

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	The magic nature of ^{132}Sn explored through the single-particle states of ^{133}Sn . Nature, 2010, 465, 454-457.	27.8	189
2	Structure of ^{12}Be : Intruder-d-Wave Strength at $N=8$. Physical Review Letters, 2006, 96, 032502.	7.8	93
3	Halo Nucleus ^{11}Be : A Spectroscopic Study via Neutron Transfer. Physical Review Letters, 2012, 108, 192701.	7.8	79
4	Direct reaction measurements with a ^{132}Sn radioactive ion beam. Physical Review C, 2011, 84, .	2.9	62
5	Toward a complete theory for predicting inclusive deuteron breakup away from stability. European Physical Journal A, 2017, 53, 1.	2.5	62
6	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
7	Neutron Single Particle Structure in ^{131}Sn and Direct Neutron Capture Cross Sections. Physical Review Letters, 2012, 109, 172501.	7.8	58
8	Resonances in ^{14}C observed in the $^{14}\text{C} + ^4\text{He}$ reaction. Physical Review Letters, 2012, 109, 172501.	2.9	57
9	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
10	Double-Magic Nature of ^{132}Sn and ^{132}Pb . Physical Review Letters, 2015, 115, 082501.	7.8	47
11	Excitation energy dependence of fragment-mass distributions from fission of $^{180,190}\text{Hg}$ formed in fusion reactions of $^{36}\text{Ar} + ^{144,154}\text{Sm}$. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2015, 748, 89-94.	4.1	47
12	Investigation into the semimagic nature of the tin isotopes through electromagnetic moments. Physical Review C, 2015, 92, .	2.9	44
13	Migration of Nuclear Shell Gaps Studied in the $^{10}\text{B} + ^{16}\text{O}$ Reaction. Physical Review Letters, 2012, 109, 172501.	7.8	40
14	Classical-Nova Contribution to the Milky Way ^{26}Al Abundance: Exit Channel of the Key ^{26}Al Resonance. Physical Review Letters, 2012, 109, 172501.	7.8	40
15	Key $^{7}\text{Be} + ^{7}\text{Be}$ Reaction and Primordial ^{7}Li . Physical Review Letters, 2012, 109, 172501.	2.9	39
16	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
17	Breakup reaction studies of ^{10}Be and ^{11}Be using a ^{10}Be beam. Physical Review C, 2004, 69, .	2.9	36
18	Resonances in ^{11}C observed in the $^{11}\text{C} + ^4\text{He}$ reaction. Physical Review Letters, 2012, 109, 172501.		

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19	Reactions of a ^{10}Be beam on proton and deuteron targets. Physical Review C, 2013, 88, .	2.9	36
20	First proton-transfer study of $^{18}\text{F} + ^{18}\text{O}$ resonances	2.9	33
21	$^{18}\text{F} + ^{18}\text{O}$ resonances		

#	ARTICLE	IF	CITATIONS
37	Transition from collectivity to single-particle degrees of freedom from magnetic moment measurements on ^{388}Sr 44 and ^{389}Sr 52. <i>Physical Review C</i> , 2014, 89, .	2.9	20
38	Design of SECAR a recoil mass separator for astrophysical capture reactions with radioactive beams. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2018, 877, 87-103.	1.6	20
39	C^{13} levels. <i>Physical Review C</i> , 2008, 78, .	7.8	20
40	$(d, p)^3$ Reactions and the surrogate reaction technique. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2007, 261, 938-940.	1.4	18
41	Spectroscopic study of low-lying N levels. <i>Physical Review C</i> , 2008, 78, .	2.9	18
42	Status of the JENSA gas-jet target for experiments with rare isotope beams. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2018, 911, 1-9.	1.6	18
43	High-energy two-neutron removal from ^{10}Be . <i>Physical Review C</i> , 2005, 72, .	2.9	17
44	Construction of a fast ionization chamber for high-rate particle identification. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2014, 751, 6-10.	1.6	17
45	$^{\pm}\text{Li}$ and $\text{H}+\text{Be}$ decay of $^{10,11,12}\text{B}$. <i>Physical Review C</i> , 2005, 72, .	2.9	16
46	Advances in instrumentation for nuclear astrophysics. <i>AIP Advances</i> , 2014, 4, .	1.3	16
47	Direct Reaction Measurements Using GODDESS. <i>Physics Procedia</i> , 2017, 90, 455-462.	1.2	16
48	Measurements of the breakup and neutron removal cross sections for ^{16}C . <i>Physical Review C</i> , 2004, 70, .	2.9	15
49			

#	ARTICLE	IF	CITATIONS
55	Investigation of Compton scattering for gamma beam intensity measurements and perspectives at ELI-NP. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2019, 921, 27-32.	1.6	11
56	Measurement of the ${}^7\text{Li}(\hat{1}^3, t){}^4\text{He}$ ground-state cross section between $E\hat{1}^3=4.4$ and 10 MeV. Physical Review C, 2020, 101, .	2.9	11
57	Cross-section measurement of the $\text{B} + {}^{10}\text{B} \rightarrow \text{N} + \text{N}$ reaction and its impact on		
58	Experimental evidence of a $\text{ensuremath}\{u(1d_{5/2})^2\}$ component to the ${}^{12}\text{Be}$ ground state. European Physical Journal A, 2005, 25, 349-351.	2.5	10
59	Nucleon transfer via (d,p) using TIARA with a ${}^{24}\text{Ne}$ radioactive beam. Journal of Physics G: Nuclear and Particle Physics, 2005, 31, S1655-S1661.	3.6	10
60	Coupling Gammasphere and ORRUBA. , 2013, , .		10
61	$2\hat{1}^{1/2}$ states populated in Te^{135} from Be^9 -induced reactions with a Sn^{132} beam. Physical Review C, 2014, 90, .	2.9	10
62	Isobaric multiplet mass equation in the $A=31, T=3/2$ quartets. Physical Review C, 2016, 93, .	2.9	10
63	Informing direct neutron capture on tin isotopes near the $N=82$ shell closure. Physical Review C, 2019, 99, .	2.9	10
64	The $F + \text{Tj ETQqO}^0 \text{rgBT} / \text{Overlock} 10$	2.9	10
65	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
66	Direct studies of low-energy resonances in ${}^{31}\text{P}(p, \hat{1}^\pm){}^{28}\text{Si}$ and ${}^{35}\text{Cl}(p, \hat{1}^\pm){}^{32}\text{S}$. European Physical Journal A, 2011, 47, 1.	2.5	9
67	Structure of Sn studied through New portal to the single-neutron knockout reactions. Physical Review C, 2016, 93.	2.9	9
68	$\text{O} + \text{Ne} \rightarrow \text{N} + \text{N}$ resonance triggering		
69	Key Ne^{19} States Identified Affecting $\hat{1}^3$ -Ray Emission from F18 in Novae. Physical Review Letters, 2019, 122, 052701.	7.8	9
70	Validating (d,p $\hat{1}^3$) as a Surrogate for Neutron Capture. EPJ Web of Conferences, 2015, 93, 02012.	0.3	8
71	Constraining spectroscopic factors near the $\text{Kr} + \text{Kr}$ -process path using combined measurements:		

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73	Neutron removal and cluster breakup of ^{14}Be and ^{14}B . Physical Review C, 2004, 70, . Spin assignments to excited states in ^{22}Na through ^{20}Mg . Physical Review C, 2019, 99, .	2.9	7
74	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. Doppler broadening in ^{20}Mg decay. Physical Review C, 2019, 99, .	2.9	7
75	^{12}C -delayed ^{13}C decay of ^{20}Mg and the $^{19}\text{Ne}(p,^{13}\text{C})^{20}\text{Na}$ breakout reaction in Type I X-ray bursts. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2018, 778, 397-402.	4.1	7
76	First data with the Hybrid Array of Gamma Ray Detector (HAGRID). Nuclear Instruments & Methods in Physics Research B, 2018, 414, 190-194.	4.1	6
77	The ORNL Deuterated Spectroscopic Array (ODeSA). Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2019, 946, 162-168.	1.4	6
78	Measurement of the ^{10}B cross section for the astrophysical $^{10}\text{B}(p,\alpha)^8\text{Be}$ reaction. Physical Review C, 2019, 99, .	1.6	6
79	Spin assignments to ^{23}Mg levels and the astrophysical $^{22}\text{Na}(p,\gamma)^{23}\text{Mg}$ reaction. Physical Review C, 2019, 99, .	2.9	6
80	Levels in ^{12}N via the $^{14}\text{N}(p,\alpha)^{12}\text{C}$ reaction using the JENSA gas-jet target. Physical Review C, 2015, 92, .	2.9	5
81	Improved technique for preparation of deuterated-polyethylene targets. Nuclear Instruments & Methods in Physics Research B, 2017, 410, 53-59.	1.4	5
82	Particle decay of proton-unbound levels in ^{12}N . Physical Review C, 2017, 95, .	2.9	5
83	Informing neutron capture nucleosynthesis on short-lived nuclei with (d,p) reactions. EPJ Web of Conferences, 2017, 165, 01013.	0.3	5
84	Direct neutron capture cross section on ^{80}Ge and probing shape coexistence in neutron-rich nuclei. Physical Review C, 2019, 100, .	2.9	5
85	Chronology of the three-body dissociation of ^8He . Journal of Physics G: Nuclear and Particle Physics, 2019, 46, 03LT02.	3.6	5
86	New ^{13}C -ray transitions observed in ^{19}Ne with implications for the $^{15}\text{O}(^{13}\text{C},^{19}\text{Ne})$ reaction rate. Physical Review C, 2019, 99, .	2.9	5
87	^{10}B cross section for the astrophysical $^{10}\text{B}(p,\alpha)^8\text{Be}$ reaction. Physical Review C, 2019, 99, .	1.6	5
88	isomer production via fast fragmentation. Physical Review Accelerators and Beams, 2018, 21, .	1.6	5
89	Neutron transfer reactions with neutron-rich radioactive ion beams. Nuclear Instruments & Methods in Physics Research B, 2005, 241, 200-203.	1.4	4

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91	Single particle structure of exotic nuclei with transfer reactions. Progress in Particle and Nuclear Physics, 2007, 59, 389-391.	14.4	4
92	^{26}Al +elastic and inelastic scattering reactions and galactic abundances of ^{26}Al . Physical Review C, 2012, 85, .	2.9	4
93	Searching for resonances in the unbound ^6Be nucleus by using a radioactive ^7Be beam. Journal of the Korean Physical Society, 2012, 61, 1786-1791.	0.7	4
94	A gas jet target for radioactive ion beam experiments. , 2013, , .		4
95	The $^6\text{Li}(\text{}^{22}\text{Ne}, \text{}^{26}\text{Mg})d$ $\hat{1}\pm$ -transfer experiment for the study of low-energy resonances in $^{22}\text{Ne}(\hat{1}\pm, \hat{1}^3)$ ^{26}Mg . EPJ Web of Conferences, 2014, 66, 07017.	0.3	4
96	Spectroscopic study of the radionuclide Na^{21} for the astrophysical $\text{F}^{17}(\hat{1}\pm, p)\text{Ne}^{20}$ reaction rate. Physical Review C, 2017, 96, .	2.9	4
97	Spectroscopic study of $^{20}\text{Ne}(\hat{1}\pm, p)^{19}\text{F}$ reactions using the JENSA gas-jet target to constrain the astrophysical $^{20}\text{Ne}(\hat{1}\pm, p)^{19}\text{F}$ reaction rate. EPJ Web of Conferences, 2017, 165, 01043.	0.3	4
98	X-ray burst studies with the JENSA gas jet target. EPJ Web of Conferences, 2017, 165, 01043.	0.3	4
99	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
100	$\hat{1}^3$ -ray spectroscopy of astrophysically important states in Ca^{39} . Physical Review C, 2020, 101, .	2.9	4
101	Development of the ORRUBA Silicon Detector Array. , 2009, , .		3
102	Single-particle structure of neutron-rich nuclei. Journal of Physics: Conference Series, 2010, 239, 012007.	0.4	3
103	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
104	Development of the superORRUBA detector array and the measurement of single particle states in ^{81}Ge . , 2013, , .		3
105	Nuclear Structure Studies in the ^{132}Sn Region: "Safe Coulex" with Carbon Targets. Journal of Physics: Conference Series, 2015, 639, 012007.	0.4	3
106	Recent Direct Reaction Experimental Studies with Radioactive Tin Beams. Acta Physica Polonica B, 2015, 46, 537.	0.8	3
107	Recent Nuclear Astrophysics Measurements using the TwinSol Separator. Journal of Physics: Conference Series, 2016, 730, 012004.	0.4	3
108	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

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109	Confirmation of the isomeric state in P26. Physical Review C, 2017, 96, .	2.9	3
110	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
111	CLUSTER STATES IN 12C AND 14C. Modern Physics Letters A, 2010, 25, 1833-1837.	1.2	2
112	Study of states in 14C via the 10Be(4He,4He)10Be reaction. Journal of Physics: Conference Series, 2012, 381, 012077.	0.4	2
113	24Mg(p, $\hat{1}\pm$)21Na reaction study for spectroscopy of 21Na. Journal of the Korean Physical Society, 2015, 67, 1435-1439.	0.7	2
114	The JENSA Gas-Jet Target for Radioactive Beam Experiments at ReA3 and FRIB. Physics Procedia, 2015, 66, 451-456.	1.2	2
115	$\hat{1}^2$ Decay as a Probe of Explosive Nucleosynthesis in Classical Novae. Physics Procedia, 2015, 66, 532-536.	1.2	2
116	Neutron-Transfer Reactions with Exotic Neutron-Rich Beams: Surrogates for Neutron-Capture Reactions. AIP Conference Proceedings, 2006, , .	0.4	1
117	Neutron Transfer Reactions on Neutron-Rich $N=50$ and $N=82$ Nuclei Near the r-Process Path. , 2009, , .		1
118	Neutron Transfer Reactions: Surrogates for Neutron Capture for Basic and Applied Nuclear Science. , 2009, , .		1
119	Elemental Discrimination of Low-Energy Ions using Risetime Analysis of Silicon-Strip Detector Signals. , 2009, , .		1
120	Neutron capture surrogate reaction on 75As in inverse kinematics using (d,p $\hat{1}^3$). EPJ Web of Conferences, 2010, 2, 06003.	0.3	1
121	First spin-parity constraint of the 306 keV resonance in ^{35}Cl for nova nucleosynthesis. Physical Review C, 2017, 95, .	2.9	1
122	Toward complete spectroscopy using $\hat{1}^2$ decay: The example of ^{132}Sb . Physical Review C, 2018, 98, .	2.9	1
123	Studies of Single-Particle Structure in the N=16 Region Using Transfer Reactions. AIP Conference Proceedings, 2006, , .	0.4	0
124	Studies of the Single Particle Structure of Exotic Nuclei using Transfer Reactions. AIP Conference Proceedings, 2006, , .	0.4	0
125	Single-neutron excitations near ^{132}Sn . , 2012, , .		0
126	Single-neutron levels near the N=82 shell closure. , 2013, , .		0

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127	HRIBF studies of r-process nuclei and first results with the new SuperORRUBA detector. , 2013, , .		0
128	GYROMAGNETIC RATIOS IN NEUTRON-RICH NUCLEI BY THE RECOIL IN VACUUM TECHNIQUE. , 2013, , .		0
129	TRANSFER REACTION EXPERIMENTS WITH FISSION FRAGMENTS. , 2013, , .		0
130	Direct reaction experimental studies with beams of radioactive tin ions. AIP Conference Proceedings, 2015, , .	0.4	0
131	Determining the $^{14}\text{O}(\hat{\pm},p)^{17}\text{F}$ astrophysical rate from Measurements at TwinSol. Physics Procedia, 2017, 90, 415-420.	1.2	0
132	GAMMASPHERE AND ORRUBA: DUAL DETECTORS FOR EXPERIMENTAL STRUCTURE STUDIES. , 2013, , .		0
133	Development of the (d,n) Proton-transfer Reaction in Inverse Kinematics for Structure Studies. Acta Physica Polonica B, 2018, 49, 365.	0.8	0