

Steven D Pain

List of Publications by Year in descending order

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133
papers

2,260
citations

186265

28
h-index

265206

42
g-index

136
all docs

136
docs citations

136
times ranked

1483
citing authors

#	ARTICLE	IF	CITATIONS
1	Measurement of the ${}^7\text{Li}(\hat{I}^3, t)4\text{He}$ ground-state cross section between $E\hat{I}^3=4.4$ and 10 MeV. Physical Review C, 2020, 101, .	7.8	20
2	Spin assignments for ${}^{23}\text{Mg}$ levels and the astrophysical ${}^{22}\text{Na}(p, \gamma)$ reaction and its impact on ${}^{23}\text{Mg}$ production. Physical Review C, 2020, 101, .	2.9	11
3	Low-energy cross-section measurement of the ${}^{23}\text{Mg}(p, \gamma)$ reaction and its impact on ${}^{23}\text{Mg}$ production. Physical Review C, 2020, 101, .	2.5	4
4	Doppler broadening in ${}^{23}\text{Mg}$ \hat{I}^3 -ray spectroscopy of astrophysically important states in Ca39. Physical Review C, 2020, 101, .	2.9	4
5	Direct neutron capture cross section on Ge80 and probing shape coexistence in neutron-rich nuclei. Physical Review C, 2019, 99, .	2.9	5
6	The ORNL Deuterated Spectroscopic Array (ODeSA). Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2019, 946, 162668.	1.6	6
7	Measurement of the ${}^{23}\text{Mg}(p, \gamma)$ reaction and its impact on ${}^{23}\text{Mg}$ production. Physical Review C, 2020, 101, .	2.9	6
8	Constraining spectroscopic factors near the ${}^{23}\text{Mg}(p, \gamma)$ reaction using combined measurements. Physical Review C, 2020, 101, .	2.9	6
9	Measurement of the ${}^{23}\text{Mg}(p, \gamma)$ reaction and its impact on ${}^{23}\text{Mg}$ production. Physical Review C, 2020, 101, .	2.9	6
10	Measurement of the ${}^{23}\text{Mg}(p, \gamma)$ reaction and its impact on ${}^{23}\text{Mg}$ production. Physical Review C, 2020, 101, .	2.9	6

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19	Design of SECAR a recoil mass separator for astrophysical capture reactions with radioactive beams. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2018, 877, 87-103.	1.6	20
20	First data with the Hybrid Array of Gamma Ray Detector (HAGRID). Nuclear Instruments & Methods in Physics Research B, 2018, 414, 190-194.	1.4	6
21	Neutron-hole states in ^{131}Sn and spin-orbit splitting in neutron-rich nuclei. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2018, 785, 615-620.	4.1	7
22	Status of the JENSA gas-jet target for experiments with rare isotope beams. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2018, 911, 1-9.	1.6	18
23	Development of an array of liquid-scintillator-based bar detectors: SABRE. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2018, 908, 189-197.	1.6	4
24	Toward complete spectroscopy using \hat{I}^2 decay: The example of $\text{Cl}^{32}(\hat{I}^2\hat{I}^3)\text{S}^{32}$. Physical Review C, 2018, 98, .	2.9	1
25	Detailed study of the decay $\langle \text{math xmlns:mml="http://www.w3.org/1998/Math/MathML"} \rangle \langle \text{mrow} \rangle \langle \text{mmultiscripts} \rangle \langle \text{mi} \rangle \text{Cl} \langle \text{mi} \rangle \langle \text{mprescripts} \rangle \langle \text{none} \rangle \langle \text{mn} \rangle 31 \langle \text{mn} \rangle \langle \text{mmultiscripts} \rangle \langle \text{mo} \rangle \langle \text{mo} \rangle \langle \text{mi} \rangle \hat{I}^2 \langle \text{mi} \rangle \langle \text{mi} \rangle \hat{I}^3 \langle \text{mi} \rangle \langle \text{mo} \rangle \langle \text{mn} \rangle 29 \langle \text{mn} \rangle \langle \text{mmultiscripts} \rangle \langle \text{mi} \rangle \text{S} \langle \text{mi} \rangle \langle \text{mprescripts} \rangle \langle \text{none} \rangle \langle \text{math display="inline"} \rangle \langle \text{mrow} \rangle \langle \text{mmultiscripts} \rangle \langle \text{mrow} \rangle \langle \text{mi} \rangle \text{K} \langle \text{mi} \rangle \langle \text{mprescripts} \rangle \langle \text{none} \rangle \langle \text{mrow} \rangle \langle \text{mn} \rangle 38 \langle \text{mn} \rangle \langle \text{mmultiscripts} \rangle \langle \text{mrow} \rangle \langle \text{math} \rangle$. Physical Review C, 2018, 97, .	2.9	12
26	Isomer production via fast fragmentation. Physical Review Accelerators and Beams, 2018, 21, .	1.6	5
27	Development of the (d,n) Proton-transfer Reaction in Inverse Kinematics for Structure Studies. Acta Physica Polonica B, 2018, 49, 365.	0.8	0
28	New portal to the $\langle \text{math xmlns:mml="http://www.w3.org/1998/Math/MathML"} \rangle \langle \text{mrow} \rangle \langle \text{mmultiscripts} \rangle \langle \text{mi} \rangle \text{O} \langle \text{mi} \rangle \langle \text{mprescripts} \rangle \langle \text{none} \rangle \langle \text{mn} \rangle 15 \langle \text{mn} \rangle \langle \text{mmultiscripts} \rangle \langle \text{mo} \rangle \langle \text{mo} \rangle \langle \text{mi} \rangle \hat{I}^{\pm} \langle \text{mi} \rangle \langle \text{mo} \rangle \langle \text{mn} \rangle 19 \langle \text{mn} \rangle \langle \text{mmultiscripts} \rangle \langle \text{mi} \rangle \text{Ne} \langle \text{mi} \rangle \langle \text{mprescripts} \rangle \langle \text{none} \rangle \langle \text{mn} \rangle 19 \langle \text{mn} \rangle \langle \text{mmultiscripts} \rangle \langle \text{mrow} \rangle \langle \text{math} \rangle$ resonance triggering	2.9	1
29	CNO-cv Spectroscopic study of the radionuclide Na^{21} for the astrophysical $\text{F}^{17}(\hat{I}^{\pm},p)\text{Ne}^{20}$ reaction rate. Physical Review C, 2017, 96, .	2.9	4
30	Improved technique for preparation of deuterated-polyethylene targets. Nuclear Instruments & Methods in Physics Research B, 2017, 410, 53-59.	1.4	5
31	First spin-parity constraint of the 306 keV resonance in $\langle \text{math xmlns:mml="http://www.w3.org/1998/Math/MathML"} \rangle \langle \text{mmultiscripts} \rangle \langle \text{mi} \rangle \text{Cl} \langle \text{mi} \rangle \langle \text{mprescripts} \rangle \langle \text{none} \rangle \langle \text{mn} \rangle 35 \langle \text{mn} \rangle \langle \text{mmultiscripts} \rangle \langle \text{math} \rangle$ for nova nucleosynthesis. Physical Review C, 2017, 95, .	2.9	1
32	Toward a complete theory for predicting inclusive deuteron breakup away from stability. European Physical Journal A, 2017, 53, 1.	2.5	62
33	Particle decay of proton-unbound levels in N^{12} . Physical Review C, 2017, 95, .	2.9	5
34	Spectroscopic study of $\langle \text{math xmlns:mml="http://www.w3.org/1998/Math/MathML"} \rangle \langle \text{mrow} \rangle \langle \text{mmultiscripts} \rangle \langle \text{mi} \rangle \text{Ne} \langle \text{mi} \rangle \langle \text{mprescripts} \rangle \langle \text{none} \rangle \langle \text{mn} \rangle 20 \langle \text{mn} \rangle \langle \text{mmultiscripts} \rangle \langle \text{mo} \rangle + \langle \text{mo} \rangle \langle \text{mi} \rangle p \langle \text{mi} \rangle \langle \text{mrow} \rangle \langle \text{math} \rangle$ reactions using the JENSA gas-jet target to constrain the astrophysical $\langle \text{math xmlns:mml="http://www.w3.org/1998/Math/MathML"} \rangle \langle \text{mrow} \rangle \langle \text{mmultiscripts} \rangle \langle \text{mi} \rangle \text{mathv}$	2.9	4
35	Confirmation of the isomeric state in P^{26} . Physical Review C, 2017, 96, .	2.9	3
36	Determining the $^{14}\text{O}(\hat{I}^{\pm},p)^{17}\text{F}$ astrophysical rate from Measurements at TwinSol. Physics Procedia, 2017, 90, 415-420.	1.2	0

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37	Direct Reaction Measurements Using GODDESS. Physics Procedia, 2017, 90, 455-462.	1.2	16
38	X-ray burst studies with the JENSA gas jet target. EPJ Web of Conferences, 2017, 165, 01043.	0.3	4
39	Informing neutron capture nucleosynthesis on short-lived nuclei with (d,p) reactions. EPJ Web of Conferences, 2017, 165, 01013.	0.3	5
40	Recent Nuclear Astrophysics Measurements using the TwinSol Separator. Journal of Physics: Conference Series, 2016, 730, 012004.	0.4	3
41	The new JENSA gas-jet target for astrophysical radioactive beam experiments. Nuclear Instruments & Methods in Physics Research B, 2016, 376, 326-328.	1.4	3
42	Structure of ^{107}Sn studied through single-neutron knockout reactions. Physical Review C, 2016, 93, .	2.9	9
43	Isobaric multiplet mass equation in the $A=31, T=3/2$ quartets. Physical Review C, 2016, 93, .	2.9	10
44	Isospin Mixing Reveals P in ^{30}P . Physical Review C, 2015, 92, .	7.8	31
45	Possible evidence of a ^{12}C -delayed ^{13}C decay of ^{12}C . Physical Review C, 2015, 92, .	2.9	29
46	Revalidation of the isobaric multiplet mass equation for the A in ^{20}A . Physical Review C, 2015, 92, .	2.9	20
47	Observation of Doppler broadening in ^{12}C -delayed proton- ^{13}C decay. Physical Review C, 2015, 92, .	2.9	13
48	Levels in ^{12}N via the $^{14}\text{N}(p, \hat{\alpha})$ reaction using the JENSA gas-jet target. Physical Review C, 2015, 92, .	2.9	5
49	Investigation into the semimagic nature of the tin isotopes through electromagnetic moments. Physical Review C, 2015, 92, .	2.9	44
50	Direct reaction experimental studies with beams of radioactive tin ions. AIP Conference Proceedings, 2015, .	0.4	0
51	$^{24}\text{Mg}(p, \hat{\alpha})^{21}\text{Na}$ reaction study for spectroscopy of ^{21}Na . Journal of the Korean Physical Society, 2015, 67, 1435-1439.	0.7	2
52	The JENSA Gas-Jet Target for Radioactive Beam Experiments at ReA3 and FRIB. Physics Procedia, 2015, 66, 451-456.	1.2	2
53	^{12}C Decay as a Probe of Explosive Nucleosynthesis in Classical Novae. Physics Procedia, 2015, 66, 532-536.	1.2	2
54	Nuclear Structure Studies in the ^{132}Sn Region: α -Safe Coulex with Carbon Targets. Journal of Physics: Conference Series, 2015, 639, 012007.	0.4	3

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73	Coupling Gammasphere and ORRUBA. , 2013, , .		10
74	HRIBF studies of r-process nuclei and first results with the new SuperORRUBA detector. , 2013, , . Classical-Nova Contribution to the Milky Way ϵ^{ms}		0
75	Abundance: Exit Channel of the Key ^{26}Al	7.8	40
76	GYROMAGNETIC RATIOS IN NEUTRON-RICH NUCLEI BY THE RECOIL IN VACUUM TECHNIQUE. , 2013, , .		0
77	TRANSFER REACTION EXPERIMENTS WITH FISSION FRAGMENTS. , 2013, , .		0
78	GAMMASPHERE AND ORRUBA: DUAL DETECTORS FOR EXPERIMENTAL STRUCTURE STUDIES. , 2013, , .		0
79	Single-neutron excitations near ^{132}Sn . , 2012, , .		0
80	^{19}Ne levels studied with the $^{18}\text{F}(d,n)^{19}\text{Ne}^*(^{18}\text{F}+p)$ reaction. Physical Review C, 2012, 85, .	2.9	14
81	Neutron Single Particle Structure in ^{131}Sn and Direct Neutron Capture Cross Sections. Physical Review Letters, 2012, 109, 172501.	7.8	58
82	^{26}Al +pelastic and inelastic scattering reactions and galactic abundances of ^{26}Al . Physical Review C, 2012, 85, .	2.9	4
83			

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91	Comment on "Properties of ^{26}Mg and ^{26}Si in the shell model and the determination of the $^{25}\text{Al}(p, \hat{1}^3)^{26}\text{Si}$ reaction rate". Physical Review C, 2011, 84, .	2.9	3
92	First proton-transfer study of $^{18}\text{F} + ^{18}\text{O}$ resonances	2.9	33
93	$^{7}\text{Be} + ^{d}$ reaction and primordial ^{7}Li	2.9	39
94	Single-particle structure of neutron-rich nuclei. Journal of Physics: Conference Series, 2010, 239, 012007.	0.4	3
95	TIARA: A large solid angle silicon array for direct reaction studies with radioactive beams. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2010, 614, 439-448.	1.6	48
96	Neutron capture surrogate reaction on ^{75}As in inverse kinematics using $(d, p^{\hat{1}^3})$. EPJ Web of Conferences, 2010, 2, 06003.	0.3	1
97	Spin assignments to excited states in ^{22}Na through	2.9	7
98	Migration of Nuclear Shell Gaps Studied in the ^{29}Ne	7.8	40
99	^{28}Si	2.9	29
100	CLUSTER STATES IN ^{12}C AND ^{14}C . Modern Physics Letters A, 2010, 25, 1833-1837.	1.2	2
101	The magic nature of ^{132}Sn explored through the single-particle states of ^{133}Sn . Nature, 2010, 465, 454-457.	27.8	189
102	Neutron Transfer Reactions on Neutron-Rich ^{50}Na and ^{82}Na Nuclei Near the r-Process Path. , 2009, , .		1
103	Neutron Transfer Reactions: Surrogates for Neutron Capture for Basic and Applied Nuclear Science. , 2009, , .		1
104	^{17}F	2.9	9
105	First Direct Measurement of the $^{17}\text{F}(p, \hat{1}^3)^{18}\text{Ne}$ Cross Section. Physical Review Letters, 2009, 102, 152502.	7.8	26
106	Constraint on the astrophysical ^{18}Ne	2.9	28
107	Direct measurements of (p, γ) cross-sections at astrophysical energies using radioactive beams and the Daresbury Recoil Separator. European Physical Journal A, 2009, 42, 457.	2.5	9
108	Development of the ORRUBA Silicon Detector Array. , 2009, , .		3

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109	Elemental Discrimination of Low-Energy Ions using Risetime Analysis of Silicon-Strip Detector Signals. , 2009, , .		1
110	Measurement of g factors of excited states in radioactive beams by the transient field technique: ^{132}Te . Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2008, 664, 241-245.	4.1	28
111	Spectroscopic study of low-lying N levels. Physical Review C, 2008, 78, .	2.9	18
112	Measurement of the 183 keV resonance in $^{17}\text{O}(p, \hat{1}\pm)^{14}\text{N}$ using a novel technique. Physical Review C, 2007, 75, .	2.9	27
113	Development of a high solid-angle silicon detector array for measurement of transfer reactions in inverse kinematics. Nuclear Instruments & Methods in Physics Research B, 2007, 261, 1122-1125.	1.4	59
114	Single particle structure of exotic nuclei with transfer reactions. Progress in Particle and Nuclear Physics, 2007, 59, 389-391.	14.4	4
115	$(d, p\hat{1}^3)$ Reactions and the surrogate reaction technique. Nuclear Instruments & Methods in Physics Research B, 2007, 261, 938-940.	1.4	18
116	Neutron-Transfer Reactions with Exotic Neutron-Rich Beams: Surrogates for Neutron-Capture Reactions. AIP Conference Proceedings, 2006, , .	0.4	1
117	Studies of Single-Particle Structure in the $N=16$ Region Using Transfer Reactions. AIP Conference Proceedings, 2006, , .	0.4	0
118	Studies of the Single Particle Structure of Exotic Nuclei using Transfer Reactions. AIP Conference Proceedings, 2006, , .	0.4	0
119	Astrophysically important ^{26}Si states studied with the $^{28}\text{Si}(p, t)^{26}\text{Si}$ reaction. II. Spin of the 5.914-MeV ^{26}Si level and galactic ^{26}Al production. Physical Review C, 2006, 74, .	2.9	38
120	Structure of ^{12}Be : Intruder d-Wave Strength at $N=8$. Physical Review Letters, 2006, 96, 032502.	7.8	93
121	First experimental constraints on the interference of ^{32}S resonances in the $^{18}\text{O}(p, \hat{1}\pm)^{15}\text{O}$ reaction. Physical Review C, 2006, 74, .	2.9	29
122	Neutron transfer reactions with neutron-rich radioactive ion beams. Nuclear Instruments & Methods in Physics Research B, 2005, 241, 200-203.	1.4	4
123	Experimental evidence of a $\text{ensuremath}\{u(1d_{5/2})^2\}$ component to the ^{12}Be ground state. European Physical Journal A, 2005, 25, 349-351.	2.5	10
124	Study of transfer reactions in inverse kinematics with the TIARA array. Journal of Physics G: Nuclear and Particle Physics, 2005, 31, S1691-S1695.	3.6	2
125	$\hat{1}\pm + \text{Li}$ and $\text{H} + \text{Be}$ decay of $^{10,11,12}\text{B}$. Physical Review C, 2005, 72, .	2.9	16
126	High-energy two-neutron removal from ^{10}Be . Physical Review C, 2005, 72, .	2.9	17

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127	Nucleon transfer via (d,p) using TIARA with a ^{24}Ne radioactive beam. Journal of Physics G: Nuclear and Particle Physics, 2005, 31, S1655-S1661.	3.6	10
128	Breakup reaction studies of ^{10}Be and ^{11}Be using a ^{10}Be beam. Physical Review C, 2004, 69, .	2.9	36
129	Angular correlation measurements for the $\alpha + \text{He6}$ decay of ^{10}Be . Physical Review C, 2004, 70, .	2.9	21
130	Neutron removal and cluster breakup of ^{14}B and ^{14}Be . Physical Review C, 2004, 70, .	2.9	7
131	Helium clustering in neutron-rich Be isotopes. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2004, 580, 129-136.	4.1	32
132	Measurements of the breakup and neutron removal cross sections for ^{16}C . Physical Review C, 2004, 70, .	2.9	15
133	$^{12}\text{C} + ^{12}\text{C}$ cluster resonances in ^{24}Mg up to $E_x = 50\text{MeV}$. Physical Review C, 2003, 68, .	2.9	13