

# Michael S Smith

## List of Publications by Year in descending order

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152

papers

2,898

citations

147801

31

h-index

189892

50

g-index

158

all docs

158

docs citations

158

times ranked

1380

citing authors

#	ARTICLE	IF	CITATIONS
1	Experimental, computational, and observational analysis of primordial nucleosynthesis. <i>Astrophysical Journal, Supplement Series</i> , 1993, 85, 219.	7.7	348
2	The magic nature of $^{132}\text{Sn}$ explored through the single-particle states of $^{133}\text{Sn}$ . <i>Nature</i> , 2010, 465, 454-457.	27.8	189
3	Destruction of $^{18}\text{F}$ via $^{18}\text{F}(\hat{p}, \pm)15\text{O}$ burning through the $E_{\text{c.m.}}=665\text{keV}$ resonance. <i>Physical Review C</i> , 2001, 63, .	2.9	107
4	Observation of the Astrophysically Important 3+ State in $^{18}\text{Ne}$ via Elastic Scattering of a Radioactive $^{17}\text{F}$ Beam from $^{11}\text{H}$ . <i>Physical Review Letters</i> , 1999, 83, 45-48.	7.8	104
5	Halo Nucleus $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"} \rangle$ $\text{display="inline"} \langle \text{mml:mmultiscripts} \rangle \langle \text{mml:mi} \rangle \text{Be} \langle \text{mml:mi} \rangle \langle \text{mml:mprescripts} / \rangle \langle \text{mml:none} / \rangle \langle \text{mml:mn} \rangle 11 \langle \text{mml:mn} \rangle \langle \text{mml:mmultiscripts} \rangle \langle \text{mml:math} \rangle$ : A Spectroscopic Study via Neutron Transfer. <i>Physical Review Letters</i> , 2012, 108, 192701.	7.8	79
6	Strength of the $^{18}(\hat{p}, \pm)15\text{O}$ Resonance at $E_{\text{c.m.}}=330\text{keV}$ . <i>Physical Review Letters</i> , 2002, 89, 262501.	7.8	73
7	Breakout from the hot CNO cycle: The $^{18}(\hat{p}, \beta^3)18\text{F}$ vs $^{18}(\hat{p}, \pm)18\text{F}$ branching ratio. <i>Physical Review C</i> , 1998, 57, 2731-2739.	2.9	69
8	Structure of $^{18}\text{Ne}$ and the breakout from the hot CNO cycle. <i>Physical Review C</i> , 1996, 54, 1999-2013.	2.9	68
9	NUCLEAR ASTROPHYSICS MEASUREMENTS WITH RADIOACTIVE BEAMS. <i>Annual Review of Nuclear and Particle Science</i> , 2001, 51, 91-130.	10.2	67
10	Direct reaction measurements with a $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"} \rangle$ $\text{display="inline"} \langle \text{mml:msup} \rangle \langle \text{mml:mrow} / \rangle \langle \text{mml:mn} \rangle 132 \langle \text{mml:mn} \rangle \langle \text{mml:msup} \rangle \langle \text{mml:math} \rangle \text{Sn}$ radioactive ion beam. <i>Physical Review C</i> , 2011, 84, .	2.9	62
11	Neutron Single Particle Structure in $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"} \rangle$ $\text{display="inline"} \langle \text{mml:mmultiscripts} \rangle \langle \text{mml:mi} \rangle \text{Sn} \langle \text{mml:mi} \rangle \langle \text{mml:mprescripts} / \rangle \langle \text{mml:none} / \rangle \langle \text{mml:mn} \rangle 131 \langle \text{mml:mn} \rangle \langle \text{mml:mmultiscripts} \rangle \langle \text{mml:math} \rangle$ and Direct Neutron Capture Cross Sections. <i>Physical Review Letters</i> , 2012, 109, 172501.	7.8	58
12	The astrophysically important 3+ state in $^{18}\text{Ne}$ and the $^{17}(\hat{p}, \beta^3)18\text{F}$ stellar rate. <i>Physical Review C</i> , 2000, 62, .	2.9	54
13	First study of the level structure of the r-process nucleus $^{83}\text{Ge}$ . <i>Physical Review C</i> , 2005, 71, .	2.9	48
14	Single-neutron excitations in neutron-rich $^{83}\text{Ge}$ and $^{85}\text{Se}$ . <i>Physical Review C</i> , 2007, 76, .	2.9	47
15	Double Magic Nature of $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"} \rangle$ $\text{display="inline"} \langle \text{mml:mrow} \rangle \langle \text{mml:mmultiscripts} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mi} \rangle \text{Sn} \langle \text{mml:mi} \rangle \langle \text{mml:mprescripts} / \rangle \langle \text{mml:none} / \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mn} \rangle 132 \langle \text{mml:mn} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mmultiscripts} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:math} \rangle$ and $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"} \rangle$ $\text{display="inline"} \langle \text{mml:mrow} \rangle \langle \text{mml:mmultiscripts} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mi} \rangle \text{Pb} \langle \text{mml:mi} \rangle \langle \text{mml:mprescripts} / \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:math} \rangle$ . <i>Physical Review C</i> , 2007, 75, .	7.8	47
16	Nuclear structure properties of astrophysical importance for $^{19}\text{Ne}$ above the proton threshold energy. <i>Physical Review C</i> , 2007, 75, .	2.9	46
17	Resonance neutron capture and transmission measurements and the stellar neutron capture cross sections of $^{134}\text{Ba}$ and $^{136}\text{Ba}$ . <i>Physical Review C</i> , 1996, 54, 1463-1477.	2.9	45
18	Stellar Reactions with Short-Lived Nuclei: $^{17}(\hat{p}, \pm)14\text{O}$ . <i>Physical Review Letters</i> , 1999, 82, 3964-3967.	7.8	44

#	ARTICLE	IF	CITATIONS
19	Astrophysically important 26Si states studied with the 28Si(p,t)26Si reaction. Physical Review C, 2002, 65, .	2.9	42
20	Constraining Al 26+ resonances using Al 26(3He,d)27Si. Physical Review C, 1996, 53, 1945-1949.	2.9	41
21	New constraints on the F 18(p, $\hat{\nu}$ )O 15 rate in novae from the (d,p) reaction. Physical Review C, 2005, 71, . Search for a resonant enhancement of the $\text{Be} + \text{O}^{15}$ reaction. Physical Review C, 2005, 71, .	2.9	39
22	Reactions of a $\text{Be}^{10}$ beam on proton and deuteron targets. Physical Review C, 2013, 88, .	2.9	39
23	Astrophysically important Si 26 states studied with the Si 28(p,t)Si 26 reaction. II. Spin of the 5.914-MeV Si 26 level and galactic Al 26 production. Physical Review C, 2006, 74, .	2.9	38
24	The "missing" 3+ state of Ne 18 and explosive F 17(p, $\hat{\nu}$ ) burning. Physical Review C, 1991, 43, 2012-2019.	2.9	36
25	Measurement of Li 7(n, $\hat{\nu}$ )8Li cross sections at En = 1.5–1340 eV. Physical Review C, 1996, 54, 383-388.	2.9	36
26	Reactions of a $\text{Be}^{10}$ beam on proton and deuteron targets. Physical Review C, 2013, 88, .	2.9	36
27	Astrophysically important S 31 states studied with the S 32(p,d)S 31 reaction. Physical Review C, 2007, 76, .	2.9	34
28	Microscopic self-consistent study of neon halos with resonant contributions. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2014, 730, 30-35.	4.1	34
29	First proton-transfer study of $\text{F}^{18}(\text{p},\text{n})\text{O}^{18}$ resonances relevant for novae. Physical Review C, 2011, 83, .	2.9	33
30	Neutron capture on $\text{Sn}^{130}$ during the r-process freeze-out. Journal of Physics G: Nuclear and Particle Physics, 2009, 36, 025201.	3.6	32
31	White paper on nuclear astrophysics and low energy nuclear physics Part 1: Nuclear astrophysics. Progress in Particle and Nuclear Physics, 2017, 94, 1-67.	14.4	32
32	Search for astrophysically important Ne 19 levels with a thick-target F 18(p,p)F 18 measurement. Physical Review C, 2004, 70, .	2.9	30
33	Elastic scattering of the proton drip-line nucleus F 17. Physical Review C, 2005, 72, .	2.9	30
34	First experimental constraints on the interference of 32+ resonances in the F 18(p, $\hat{\nu}$ )O 15 reaction. Physical Review C, 2006, 74, .	2.9	29
35	Constraint on the astrophysical $\text{F}^{18}(\text{p},\text{n})\text{O}^{18}$ ( $\text{T}_{\text{j}} = 10.784314^{29}$ rgBT) ( $\text{T}_{\text{j}} = 10.784314^{29}$ rgBT) / Overlock et al. (2013). Physical Review C, 2013, 88, .	2.9	29
36	Stretches of the Na 22 ground state. Physical Review C, 2000, 62, 054312. Stretches of the Na 22 ground state. Physical Review C, 2000, 62, 054312.	2.9	28

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37	Measurement of the 183 keV resonance in $O^{17}(p, \bar{\nu})N^{14}$ using a novel technique. Physical Review C, 2007, 75, .	2.9	27
38	Constraint of the Astrophysical $\lambda$ from the $O^{17}(p, \bar{\nu})N^{14}$ reaction. Physical Review C, 2007, 75, .	2.9	27
39	High-resolution study of the $^{18}Ne$ excited states relevant to the hot CNO cycle. Physical Review C, 1999, 59, 1182-1184.	2.9	26
40	First Direct Measurement of the $F^{17}(p, \bar{\nu})^{18}Ne$ Cross Section. Physical Review Letters, 2009, 102, 152502.	7.8	26
41	A New $F^{17}(p, \bar{\nu})^{18}Ne$ Reaction Rate and Its Implications for Nova Nucleosynthesis. Astrophysical Journal, 2003, 598, 1239-1245.	4.5	25
42	$F^{19}\hat{\pm}$ widths and the $F^{18}$ preaction rates. Physical Review C, 2005, 71, .	2.9	25
43	Structures of exotic $^{18}F$ and $^{19}Ne$ . Physical Review C, 2005, 71, .	2.9	25
44	Study of the $Sn(d,p)^{124}$ reaction in inverse kinematics close to the Coulomb barrier. Physical Review C, 2004, 70, .	2.9	23
45	Kinematically complete measurement of the $H(18F, p)^{18}F$ excitation function for the astrophysically important 7.08-MeV state in $^{19}Ne$ . Physical Review C, 2000, 62, .	2.9	22
46	Massive neutron stars and $\bar{\nu}$ -hypernuclei in relativistic mean field models. Chinese Physics C, 2018, 42, 025101.	3.7	21
47	Single-nucleon transfer reactions on $^{18}F$ . Physical Review C, 2011, 84, .	2.9	20
48	Analytical continuation from bound to resonant states in the Dirac equation with quadrupole-deformed potentials. Physical Review C, 2015, 92, .	2.9	20
49	Spectroscopic study of low-lying $^{18}F$ states. Physical Review C, 2015, 92, .	2.9	19
50	Gamma width of $O^{14}(5.17 \text{ MeV})$ and the stellar $N^{13}(p, \bar{\nu})^{14}O$ reaction rate. Physical Review C, 1993, 47, 2740-2750.	2.9	18
51	High resolution neutron capture and transmission measurements on $^{137}Ba$ and their impact on the interpretation of meteoric barium anomalies. Physical Review C, 1998, 57, R1558-R1561.	2.9	17
52	Study of the deformed halo nucleus $^{31}Ne$ with Glauber model based on microscopic self-consistent structures. Science China: Physics, Mechanics and Astronomy, 2022, 65, 1.	5.1	17
53	Big bang nucleosynthesis with independent neutrino distribution functions. Physical Review D, 2009, 79, .	4.7	16



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73	Spin assignments for $\text{Mg}^{23}$ levels and the astrophysical $\text{Na}(p,\gamma)$ reaction rate. <i>TJETQq1</i> 1, 0, 784314, 2.5, 10	2.5	10
74	Inelastic $\text{F}^{17}(p,p)\text{F}^{17}$ scattering at $E_{\text{c.m.}} = 3 \text{ MeV}$ and the $\text{O}^{14}(\bar{\nu}, p)\text{F}^{17}$ reaction rate. <i>Physical Review C</i> , 2010, 81, ., 2.9, 5	2.9	5
75	Levels in $\text{N}^{12}$ via the $\text{N}^{14}(p, \bar{\nu})$ reaction using the JENSA gas-jet target. <i>Physical Review C</i> , 2015, 92, ., 2.9, 5	2.9	5
76	Particle decay of proton-unbound levels in $\text{N}^{12}$ . <i>Physical Review C</i> , 2017, 95, ., 2.9, 5	2.9	5
77	Direct neutron capture cross section on $\text{Ge}^{80}$ and probing shape coexistence in neutron-rich nuclei. <i>Physical Review C</i> , 2019, 100, ., 2.9, 5	2.9	5
78	Search for the $K^{\pi}=1+$ two-proton band in $\text{Er}^{166}$ . <i>Physical Review C</i> , 1993, 47, 1943-1950., 2.9, 4	2.9	4
79	Computational Infrastructure for Nuclear Astrophysics. <i>AIP Conference Proceedings</i> , 2006, ., 0.4, 4	0.4	4
80	$^{26}\text{Al}$ +inelastic and inelastic scattering reactions and galactic abundances of $^{26}\text{Al}$ . <i>Physical Review C</i> , 2012, 85, ., 2.9, 4	2.9	4
81	Searching for resonances in the unbound $^{6}\text{Be}$ nucleus by using a radioactive $^{7}\text{Be}$ beam. <i>Journal of the Korean Physical Society</i> , 2012, 61, 1786-1791., 0.7, 4	0.7	4
82	A gas jet target for radioactive ion beam experiments. , 2013, ., 4	4	
83	Spectroscopic study of the radionuclide $\text{Na}^{21}$ for the astrophysical $\text{F}^{17}(\bar{\nu}, p)\text{Ne}^{20}$ reaction rate. <i>Physical Review C</i> , 2017, 96, ., 2.9, 4	2.9	4
84	Spectroscopic study of $\text{Ne}^{20}$ reactions using the JENSA gas-jet target to constrain the astrophysical $\text{F}^{17}(\bar{\nu}, p)\text{Ne}^{20}$ reaction rate. <i>Physical Review C</i> , 2017, 96, ., 2.9, 4	2.9	4
85	X-ray burst studies with the JENSA gas jet target. <i>EPJ Web of Conferences</i> , 2017, 165, 01043., 0.3, 4	0.3	4
86	Nuclear Data for Astrophysics Research: A New Online Paradigm. <i>Journal of the Korean Physical Society</i> , 2011, 59, 761-766., 0.7, 4	0.7	4
87	Self-consistent description of the halo nature of $^{31}\text{Ne}$ with continuum and pairing correlations. <i>Journal of Physics G: Nuclear and Particle Physics</i> , 2022, 49, 025102., 3.6, 4	3.6	4
88	Nova Nucleosynthesis Calculations: Robust Uncertainties, Sensitivities, and Radioactive Ion Beam Measurements. <i>AIP Conference Proceedings</i> , 2002, ., 0.4, 3	0.4	3
89	Single-neutron excitations in neutron-rich $N = 51$ nuclei. <i>European Physical Journal A</i> , 2005, 25, 371-374., 2.5, 3	2.5	3
90	Studies of nuclei close to $[^{132}\text{Sn}]$ using single-neutron transfer reactions. , 2009, ., 3	3	

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91	Development of the ORRUBA Silicon Detector Array. , 2009, , .		3
92	Comment on "Properties of $^{26}\text{Mg}$ and $^{26}\text{Si}$ in the sdshell model and the determination of the $^{25}\text{Al}(\text{p},\text{f}^3)26\text{Si}$ reaction rate". Physical Review C, 2011, 84, .	2.9	3
93	Proton decay branching ratio for the 6.15-MeV $\text{Sn}(p,\text{f}^3)\text{Ne}$ level. Physical Review C, 2012, 85, .	2.9	3
94	Development of the superorrruba detector array and the measurement of single particle states in $^{81}\text{Ge}$ . , 2013, , .		3
95	Particle decay of astrophysically-important $^{19}\text{Ne}$ levels. Journal of Physics: Conference Series, 2019, 1308, 012004.	0.4	3
96	DEVELOPMENT OF ORRUBA: A SILICON ARRAY FOR THE MEASUREMENT OF TRANSFER REACTIONS IN INVERSE KINEMATICS. , 2008, , .		3
97	Neutron transfer reactions on the ground state and isomeric state of a $\text{Sn}(p,\text{f}^3)\text{Ne}$ beam. Physical Review C, 2022, 105, .	2.9	3
98	Nuclear physics at Oak Ridge National Laboratory. Nuclear Physics News, 2002, 12, 4-12.	0.4	2
99	Element synthesis calculations for stellar explosions: robust uncertainties, sensitivities, and radioactive ion beam measurements. Nuclear Physics A, 2004, 746, 565-568.	1.5	2
100	Analysis of $^{25}\text{Al}$ energy levels observed in the $\text{Si}^{28}(\text{p},\text{f}^\pm)25\text{Al}$ reaction. Physical Review C, 2009, 80, .	2.9	2
101	$^{24}\text{Mg}(\text{p},\text{f}^\pm)21\text{Na}$ reaction study for spectroscopy of $^{21}\text{Na}$ . Journal of the Korean Physical Society, 2015, 67, 1435-1439.	0.7	2
102	Neutron capture on $^{16}\text{O}$ within the framework of RMF + ACCC + BCS for astrophysical simulations. European Physical Journal A, 2021, 57, 1.	2.5	2
103	First measurement of proton decay from a transfer reaction to $^{21}\text{Na}$ . Physical Review C, 2021, 104, .	2.9	2
104	Nuclear data for astrophysics: resources, challenges, strategies, and software solutions. , 2007, , .		2
105	Online Bayesian optimization for a recoil mass separator. Physical Review Accelerators and Beams, 2022, 25, .	1.6	2
106	Nuclear data on unstable nuclei for astrophysics. Nuclear Physics A, 2004, 746, 569-572.	1.5	1
107	Developing techniques to study $A \approx 132$ nuclei with (d, p) reactions in inverse kinematics. European Physical Journal A, 2005, 25, 283-285.	2.5	1
108	Future of Nuclear Data for Nuclear Astrophysics. AIP Conference Proceedings, 2005, , .	0.4	1

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109	Neutron-Transfer Reactions with Exotic Neutron-Rich Beams: Surrogates for Neutron-Capture Reactions. AIP Conference Proceedings, 2006, , .	0.4	1
110	Waiting Points in Nova and X-ray burst Nucleosynthesis. AIP Conference Proceedings, 2008, , .	0.4	1
111	Neutron Transfer Reactions on Neutron-Rich $\text{N}^{50}$ and $\text{N}^{82}$ Nuclei Near the r-Process Path. , 2009, , .		1
112	Neutron Transfer Reactions: Surrogates for Neutron Capture for Basic and Applied Nuclear Science. , 2009, , .		1
113	Elemental Discrimination of Low-Energy Ions using Risetime Analysis of Silicon-Strip Detector Signals. , 2009, , .		1
114	Bottlenecks and Waiting Points in Nucleosynthesis in X-ray bursts and Novae. , 2010, , .		1
115	First spin-parity constraint of the 306 keV resonance in $\text{Cl}^{35}$ for nova nucleosynthesis. Physical Review C, 2017, 95, .	2.9	1
116	X-ray Burst Studies with the JENSA Gas Jet Target. , 2017, , .		1
117	PROBING SINGLE-NEUTRON LEVELS IN $^{127,129}\text{Sn}$ VIA TRANSFER REACTIONS. , 2013, , .		1
118	Proton branching ratios of Mg23 levels. Physical Review C, 2022, 105, .	2.9	1
119	Radioactive beams in nuclear astrophysics. AIP Conference Proceedings, 2001, , .	0.4	0
120	Study of the $^{18}\text{F}(p,\hat{\nu})$ $^{15}\text{O}$ Reaction at Energies Relevant for $^{18}\text{F}$ Nucleosynthesis in Novae. AIP Conference Proceedings, 2002, , .	0.4	0
121	Nuclear Data Strategies for Mapping the Cosmos. AIP Conference Proceedings, 2002, , .	0.4	0
122	WEB-BASED NUCLEAR DATA INFORMATION FOR ASTROPHYSICS. , 2003, , .		0
123	New $^{19}\text{Ne}$ resonance observed using an exotic $^{18}\text{F}$ beam. European Physical Journal A, 2005, 25, 643-644.	2.5	0
124	Studies Of Neutron-Rich Nuclei With (d,p) Reactions In Inverse Kinematics At The HRIBF. AIP Conference Proceedings, 2005, , .	0.4	0
125	New Evaluations and Computational Infrastructure for Management and Visualization of Nuclear Astrophysics Data. AIP Conference Proceedings, 2005, , .	0.4	0
126	Radioactive Beams and Exploding Stars at ORNL. AIP Conference Proceedings, 2006, , .	0.4	0



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145	RECENT NUCLEAR ASTROPHYSICS DATA ACTIVITIES AT ORNL. , 2004, , .	0	0
146	A GAS JET TARGET FOR RADIOACTIVE ION BEAM EXPERIMENTS. , 2013, , .	0	0
147	Transfer Reactions with $^{134}\text{Xe}$ . , 2017, , .	0	0
148	Single-neutron excitations in neutron-rich $N = 51$ nuclei. , 2005, , 371-374.	0	0
149	New $^{19}\text{Ne}$ resonance observed using an exotic $^{18}\text{F}$ beam. , 2005, , 643-644.	0	0
150	Developing techniques to study $A \approx 132$ nuclei with (d, p) reactions in inverse kinematics. , 2005, , 283-285.	0	0
151	Proton Decay of $^{21}\text{Na}$ for $^{20}\text{Ne}$ Energy Levels. Journal of the Korean Physical Society, 2020, 77, 383-387.	0.7	0
152	Estimation of the NiCu Cycle Strength and Its Impact on Type I X-Ray Bursts. Astrophysical Journal, 2022, 929, 96.	4.5	0