

Steven D Bass

List of Publications by Year in descending order

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62
papers

1,181
citations

471477

17
h-index

395678

33
g-index

63
all docs

63
docs citations

63
times ranked

935
citing authors

#	ARTICLE	IF	CITATIONS
1	The spin structure of the nucleon. <i>Reviews of Modern Physics</i> , 2013, 85, 655-691.	45.6	303
2	The spin structure of the proton. <i>Reviews of Modern Physics</i> , 2005, 77, 1257-1302.	45.6	114
3	\hat{I} -bound states in nuclei: a probe of flavour-singlet dynamics. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2006, 634, 368-373.	4.1	78
4	Positronium in medicine and biology. <i>Nature Reviews Physics</i> , 2019, 1, 527-529.	26.6	71
5	The nucleon's octet axial charge. <i>Modern Physics</i> , 2019, 684, 316-330.	4.1	52
6	\hat{I} -mesons with connection to anomalous glue. <i>Reviews of Modern Physics</i> , 2019, 91, .	45.6	43
7	Determination of the scattering length in free space. <i>Physical Review Letters</i> , 2014, 113, 062004.	4.1	18
8	The small x behaviour of g_1 . <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1994, 336, 537-542.	4.1	34
9	The spin structure of a polarized photon. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1998, 437, 417-424.	4.1	29
10	QCD Symmetries in η - and η' -Mesic Nuclei. <i>Acta Physica Polonica B</i> , 2014, 45, 627.	0.8	27
11	Final state interaction and a light mass ω -resonance. <i>Physical Review D</i> , 2002, 65, .	4.7	24
12	The EMC spin effect. <i>Journal of Physics G: Nuclear and Particle Physics</i> , 1993, 19, 925-955.	3.6	23
13	The spin and flavour dependence of high-energy photoabsorption. <i>European Physical Journal A</i> , 1999, 4, 251-258.	2.5	22
14	Heavy-quark axial charges to nonleading order. <i>Physical Review D</i> , 2002, 66, .	4.7	22
15	QED and Fundamental Symmetries in Positronium Decays. <i>Acta Physica Polonica B</i> , 2019, 50, 1319.	0.8	22
16	Near-threshold production of the η -meson via the $pn \rightarrow pn\eta$ -reaction. <i>Physical Review C</i> , 2009, 79, .	2.9	20
17	The cosmological constant puzzle. <i>Journal of Physics G: Nuclear and Particle Physics</i> , 2011, 38, 043201.	3.6	18
18	A POLARISED QCD CONDENSATE: $\hat{I}^{1/2}p$ ELASTIC SCATTERING AS A PROBE OF $U_A(1)$ DYNAMICS. <i>Modern Physics Letters A</i> , 1998, 13, 791-803.	1.2	17

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19	The Higgs boson implications and prospects for future discoveries. <i>Nature Reviews Physics</i> , 2021, 3, 608-624.	26.6	13
20	The spin structure of the nucleon. <i>Progress in Particle and Nuclear Physics</i> , 1994, 33, 449-475.	14.4	12
21	The spin structure of the proton and polarized collider physics. <i>Nuclear Physics, Section B, Proceedings Supplements</i> , 2002, 105, 1-27.	0.4	12
22	THE PROTON SPIN PUZZLE: WHERE ARE WE TODAY?. <i>Modern Physics Letters A</i> , 2009, 24, 1087-1101.	1.2	12
23	Partons and the EMC spin effect. <i>Zeitschrift für Physik C-Particles and Fields</i> , 1992, 55, 653-658.	1.5	10
24	Transverse momentum in semi-inclusive polarized deep inelastic scattering and the spin-flavor structure of the proton. <i>Physical Review D</i> , 2003, 67, .	4.7	10
25	SPIN CONSTRAINTS ON REGGE PREDICTIONS AND PERTURBATIVE EVOLUTION IN HIGH ENERGY COLLISIONS. <i>Modern Physics Letters A</i> , 2007, 22, 1005-1012.	1.2	9
26	Vacuum energy and the cosmological constant. <i>Modern Physics Letters A</i> , 2015, 30, 1540033.	1.2	9
27	Emergent gauge symmetries and particle physics. <i>Progress in Particle and Nuclear Physics</i> , 2020, 113, 103756.	14.4	9
28	Axial U(1) dynamics in $\hat{1}$ - and $\hat{1}\hat{2}$ photoproduction. <i>Nuclear Physics A</i> , 2001, 686, 429-446.	1.5	8
29	Matching functions for heavy particles. <i>Physical Review D</i> , 2003, 68, .	4.7	8
30	Search for $\hat{1}$ -mesic ^3He with the WASA-at-COSY facility in the $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.svg"} \rangle \langle \text{mml:mi} \rangle \text{p} \langle \text{mml:mi} \rangle \langle \text{mml:mi} \rangle \text{d} \langle \text{mml:mi} \rangle \langle \text{mml:mo stretchy="false"} \rangle \hat{1}^{\dagger} \langle \text{mml:mo} \rangle \langle \text{mml:msup} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mn} \rangle 3 \langle \text{mml:mn} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:msup} \rangle \langle \text{mml:mtext} \rangle \text{He} \langle \text{mml:mtext} \rangle \langle \text{mml:mn} \rangle 2 \langle \text{mml:mn} \rangle \langle \text{mml:mi} \rangle \hat{1}^3 \langle \text{mml:mtext} \rangle$ and $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si2.svg"} \rangle \langle \text{mml:mi} \rangle \text{p} \langle \text{mml:mi} \rangle \langle \text{mml:mi} \rangle \text{d} \langle \text{mml:mi} \rangle \langle \text{mml:mo stretchy="false"} \rangle \hat{1}^{\dagger} \langle \text{mml:mo} \rangle \langle \text{mml:msup} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mn} \rangle 3 \langle \text{mml:mn} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:msup} \rangle \langle \text{mml:mtext} \rangle \text{He} \langle \text{mml:mtext} \rangle \langle \text{mml:mn} \rangle 2 \langle \text{mml:mn} \rangle \langle \text{mml:mi} \rangle \hat{1}^3 \langle \text{mml:mtext} \rangle$	4.1	8
31	$\hat{1}$ Interactions with Nucleons and Nuclei. <i>Acta Physica Polonica B</i> , 2016, 47, 373.	0.8	8
32	Charm as a signature of the EMC spin effect. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1992, 293, 457-459.	4.1	7
33	Mapping the x dependence of the axial anomaly in polarised deep inelastic scattering. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1993, 312, 345-350.	4.1	6
34	Gluon polarization in the proton. <i>Physical Review C</i> , 2011, 83, .	2.9	6
35	The Cosmological Constant Puzzle: Vacuum Energies from QCD to Dark Energy. <i>Acta Physica Polonica B</i> , 2014, 45, 1269.	0.8	6
36	Quantum technologies in particle physics. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2022, 380, 20210072.	3.4	6

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37	Modelling QCD: Probes of hadron structure. Nuclear Physics A, 1991, 527, 519-524.	1.5	5
38	Gauge symmetry and the EMC spin effect. Zeitschrift für Physik C-Particles and Fields, 1993, 60, 343-348.	1.5	5
39	The spin structure of constituent quarks. European Physical Journal D, 2000, 50, 109-116.	0.4	5
40	TOWARDS AN UNDERSTANDING OF NUCLEON SPIN STRUCTURE: FROM HARD TO SOFT SCALES. International Journal of Modern Physics A, 2006, 21, 4407-4423.	1.5	5
41	PHYSICS: How Does the Proton Spin?. Science, 2007, 315, 1672-1673.	12.6	5
42	Upper limit of the total cross section for the π^+p \rightarrow $\pi^+\pi^+\pi^+$ reaction. Physical Review C, 2010, 81, .	2.9	5
43	Confinement and the pion nucleon sigma term. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1994, 329, 358-360.	4.1	4
44	The trace anomaly and the parton model. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1995, 342, 233-238.	4.1	4
45	Proton spin structure and the axial U(1) problem. Nuclear Physics, Section B, Proceedings Supplements, 2002, 105, 56-61.	0.4	4
46	Decoupling heavy particles simultaneously. Nuclear Physics, Section B, Proceedings Supplements, 2005, 141, 159-164.	0.4	3
47	Improved Parton Distributions from the Quark Model. Australian Journal of Physics, 1991, 44, 363.	0.6	3
48	Emergent gauge symmetries: making symmetry as well as breaking it. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2022, 380, 20210059.	3.4	3
49	A NEW HYPOTHESIS ON THE ORIGIN OF THE THREE GENERATIONS. Modern Physics Letters A, 1996, 11, 339-347.	1.2	2
50	Anomalous commutators and electroweak baryogenesis. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2004, 590, 115-119.	4.1	2
51	Running couplings for the simultaneous decoupling of heavy quarks. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2006, 634, 249-254.	4.1	2
52	The Cosmological Constant Puzzle: Synergies with Nuclear Physics and its Measurement in Astrophysics Experiments. Nuclear Physics News, 2014, 24, 10-12.	0.4	2
53	QCD symmetries and the $\hat{\Gamma}$ and $\hat{\Gamma} \cdot \hat{\Gamma} \cdot \hat{\Gamma}$ in nuclei. Hyperfine Interactions, 2015, 234, 41-47.	0.5	2
54	Spin Dependence of $\hat{\Gamma}$ Meson Production in Proton-Proton Collisions Close to Threshold. Physical Review Letters, 2018, 120, 022002.	7.8	2

#	ARTICLE	IF	CITATIONS
55	Aspects of Anomalous Glue. Acta Physica Polonica B, 2014, 45, 2455.	0.8	1
56	The Cosmological Constant and Stability of the Higgs Vacuum. Acta Physica Polonica B, 2016, 47, 485.	0.8	1
57	The physics of anomalous glue. Nuclear Physics, Section B, Proceedings Supplements, 2002, 108, 307-309.	0.4	0
58	Manifestations of anomalous glue: Light-mass exotic mesons and $g_{\eta' NN}$. European Physical Journal A, 2003, 18, 327-329.	2.5	0
59	Neutrino proton elastic scattering and the spin structure of the proton. Nuclear Physics A, 2005, 752, 34-37.	1.5	0
60	Probing anomalous glue in the $\hat{I}^{[sup \hat{E}1]}$ with COSY-11. AIP Conference Proceedings, 2007, , .	0.4	0
61	Spinning quarks in the nucleon. , 2010, , .		0
62	Spinning Gluons in the Proton. Physics Magazine, 2017, 10, .	0.1	0