <i>European Physical Journal A</i> , 2014 , 50, 1	2.5	183
117	Neutron stars. <i>General Relativity and Gravitation</i> , 2014 , 46, 1	2.3	22
116	NEUTRON STAR MASSES AND RADII FROM QUIESCENT LOW-MASS X-RAY BINARIES. <i>Astrophysical Journal</i> , 2014 , 784, 123	4.7	201
115	Symmetry energy in nuclei and neutron stars. <i>Nuclear Physics A</i> , 2014 , 928, 276-295	1.3	23
114	Thermal properties of supernova matter: The bulk homogeneous phase. <i>Physical Review C</i> , 2014 , 89,	2.7	38
113	CONSTRAINING THE SYMMETRY PARAMETERS OF THE NUCLEAR INTERACTION. <i>Astrophysical Journal</i> , 2013 , 771, 51	4.7	362
112	THE NEUTRON STAR MASS-RADIUS RELATION AND THE EQUATION OF STATE OF DENSE MATTER. <i>Astrophysical Journal Letters</i> , 2013 , 765, L5	7.9	297

111	EQUATION OF STATE AND NEUTRON STAR PROPERTIES CONSTRAINED BY NUCLEAR PHYSICS AND OBSERVATION. <i>Astrophysical Journal</i> , 2013 , 773, 11	4.7	392
110	The Large Observatory for X-ray Timing (LOFT). <i>Experimental Astronomy</i> , 2012 , 34, 415-444	1.3	148
109	The Nuclear Equation of State and Neutron Star Masses. <i>Annual Review of Nuclear and Particle Science</i> , 2012 , 62, 485-515	15.7	618
108	Astrophysical and laboratory constraints for the dense matter equation of state 2012 ,		1
107	Neutron stars and the dense matter equation of state. <i>Astrophysics and Space Science</i> , 2011 , 336, 67-74	1.6	26
106	What a Two Solar Mass Neutron Star Really Means 2011 , 275-304		26
105	Rapid cooling of the neutron star in Cassiopeia A triggered by neutron superfluidity in dense matter. <i>Physical Review Letters</i> , 2011 , 106, 081101	7.4	295
104	Neutron Star Structure and the Equation of State. <i>Progress of Theoretical Physics Supplement</i> , 2010 , 186, 1-8		5
103	THE EQUATION OF STATE FROM OBSERVED MASSES AND RADII OF NEUTRON STARS. <i>Astrophysical Journal</i> , 2010 , 722, 33-54	4.7	653
102	Constraints on neutron star radii based on chiral effective field theory interactions. <i>Physical Review Letters</i> , 2010 , 105, 161102	7.4	265
101	Tidal Love numbers of neutron and self-bound quark stars. <i>Physical Review D</i> , 2010 , 82,	4.9	194
100	REVISITING THE PARALLAX OF THE ISOLATED NEUTRON STAR RX J185635B754 USING HST/ACS IMAGING. <i>Astrophysical Journal</i> , 2010 , 724, 669-677	4.7	53
99	Evolution of Neutron Stars and Observational Constraints. <i>EPJ Web of Conferences</i> , 2010 , 7, 03001	0.3	
98	Neutron star equation of state. <i>New Astronomy Reviews</i> , 2010 , 54, 101-109	7.9	15
97	NEUTRINO EMISSION FROM COOPER PAIRS AND MINIMAL COOLING OF NEUTRON STARS. <i>Astrophysical Journal</i> , 2009 , 707, 1131-1140	4.7	161
96	Keplerian frequency of uniformly rotating neutron stars and strange stars. <i>Astronomy and Astrophysics</i> , 2009 , 502, 605-610	5.1	76
95	Equation of state constraints from neutron stars. <i>Astrophysics and Space Science</i> , 2007 , 308, 371-379	1.6	4
94	Neutron star observations: Prognosis for equation of state constraints. <i>Physics Reports</i> , 2007 , 442, 109-165.7	15.7	961

93	Equation of state constraints from neutron stars 2007 , 371-379		
92	Equation of state, neutron stars and exotic phases. <i>Nuclear Physics A</i> , 2006 , 777, 479-496	1.3	19
91	Ultimate energy density of observable cold baryonic matter. <i>Physical Review Letters</i> , 2005 , 94, 111101	7.4	108
90	Isospin asymmetry in nuclei and neutron stars. <i>Physics Reports</i> , 2005 , 411, 325-375	27.7	711
89	Constraining the Equation of State with Moment of Inertia Measurements. <i>Astrophysical Journal</i> , 2005 , 629, 979-984	4.7	276
88	Structure of Strange Quark Matter and Neutron Stars. <i>Symposium - International Astronomical Union</i> , 2004 , 218, 289-296		
87	The structure of strange quark matter and neutron stars. <i>Journal of Physics G: Nuclear and Particle Physics</i> , 2004 , 30, S479-S486	2.9	8
86	Mergers of binary stars: the ultimate heavy-ion experience. <i>Journal of Physics G: Nuclear and Particle Physics</i> , 2004 , 30, S1279-S1282	2.9	7
85	A tale of two mergers: searching for strangeness in compact stars. <i>Journal of Physics G: Nuclear and Particle Physics</i> , 2004 , 30, S451-S459	2.9	6
84	Properties of the isolated neutron star RX J185635-3754. <i>Advances in Space Research</i> , 2004 , 33, 513-517	2.4	3
83	The physics of neutron stars. <i>Science</i> , 2004 , 304, 536-42	33.3	882
82	Minimal Cooling of Neutron Stars: A New Paradigm. <i>Astrophysical Journal, Supplement Series</i> , 2004 , 155, 623-650	8	378
81	THE MINIMAL COOLING OF NEUTRON STARS 2004 ,		2
80	Observability of neutron stars with quarks. <i>Nuclear Physics A</i> , 2003 , 715, 835c-838c	1.3	16
79	Effects of strong magnetic fields in strange baryonic matter. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2002 , 531, 167-174	4.2	92
78	A Revised Parallax and Its Implications for RX J185635-3754. <i>Astrophysical Journal</i> , 2002 , 576, L145-L148	4.7	130
77	Toward a Mass and Radius Determination of the Nearby Isolated Neutron Star RX J185635-3754. <i>Astrophysical Journal</i> , 2002 , 564, 981-1006	4.7	184
76	Diffusion of neutrinos in proto-neutron star matter with quarks. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2001 , 509, 10-18	4.2	26

75	Effects of Strong Magnetic Fields on Neutron Star Structure. <i>Astrophysical Journal</i> , 2001 , 554, 322-339	4.7	210
74	Evolution of Proto-Neutron Stars with Kaon Condensates. <i>Astrophysical Journal</i> , 2001 , 553, 382-393	4.7	73
73	Evolution of proto-neutron stars with quarks. <i>Physical Review Letters</i> , 2001 , 86, 5223-6	7.4	128
72	Evolution of a Neutron Star from Its Birth to Old Age. <i>Lecture Notes in Physics</i> , 2001 , 364-423	0.8	36
71	NEUTRINO PROPAGATION IN DENSE ASTROPHYSICAL SYSTEMS. <i>Annual Review of Nuclear and Particle Science</i> , 2001 , 51, 295-344	15.7	46
70	Neutron Star Structure and the Equation of State. <i>Astrophysical Journal</i> , 2001 , 550, 426-442	4.7	1082
69	Quark-hadron phase transitions in Young and old neutron stars. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2000 , 486, 239-248	4.2	80
68	Nuclear matter and its role in supernovae, neutron stars and compact object binary mergers. <i>Physics Reports</i> , 2000 , 333-334, 121-146	27.7	231
67	Supernova theory. <i>Nuclear Physics, Section B, Proceedings Supplements</i> , 2000 , 81, 283-293		
66	The Isolated Neutron Star RX J185635-3754. <i>Symposium - International Astronomical Union</i> , 2000 , 195, 437-438		
65	The Equation of State of Neutron Star Matter in Strong Magnetic Fields. <i>Astrophysical Journal</i> , 2000 , 537, 351-367	4.7	239
64	Kaon condensation in proto-neutron star matter. <i>Physical Review C</i> , 2000 , 62,	2.7	80
63	Prospects of detecting baryon and quark superfluidity from cooling neutron stars. <i>Physical Review Letters</i> , 2000 , 85, 2048-51	7.4	112
62	Probing the Neutron Star Interior with Glitches. <i>Astrophysics and Space Science Library</i> , 2000 , 117-126	0.3	1
61	Pulsar Constraints on Neutron Star Structure and Equation of State. <i>Physical Review Letters</i> , 1999 , 83, 3362-3365	7.4	213
60	Effects of strong and electromagnetic correlations on neutrino interactions in dense matter. <i>Physical Review C</i> , 1999 , 59, 2888-2918	2.7	168
59	Evolution of Proto-Neutron Stars. <i>Astrophysical Journal</i> , 1999 , 513, 780-804	4.7	376
58	Strangeness in stellar matter. <i>Nuclear Physics A</i> , 1998 , 639, 433c-442c	1.3	11

57	Neutrino interactions in hot and dense matter. <i>Physical Review D</i> , 1998 , 58,	4.9	222
56	Tales of Neutrinos. <i>Science</i> , 1997 , 276, 1344-1344	33.3	
55	Composition and structure of protoneutron stars. <i>Physics Reports</i> , 1997 , 280, 1-77	27.7	577
54	Numerical Approximation to the Thermodynamic Integrals. <i>Astrophysical Journal</i> , 1996 , 473, 1020-1028	4.7	20
53	Strangeness in stellar matter. <i>Acta Physica Hungarica A Heavy Ion Physics</i> , 1996 , 4, 271-292		2
52	Quark-hadron phase transition in protoneutron stars. <i>Physical Review D</i> , 1995 , 52, 661-665	4.9	111
51	Newborn hot neutron stars. <i>Nuclear Physics A</i> , 1995 , 583, 623-628	1.3	24
50	Composition, structure and evolution of neutron stars with kaon condensates. <i>Nuclear Physics A</i> , 1994 , 572, 693-731	1.3	197
49	The role of the equation of state in the 'prompt' phase of type II supernovae. <i>Astrophysical Journal</i> , 1994 , 425, 195	4.7	74
48	Rapid cooling and the structure of neutron stars. <i>Astrophysical Journal</i> , 1994 , 425, 802	4.7	147
47	The Boltzmann equation in general relativistic rotating systems - Cooling of rotating neutron stars. <i>Astrophysical Journal</i> , 1993 , 407, 687	4.7	14
46	Rapid cooling of neutron stars by hyperons and Delta isobars. <i>Astrophysical Journal</i> , 1992 , 390, L77	4.7	136
45	A generalized equation of state for hot, dense matter. <i>Nuclear Physics A</i> , 1991 , 535, 331-376	1.3	942
44	Implications of a Fast Pulsar for the Equation of State 1991 , 318-320		
43	Direct URCA process in neutron stars. <i>Physical Review Letters</i> , 1991 , 66, 2701-2704	7.4	544
42	Rapidly rotating pulsars and the equation of state. <i>Astrophysical Journal</i> , 1990 , 355, 241	4.7	104
41	Gravitational collapse and supernovae. <i>Contemporary Physics</i> , 1989 , 30, 55-64	3.3	1
40	Neutrino helicity flips via electroweak interactions. <i>Physical Review D</i> , 1989 , 40, 309-314	4.9	49

39	Analysis of the neutrino events from supernova 1987A. <i>Astrophysical Journal</i> , 1989 , 340, 426	4-7	95
38	Convection, type II supernovae, and the early evolution of neutron stars. <i>Physics Reports</i> , 1988 , 163, 51-62	7-7	45
37	Supernova theory and the neutrinos from SN1987a. <i>Nuclear Physics A</i> , 1988 , 478, 199-217	1-3	35
36	Enthalpies of formation of CaAl ₄ O ₇ and CaAl ₁₂ O ₁₉ (hibonite) by high temperature, alkali borate solution calorimetry. <i>Geochimica Et Cosmochimica Acta</i> , 1988 , 52, 1729-1736	5-5	35
35	Limits on the Neutrino Magnetic Moment from Sn1987A. <i>Physical Review Letters</i> , 1988 , 61, 2633-2633	7-4	4
34	Limits on the neutrino magnetic moment from SN1987A. <i>Physical Review Letters</i> , 1988 , 61, 23-26	7-4	164
33	Equation of state and the maximum mass of neutron stars. <i>Physical Review Letters</i> , 1988 , 61, 2518-2521	7-4	250
32	Recent results from supernova calculations 1988 , 153-164		
31	Neutrinos from SN 1987A. <i>Astrophysical Journal</i> , 1987 , 318, L63	4-7	91
30	The birth of neutron stars. <i>Astrophysical Journal</i> , 1986 , 307, 178	4-7	565
29	Physical properties of hot, dense matter: The general case. <i>Nuclear Physics A</i> , 1985 , 432, 646-742	1-3	204
28	Surface and curvature properties of neutron-rich nuclei. <i>Nuclear Physics A</i> , 1985 , 439, 535-572	1-3	45
27	Type II supernova energetics. <i>Astrophysical Journal</i> , 1985 , 288, 644	4-7	20
26	The prompt mechanism of Type II supernovae. <i>Astrophysical Journal</i> , 1985 , 299, L19	4-7	53
25	Properties of warm dense matter at low entropies. <i>Nuclear Physics A</i> , 1984 , 414, 517-528	1-3	11
24	The Physics of Supernova Shocks 1984 , 147-162		10
23	On the accuracy of the single-nucleus approximation in the equation of state of hot, dense matter. <i>Astrophysical Journal</i> , 1984 , 285, 294	4-7	48
22	Phase transitions in cold and warm dense matter. <i>Nuclear Physics A</i> , 1983 , 411, 449-473	1-3	27

21	Nuclear interface energy at finite temperatures. <i>Nuclear Physics A</i> , 1983 , 407, 571-591	1.3	100
20	Effect of nuclear curvature energy on the transition between nuclei and bubbles in dense matter. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1983 , 128, 137-140	4.2	10
19	The effect of trapped lepton number and entropy on the outcome of stellar collapse. <i>Astrophysical Journal</i> , 1983 , 270, 735	4.7	51
18	Supernovae for Pedestrians 1982 , 53-70		20
17	Physical properties of hot, dense matter: The bulk equilibrium approximation. <i>Nuclear Physics A</i> , 1981 , 360, 459-482	1.3	104
16	The Equation of State of Hot Dense Matter and Supernovae. <i>Annual Review of Nuclear and Particle Science</i> , 1981 , 31, 337-374	15.7	102
15	Leptonic overturn and shocks in collapsing stellar cores. <i>Astrophysical Journal</i> , 1981 , 246, 955	4.7	29
14	Stellar core collapse. I - Infall epoch. <i>Astrophysical Journal</i> , 1981 , 249, 270	4.7	64
13	The deleptonization and heating of proton-neutron stars. <i>Astrophysical Journal</i> , 1981 , 251, 325	4.7	53
12	Equation of state in the gravitational collapse of stars. <i>Nuclear Physics A</i> , 1979 , 324, 487-533	1.3	432
11	Nuclear forces, partition functions, and dissociation in stellar collapse. <i>Astrophysical Journal</i> , 1979 , 229, 713	4.7	50
10	Chemical condensation sequences in supernova ejecta. <i>The Moon and the Planets</i> , 1978 , 19, 169-184		45
9	Hot Dense Matter and Stellar Collapse. <i>Physical Review Letters</i> , 1978 , 41, 1623-1626	7.4	166
8	Condensation in supernova ejecta and isotopic anomalies in meteorites. <i>Astrophysical Journal</i> , 1978 , 219, 230	4.7	172
7	Neutron star matter at high temperatures and densities. I - Bulk properties of nuclear matter. <i>Astrophysical Journal</i> , 1978 , 223, 314	4.7	104
6	Supernovae, grains and the formation of the Solar System. <i>Nature</i> , 1977 , 269, 116-118	50.4	16
5	Are supernovae sources of presolar grains?. <i>Nature</i> , 1977 , 270, 700-701	50.4	12
4	The decompression of cold neutron star matter. <i>Astrophysical Journal</i> , 1977 , 213, 225	4.7	166

- 3 The origin of deuterium. *Nature*, **1976**, 263, 198-202 50.4 190
- 2 The tidal disruption of neutron stars by black holes in close binaries. *Astrophysical Journal*, **1976**, 210, 549 4.7 271
- 1 Black-hole-neutron-star collisions. *Astrophysical Journal*, **1974**, 192, L145 4.7 494