## Friedrich-Karl Thielemann

List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	Accreting white dwarf models of Type I supernovae. III - Carbon deflagration supernovae. Astrophysical Journal, 1984, 286, 644.	4.5	1,196
2	Nucleosynthesis in Chandrasekhar Mass Models for Type Ia Supernovae and Constraints on Progenitor Systems and Burningâ€Front Propagation. Astrophysical Journal, Supplement Series, 1999, 125, 439-462.	7.7	1,080
3	Astrophysical Reaction Rates From Statistical Model Calculations. Atomic Data and Nuclear Data Tables, 2000, 75, 1-351.	2.4	807
4	THE JINA REACLIB DATABASE: ITS RECENT UPDATES AND IMPACT ON TYPE-I X-RAY BURSTS. Astrophysical Journal, Supplement Series, 2010, 189, 240-252.	7.7	721
5	[CLC][ITAL]r[/ITAL][/CLC]-Process in Neutron Star Mergers. Astrophysical Journal, 1999, 525, L121-L124.	4.5	678
6	Core-Collapse Supernovae and Their Ejecta. Astrophysical Journal, 1996, 460, 408.	4.5	620
7	rp-process nucleosynthesis at extreme temperature and density conditions. Physics Reports, 1998, 294, 167-263.	25.6	581
8	The R-process and nucleochronology. Physics Reports, 1991, 208, 267-394.	25.6	544
9	End Point of therpProcess on Accreting Neutron Stars. Physical Review Letters, 2001, 86, 3471-3474.	7.8	469
10	Neutrino-Induced Nucleosynthesis ofA>64Nuclei: TheνpProcess. Physical Review Letters, 2006, 96, 142502.	7.8	421
11	MAGNETOROTATIONALLY DRIVEN SUPERNOVAE AS THE ORIGIN OF EARLY GALAXY <i>r</i> -PROCESS ELEMENTS?. Astrophysical Journal Letters, 2012, 750, L22.	8.3	396
12	Relative frequencies of Type Ia and Type II supernovae in the chemical evolution of the Galaxy, LMC and SMC. Monthly Notices of the Royal Astronomical Society, 1995, 277, 945-958.	4.4	344
13	Isotopic r-process abundances and nuclear structure far from stability - Implications for the r-process mechanism. Astrophysical Journal, 1993, 403, 216.	4.5	332
14	Origin of the heaviest elements: The rapid neutron-capture process. Reviews of Modern Physics, 2021, 93, .	45.6	326
15	Type la Supernovae: Influence of the Initial Composition on the Nucleosynthesis, Light Curves, and Spectra and Consequences for the Determination of ΩMand ♭. Astrophysical Journal, 1998, 495, 617-629.	4.5	312
16	Nuclear level density and the determination of thermonuclear rates for astrophysics. Physical Review C, 1997, 56, 1613-1625.	2.9	299
17	Probing the gravitational well: No supernova explosion in spherical symmetry with general relativistic Boltzmann neutrino transport. Physical Review D, 2001, 63, .	4.7	269
18	TABLES OF NUCLEAR CROSS SECTIONS AND REACTION RATES: AN ADDENDUM TO THE PAPER "ASTROPHYSICAL REACTION RATES FROM STATISTICAL MODEL CALCULATIONS― Atomic Data and Nuclear Data Tables, 2001, 79, 47-64	2.4	256

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19	Nucleosynthesis in type la supernovae. Nuclear Physics A, 1997, 621, 467-476.	1.5	253
20	THE <i>r</i> -PROCESS NUCLEOSYNTHESIS IN THE VARIOUS JET-LIKE EXPLOSIONS OF MAGNETOROTATIONAL CORE-COLLAPSE SUPERNOVAE. Astrophysical Journal, 2015, 810, 109.	4.5	245
21	A Finite Difference Representation of Neutrino Radiation Hydrodynamics in Spherically Symmetric General Relativistic Spacetime. Astrophysical Journal, Supplement Series, 2004, 150, 263-316.	7.7	242
22	What are the astrophysical sites for the r-process and the production of heavy elements?. Progress in Particle and Nuclear Physics, 2011, 66, 346-353.	14.4	229
23	Nucleosynthesis in type II supernovae. Nuclear Physics A, 1997, 616, 79-90.	1.5	226
24	The long-term evolution of neutron star merger remnants - I. The impact of r-process nucleosynthesis. Monthly Notices of the Royal Astronomical Society, 2014, 439, 744-756.	4.4	219
25	Simulation of the Spherically Symmetric Stellar Core Collapse, Bounce, and Postbounce Evolution of a Star of 13 Solar Masses with Boltzmann Neutrino Transport, and Its Implications for the Supernova Mechanism. Physical Review Letters, 2001, 86, 1935-1938.	7.8	209
26	râ€Process Abundances and Chronometers in Metalâ€poor Stars. Astrophysical Journal, 1999, 521, 194-205.	4.5	200
27	The Astrophysicalrâ€Process: A Comparison of Calculations following Adiabatic Expansion with Classical Calculations Based on Neutron Densities and Temperatures. Astrophysical Journal, 1999, 516, 381-398.	4.5	197
28	Composition of the Innermost Core ollapse Supernova Ejecta. Astrophysical Journal, 2006, 637, 415-426.	4.5	196
29	NEUTRINO-DRIVEN WINDS IN THE AFTERMATH OF A NEUTRON STAR MERGER: NUCLEOSYNTHESIS AND ELECTROMAGNETIC TRANSIENTS. Astrophysical Journal, 2015, 813, 2.	4.5	192
30	<i>&gt;</i> -process production in rotating massive stars at solar and low metallicities. Monthly Notices of the Royal Astronomical Society, 2016, 456, 1803-1825.	4.4	173
31	CHARGED-PARTICLE AND NEUTRON-CAPTURE PROCESSES IN THE HIGH-ENTROPY WIND OF CORE-COLLAPSE SUPERNOVAE. Astrophysical Journal, 2010, 712, 1359-1377.	4.5	168
32	Reaction rates and reaction sequences in the rp-process. Astrophysical Journal, 1994, 432, 326.	4.5	163
33	NUCLEOSYNTHESIS IN TWO-DIMENSIONAL DELAYED DETONATION MODELS OF TYPE Ia SUPERNOVA EXPLOSIONS. Astrophysical Journal, 2010, 712, 624-638.	4.5	158
34	THE ROLE OF FISSION IN NEUTRON STAR MERGERS AND ITS IMPACT ON THE <i>r</i> -PROCESS PEAKS. Astrophysical Journal, 2015, 808, 30.	4.5	156
35	The Role of Electron Captures in Chandrasekharâ€Mass Models for Type Ia Supernovae. Astrophysical Journal, 2000, 536, 934-947.	4.5	152
36	Galactic evolution of rapid neutron capture process abundances: the inhomogeneous approach. Monthly Notices of the Royal Astronomical Society, 2015, 452, 1970-1981.	4.4	150

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37	R-Process Nucleosynthesis in Supernovae. Physics Today, 2004, 57, 47-53.	0.3	147
38	Explosive nucleosynthesis in SN 1987A. II - Composition, radioactivities, and the neutron star mass. Astrophysical Journal, 1990, 349, 222.	4.5	139
39	Nuclear structure studies for the astrophysical r-process. Nuclear Physics A, 2001, 693, 282-324.	1.5	136
40	CORE-COLLAPSE SUPERNOVA EXPLOSIONS TRIGGERED BY A QUARK-HADRON PHASE TRANSITION DURING THE EARLY POST-BOUNCE PHASE. Astrophysical Journal, Supplement Series, 2011, 194, 39.	7.7	136
41	The Intermediate r-process in Core-collapse Supernovae Driven by the Magneto-rotational Instability. Astrophysical Journal Letters, 2017, 836, L21.	8.3	134
42	Production of heavy elements in inhomogeneous cosmologies. Astrophysical Journal, 1994, 429, 499.	4.5	133
43	Explosive Nucleosynthesis in Hypernovae. Astrophysical Journal, 2001, 555, 880-899.	4.5	133
44	Decay properties of exoticN≃28 S and Cl nuclei and theCa48/46Ca abundance ratio. Physical Review C, 1993, 47, 2941-2953.	2.9	130
45	The hot proton-proton chains in low-metallicity objects. Astrophysical Journal, 1989, 343, 352.	4.5	125
46	Explosive Hydrogen Burning during Type I Xâ€Ray Bursts. Astrophysical Journal, Supplement Series, 2008, 174, 261-276.	7.7	116
47	Accreting white dwarf models for the type I supernovae. IV The optical spectrum of a carbon-deflagration supernova. Astrophysical Journal, 1985, 294, 619.	4.5	116
48	Conformally flat smoothed particle hydrodynamics application to neutron star mergers. Physical Review D, 2002, 65, .	4.7	115
49	Calculations of fission rates for r-process nucleosynthesis. Nuclear Physics A, 2005, 747, 633-654.	1.5	106
50	Nucleosynthesis in Type II Supernovae and the Abundances in Metalâ€poor Stars. Astrophysical Journal, 1999, 517, 193-208.	4.5	105
51	Silicon Burning. I. Neutronization and the Physics of Quasi-Equilibrium. Astrophysical Journal, 1996, 460, 869.	4.5	105
52	CURRENT QUESTS IN NUCLEAR ASTROPHYSICS AND EXPERIMENTAL APPROACHES. Annual Review of Nuclear and Particle Science, 1998, 48, 175-251.	10.2	104
53	Inelastic neutrino scattering on 12C and 16O above the particle emission threshold. Nuclear Physics A, 1992, 540, 599-620.	1.5	96
54	The Nuclear Reaction Waiting Points: 22 Mg, 26 Si, 30 S, and 34 Ar and Bolometrically Double-peaked Type I X-Ray Bursts. Astrophysical Journal, 2004, 608, L61-L64.	4.5	96

Friedrich-Karl Thielemann

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55	Hydrostatic Nucleosynthesis - Part Two - Core Neon to Silicon Burning and Presupernova Abundance Yields of Massive Stars. Astrophysical Journal, 1985, 295, 604.	4.5	96
56	Bridging the waiting points: The role of two-proton capture reactions in therpprocess. Physical Review C, 1995, 51, 392-400.	2.9	93
57	Computational methods for nucleosynthesis and nuclear energy generation. Journal of Computational and Applied Mathematics, 1999, 109, 321-351.	2.0	93
58	Conservative general relativistic radiation hydrodynamics in spherical symmetry and comoving coordinates. Physical Review D, 2001, 63, .	4.7	88
59	Low-lying dipole response in the relativistic quasiparticle time blocking approximation and its influence on neutron capture cross sections. Nuclear Physics A, 2009, 823, 26-37.	1.5	87
60	Nuclear cross sections, nuclear structure and stellar nucleosynthesis. Nuclear Physics A, 2003, 718, 139-146.	1.5	84
61	Late detonation models for the type IA supernovae SN 1991T and SN 1990N. Astrophysical Journal, 1992, 393, L55.	4.5	84
62	Silicon Burning. II. Quasiâ€Equilibrium and Explosive Burning. Astrophysical Journal, 1999, 511, 862-875.	4.5	81
63	NUCLEOSYNTHESIS MODES IN THE HIGH-ENTROPY WIND OF TYPE II SUPERNOVAE: COMPARISON OF CALCULATIONS WITH HALO-STAR OBSERVATIONS. Astrophysical Journal, 2009, 694, L49-L53.	4.5	78
64	PUSHing Core-collapse Supernovae to Explosions in Spherical Symmetry. III. Nucleosynthesis Yields. Astrophysical Journal, 2019, 870, 2.	4.5	78
65	Production of Heavy Elements in Inhomogeneous Cosmologies. Graduate Texts in Contemporary Physics, 1991, , 147-177.	0.2	78
66	Hydrostatic nucleosynthesis. I - Core helium and carbon burning Astrophysical Journal, 1985, 295, 589.	4.5	76
67	Three-dimensional hydrodynamical simulations of stellar collisions. II - White dwarfs. Astrophysical Journal, 1989, 342, 986.	4.5	75
68	Possible models for the type IA supernova 1990N. Astrophysical Journal, 1992, 386, L13.	4.5	71
69	Radioactive Dating of the Elements. Annual Review of Astronomy and Astrophysics, 1991, 29, 447-497.	24.3	70
70	A full general relativistic neutrino radiation-hydrodynamics simulation of a collapsing very massive star and the formation of a black hole. Monthly Notices of the Royal Astronomical Society: Letters, 2018, 477, L80-L84.	3.3	70
71	Nucleosynthesis in novae - A source of Ne-E and Al-26. Astrophysical Journal, 1982, 255, 617.	4.5	69
72	An Adaptive Grid, Implicit Code for Spherically Symmetric, General Relativistic Hydrodynamics in Comoving Coordinates. Astrophysical Journal, Supplement Series, 2002, 141, 229-246.	7.7	69

Friedrich-Karl Thielemann

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73	InclusiveC12(μ,μ,μ)12N reaction in the continuum random phase approximation. Physical Review C, 1995, 52 3437-3441.	' 2.9	68
74	Equation of State Dependent Dynamics and Multi-messenger Signals from Stellar-mass Black Hole Formation. Astrophysical Journal, 2018, 857, 13.	4.5	68
75	The Reaction Rate Sensitivity of Nucleosynthesis in Type II Supernovae. Astrophysical Journal, 1999, 521, 735-752.	4.5	67
76	PUSHing Core-collapse Supernovae to Explosions in Spherical Symmetry. II. Explodability and Remnant Properties. Astrophysical Journal, 2019, 870, 1.	4.5	65
77	Nuclear structure studies at ISOLDE and their impact on the astrophysical r-process. , 2000, 129, 185-221.		62
78	Synthesis of Al-26 in explosive hydrogen burning. Astrophysical Journal, 1980, 237, 931.	4.5	62
79	TWO-DIMENSIONAL CORE-COLLAPSE SUPERNOVA SIMULATIONS WITH THE ISOTROPIC DIFFUSION SOURCE APPROXIMATION FOR NEUTRINO TRANSPORT. Astrophysical Journal, 2016, 817, 72.	4.5	54
80	Explosive nucleosynthesis and Type I supernovae. Astrophysical Journal, 1984, 279, L23.	4.5	51
81	Capture reactions on C-14 in nonstandard big bang nucleosynthesis. Astrophysical Journal, 1990, 363, 340.	4.5	50
82	GRIPS - Gamma-Ray Imaging, Polarimetry and Spectroscopy. Experimental Astronomy, 2012, 34, 551-582.	3.7	48
83	Core-collapse Supernova Explosions Driven by the Hadron-quark Phase Transition as a Rare r-process Site. Astrophysical Journal, 2020, 894, 9.	4.5	48
84	Astrophysics and nuclei far from stabilitys. Nuclear Physics A, 1994, 570, 329-343.	1.5	45
85	Nucleosynthesis in 2D core-collapse supernovae of 11.2 and 17.0 M <sub>⊙</sub> progenitors: implications for Mo and Ru production. Journal of Physics G: Nuclear and Particle Physics, 2018, 45, 014001.	3.6	43
86	F-17(p, gamma)Ne-18 in explosive hydrogen burning. Astrophysical Journal, 1988, 326, 384.	4.5	38
87	The Quasiâ€Equilibrium–reduced αâ€Network. Astrophysical Journal, 1998, 503, 332-343.	4.5	34
88	PUSHing Core-collapse Supernovae to Explosions in Spherical Symmetry. IV. Explodability, Remnant Properties, and Nucleosynthesis Yields of Low-metallicity Stars*. Astrophysical Journal, 2020, 888, 91.	4.5	34
89	Convective instabilities in SN 1987A. Astrophysical Journal, 1990, 348, L17.	4.5	34
90	Core-collapse supernovae in the hall of mirrors. Astronomy and Astrophysics, 2018, 619, A118.	5.1	33

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91	Alpha-burning of O-14. Astrophysical Journal, 1987, 316, 162.	4.5	29
92	Nucleosynthesis in Supernovae. Space Science Reviews, 2018, 214, 1.	8.1	28
93	An Approximation for the rpâ€Process. Astrophysical Journal, 1997, 484, 412-423.	4.5	28
94	Reaction Rates for [TSUP]146[/TSUP]Sm Production in Supernovae. Astrophysical Journal, 1995, 451, .	4.5	27
95	Stellar Mass Black Hole Formation and Multimessenger Signals from Three-dimensional Rotating Core-collapse Supernova Simulations. Astrophysical Journal, 2021, 914, 140.	4.5	24
96	NUCLEOSYNTHESIS IN CORE-COLLAPSE SUPERNOVA EXPLOSIONS TRIGGERED BY A QUARK-HADRON PHASE TRANSITION. Astrophysical Journal, 2012, 758, 9.	4.5	23
97	Hot third family of compact stars and the possibility of core-collapse supernova explosions. Physical Review D, 2016, 94, .	4.7	22
98	r-Process Sites, their Ejecta Composition, and their Imprint in Galactic Chemical Evolution. Journal of Physics: Conference Series, 2020, 1668, 012044.	0.4	12
99	Towards generating a new supernova equation of state: A systematic analysis of cold hybrid stars. Physical Review D, 2016, 94, .	4.7	11
100	Thermonuclear reactions at high temperatures and densities. , 1987, , 91-101.		10
101	Nuclear Astrophysicsand Nuclei Far from Stability. Lecture Notes in Physics, 0, , 383-467.	0.7	9
102	The production of Al-26 in supermassive stars and the gamma-ray line flux from the Galactic center. Astrophysical Journal, 1987, 321, 761.	4.5	9
103	Deep-sea diving for stellar debris. Nature Physics, 2015, 11, 993-994.	16.7	6
104	Chemical evolution, stellar nucleosynthesis, and a variable star formation rate. Astrophysical Journal, 1987, 313, 813.	4.5	6
105	Massive Stars and Their Supernovae. Astrophysics and Space Science Library, 2018, , 173-286.	2.7	5
106	Nuclear astrophysics. Europhysics News, 2001, 32, 224-226.	0.3	4
107	Making the Elements in the Universe. Europhysics News, 2013, 44, 23-26.	0.3	4
108	Explosion Dynamics of Parametrized Spherically Symmetric Core-Collapse Supernova Simulations. , 2017, , .		4

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109	PUSHing Core-Collapse Supernovae to Explosions in Spherical Symmetry: Nucleosynthesis Yields. , 2017, , .		4
110	The origin of the elements. Physics Today, 2019, 72, 36-37.	0.3	4
111	Explosive Nucleosynthesis in Type I and Type II Supernovae. , 1991, , 609-618.		4
112	Metal-Poor Halo Stars as Tracers of ISM Mixing Processes During Halo Formation. , 0, , 194-198.		3
113	Neutrino Radiation-Hydrodynamics: General Relativistic versus Multidimensional Supernova Simulations. Progress of Theoretical Physics Supplement, 2010, 186, 87-92.	0.1	3
114	Multi-dimensional Core-Collapse Supernova Simulations with Neutrino Transport. , 2017, , .		3
115	Inhomogeneous Chemical Evolution ofÂr-Process Elements in the Galactic Halo. Springer Proceedings in Physics, 2019, , 91-96.	0.2	3
116	Nucleosynthesis in type I and type II supernovae. Advances in Space Research, 1984, 4, 67-78.	2.6	2
117	New aspects of the QCD phase transition in proto-neutron stars and core-collapse supernovae. Journal of Physics: Conference Series, 2017, 861, 012023.	0.4	2
118	Making the Heaviest Elements in a Rare Class of Supernovae. , 2017, , 1-35.		2
119	Erratum - Explosive Nucleosynthesis and Type-I Supernovae. Astrophysical Journal, 1984, 283, L25.	4.5	2
120	Nucleosynthesis in Supernovae, Hypernovae/Gamma-ray Bursts and Compact Binary Mergers. , 2017, , .		2
121	Explosive Nucleosynthesis in Carbon Deflagration Models of Type I Supernovae. , 1986, , 131-142.		2
122	Explosive Nucleosynthesis: What We Learned and What We Still Do Not Understand. Springer Proceedings in Physics, 2019, , 125-134.	0.2	2
123	Prediction of astrophysical reaction rates: Methods, data needs, and consequences for nucleosynthesis studies. AIP Conference Proceedings, 2000, , .	0.4	1
124	Stellar nucleosynthesis and galactic abundances. AIP Conference Proceedings, 2001, , .	0.4	1
125	On the origin of the cosmic elements and the nuclear history of the universe. Europhysics News, 2016, 47, 15-20.	0.3	1

Making the Heaviest Elements in a Rare Class of Supernovae. , 2017, , 1843-1877.

1

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127	Synthesis of Heavy Elements in the Ejecta of Neutron Star Mergers. Journal of Physics: Conference Series, 2018, 940, 012047.	0.4	1
128	Nucleosynthesis for SN 1987A from single-star and binary-merger progenitors. Journal of Physics G: Nuclear and Particle Physics, 2019, 46, 084002.	3.6	1
129	Nucleosynthesis in explosions of high metallicity supermassive objects. , 1987, , 233-242.		1
130	Inhomogeneous Chemical Evolution of r-process Elements in the Galactic Halo. , 2017, , .		1
131	Simulation of X-ray Bursts and Superbursts. , 2017, , .		1
132	Die Nobelpreise für Physik 1983. Physik in Unserer Zeit, 1984, 15, 30-32.	0.0	0
133	Supernovae and their Progenitors. Europhysics News, 1985, 16, 5-9.	0.3	0
134	Capture Reactions on 14C in Nonstandard Big Bang Nucleosynthesis. , 1991, , .		0
135	Supernova Nucleosynthesis in Massive Stars. International Astronomical Union Colloquium, 1996, 145, 157-164.	0.1	0
136	Stellar and Nuclear-Physics Constraints on Two r-Process Components in the Early Galaxy. , 0, , 148-149.		0
137	Nuclear Aspects of Stellar and Explosive Nucleosynthesis. , 2002, , 143-152.		0
138	DIVISION VIII / WORKING GROUP SUPERNOVA. Proceedings of the International Astronomical Union, 2008, 4, 295-297.	0.0	0
139	HYPERNOVA NUCLEOSYNTHESIS AND IMPLICATIONS FOR COSMIC CHEMICAL EVOLUTION. , 2001, , 171-173.		0
140	NUCLEOSYNTHESIS IN SUPERNOVAE AND NEUTRON STAR MERGERS. , 2001, , .		0
141	Hauser-Feshbach reaction rates with parity-dependent level densities. , 2009, , .		0
142	Die Entstehung der Atome – Eine Synthese von Mikro- und Makrokosmos. , 2014, , 97-108.		0
143	PERSPECTIVES: NUCLEOSYNTHESIS AND NUCLEAR REACTIONS IN STANDARD AND INHOMOGENEOUS BIG BANG MODELS AND BEYOND. , 1990, , 92-115.		0
144	Nucleosynthesis in Type II Supernovae and Abundance Trends of Iron-Peak Elements in Metal-Poor Stars. Astrophysics and Space Science Library, 1999, , 283-284.	2.7	0

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145	A Systematic Analysis of Hybrid Stars Using a Hadronic Equation of State Suitable for Core-Collapse Supernovae. , 2017, , .		0
146	Nucleosynthesis in 2D Core-Collapse Supernova Long-Term Simulations of 11.2 and 17.0 (ext{M}_{ odot }) Progenitors. , 2017, , .		0
147	Nucleosynthesis in Supernovae. Space Sciences Series of ISSI, 2019, , 251-312.	0.0	Ο
148	Nucleosynthesis in Core-Collapse Supernovae. Springer Proceedings in Physics, 2019, , 99-103.	0.2	0