

# Martin Bojowald

## List of Publications by Year in descending order

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177  
papers

8,862  
citations

28274

55  
h-index

46799

89  
g-index

190  
all docs

190  
docs citations

190  
times ranked

1169  
citing authors

#	ARTICLE	IF	CITATIONS
1	Mathematical structure of loop quantum cosmology. <i>Advances in Theoretical and Mathematical Physics</i> , 2003, 7, 233-268.	0.6	576
2	Absence of a Singularity in Loop Quantum Cosmology. <i>Physical Review Letters</i> , 2001, 86, 5227-5230.	7.8	547
3	Loop Quantum Cosmology. <i>Living Reviews in Relativity</i> , 2005, 8, 11.	26.7	424
4	Loop Quantum Cosmology. <i>Living Reviews in Relativity</i> , 2008, 11, 4.	26.7	358
5	Quantum geometry and the Schwarzschild singularity. <i>Classical and Quantum Gravity</i> , 2006, 23, 391-411.	4.0	264
6	Black hole evaporation: a paradigm. <i>Classical and Quantum Gravity</i> , 2005, 22, 3349-3362.	4.0	209
7	Isotropic loop quantum cosmology. <i>Classical and Quantum Gravity</i> , 2002, 19, 2717-2741.	4.0	197
8	Inflation from Quantum Geometry. <i>Physical Review Letters</i> , 2002, 89, 261301.	7.8	166
9	EFFECTIVE EQUATIONS OF MOTION FOR QUANTUM SYSTEMS. <i>Reviews in Mathematical Physics</i> , 2006, 18, 713-745.	1.7	159
10	Homogeneous loop quantum cosmology. <i>Classical and Quantum Gravity</i> , 2003, 20, 2595-2615.	4.0	151
11	Inverse scale factor in isotropic quantum geometry. <i>Physical Review D</i> , 2001, 64, .	4.7	149
12	Quantum cosmology: a review. <i>Reports on Progress in Physics</i> , 2015, 78, 023901.	20.1	131
13	Anomaly freedom in perturbative loop quantum gravity. <i>Physical Review D</i> , 2008, 78, .	4.7	121
14	Spherically symmetric quantum geometry: Hamiltonian constraint. <i>Classical and Quantum Gravity</i> , 2006, 23, 2129-2154.	4.0	114
15	Quantization ambiguities in isotropic quantum geometry. <i>Classical and Quantum Gravity</i> , 2002, 19, 5113-5129.	4.0	112
16	Loop quantum gravity corrections to gravitational wave dispersion. <i>Physical Review D</i> , 2008, 77, .	4.7	108
17	Spherically symmetric quantum geometry: states and basic operators. <i>Classical and Quantum Gravity</i> , 2004, 21, 3733-3753.	4.0	104
18	Black Hole Mass Threshold from Nonsingular Quantum Gravitational Collapse. <i>Physical Review Letters</i> , 2005, 95, 091302.	7.8	104

#	ARTICLE	IF	CITATIONS
19	Loop quantum cosmology and inhomogeneities. <i>General Relativity and Gravitation</i> , 2006, 38, 1771-1795.	2.0	100
20	Observational Constraints on Loop Quantum Cosmology. <i>Physical Review Letters</i> , 2011, 107, 211302.	7.8	96
21	Dynamical Initial Conditions in Quantum Cosmology. <i>Physical Review Letters</i> , 2001, 87, 121301.	7.8	95
22	Homogeneous loop quantum cosmology: the role of the spin connection. <i>Classical and Quantum Gravity</i> , 2004, 21, 1253-1278.	4.0	95
23	Deformed general relativity and effective actions from loop quantum gravity. <i>Physical Review D</i> , 2012, 86, .	4.7	93
24	Loop quantum cosmology: I. Kinematics. <i>Classical and Quantum Gravity</i> , 2000, 17, 1489-1508.	4.0	92
25	Lattice refining loop quantum cosmology, anisotropic models, and stability. <i>Physical Review D</i> , 2007, 76, .	4.7	92
26	Large scale effective theory for cosmological bounces. <i>Physical Review D</i> , 2007, 75, .	4.7	92
27	Loop quantum cosmology: IV. Discrete time evolution. <i>Classical and Quantum Gravity</i> , 2001, 18, 1071-1087.	4.0	91
28	Loop quantum cosmology: II. Volume operators. <i>Classical and Quantum Gravity</i> , 2000, 17, 1509-1526.	4.0	87
29	Gauge invariant cosmological perturbation equations with corrections from loop quantum gravity. <i>Physical Review D</i> , 2009, 79, .	4.7	85
30	The semiclassical limit of loop quantum cosmology. <i>Classical and Quantum Gravity</i> , 2001, 18, L109-L116.	4.0	84
31	Consistent loop quantum cosmology. <i>Classical and Quantum Gravity</i> , 2009, 26, 075020.	4.0	84
32	Loop quantum cosmology, boundary proposals, and inflation. <i>Physical Review D</i> , 2003, 67, .	4.7	82
33	Anomaly-free cosmological perturbations in effective canonical quantum gravity. <i>Journal of Cosmology and Astroparticle Physics</i> , 2015, 2015, 051-051.	5.4	82
34	Effective line elements and black-hole models in canonical loop quantum gravity. <i>Physical Review D</i> , 2018, 98, .	4.7	76
35	EFFECTIVE CONSTRAINTS FOR QUANTUM SYSTEMS. <i>Reviews in Mathematical Physics</i> , 2009, 21, 111-154.	1.7	75
36	What happened before the Big Bang?. <i>Nature Physics</i> , 2007, 3, 523-525.	16.7	73

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37	QUANTUM GRAVITY AND HIGHER CURVATURE ACTIONS. International Journal of Geometric Methods in Modern Physics, 2007, 04, 25-52.	2.0	72
38	Effective approach to the problem of time: General features and examples. Physical Review D, 2011, 83, .	4.7	70
39	An effective approach to the problem of time. Classical and Quantum Gravity, 2011, 28, 035006.	4.0	68
40	Loop quantum gravity and the cyclic universe. Physical Review D, 2004, 70, .	4.7	67
41	Observational test of inflation in loop quantum cosmology. Journal of Cosmology and Astroparticle Physics, 2011, 2011, 046-046.	5.4	67
42	Loop quantum cosmology: III. Wheeler-DeWitt operators. Classical and Quantum Gravity, 2001, 18, 1055-1069.	4.0	66
43	Covariance in models of loop quantum gravity: Spherical symmetry. Physical Review D, 2015, 92, .	4.7	65
44	The Bianchi IX model in loop quantum cosmology. Classical and Quantum Gravity, 2004, 21, 3541-3569.	4.0	64
45	Quantum Suppression of the Generic Chaotic Behavior Close to Cosmological Singularities. Physical Review Letters, 2004, 92, 071302.	7.8	63
46	Dynamical coherent states and physical solutions of quantum cosmological bounces. Physical Review D, 2007, 75, .	4.7	63
47	High-order quantum back-reaction and quantum cosmology with a positive cosmological constant. Physical Review D, 2011, 84, .	4.7	62
48	Cosmological vector modes and quantum gravity effects. Classical and Quantum Gravity, 2007, 24, 4801-4816.	4.0	61
49	Inflationary cosmology and quantization ambiguities in semiclassical loop quantum gravity. Physical Review D, 2004, 70, .	4.7	59
50	Effective constraints for relativistic quantum systems. Physical Review D, 2009, 80, .	4.7	59
51	Loop quantum cosmology: Recent progress. Pramana - Journal of Physics, 2004, 63, 765-776.	1.8	58
52	Nonsingular Black Holes and Degrees of Freedom in Quantum Gravity. Physical Review Letters, 2005, 95, 061301.	7.8	58
53	Nonmarginal Lemaitre-Tolman-Bondi-like models with inverse triad corrections from loop quantum gravity. Physical Review D, 2009, 80, .	4.7	58
54	Generalized uncertainty principles and localization of a particle in discrete space. Physical Review D, 2012, 86, .	4.7	57

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55	Hamiltonian cosmological perturbation theory with loop quantum gravity corrections. <i>Physical Review D</i> , 2006, 74, .	4.7	56
56	Loop quantum gravity phenomenology and the issue of Lorentz invariance. <i>Physical Review D</i> , 2005, 71, .	4.7	54
57	Some implications of signature-change in cosmological models of loop quantum gravity. <i>Journal of Cosmology and Astroparticle Physics</i> , 2015, 2015, 052-052.	5.4	54
58	Singularities and Quantum Gravity. <i>AIP Conference Proceedings</i> , 2007, , .	0.4	53
59	Quantum nature of cosmological bounces. <i>General Relativity and Gravitation</i> , 2008, 40, 2659-2683.	2.0	51
60	Lemaitre-Tolman-Bondi collapse from the perspective of loop quantum gravity. <i>Physical Review D</i> , 2008, 78, .	4.7	50
61	Quantum cosmology: effective theory. <i>Classical and Quantum Gravity</i> , 2012, 29, 213001.	4.0	48
62	How Quantum is the Big Bang?. <i>Physical Review Letters</i> , 2008, 100, 221301.	7.8	47
63	Formation and Evolution of Structure in Loop Cosmology. <i>Physical Review Letters</i> , 2007, 98, 031301.	7.8	46
64	Essay: Initial Conditions for a Universe. <i>General Relativity and Gravitation</i> , 2003, 35, 1877-1883.	2.0	45
65	Cosmological Applications of Loop Quantum Gravity. <i>Lecture Notes in Physics</i> , 0, , 421-462.	0.7	45
66	Inflationary observables in loop quantum cosmology. <i>Journal of Cosmology and Astroparticle Physics</i> , 2011, 2011, 032-032.	5.4	44
67	Deformed general relativity. <i>Physical Review D</i> , 2013, 87, .	4.7	44
68	Harmonic cosmology: how much can we know about a universe before the big bang?. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2008, 464, 2135-2150.	2.1	39
69	Hypersurface-deformation algebroids and effective spacetime models. <i>Physical Review D</i> , 2016, 94, .	4.7	38
70	Isotropic loop quantum cosmology with matter. <i>Physical Review D</i> , 2002, 66, .	4.7	37
71	Consistency conditions for fundamentally discrete theories. <i>Classical and Quantum Gravity</i> , 2004, 21, 121-143.	4.0	37
72	Effective equations for isotropic quantum cosmology including matter. <i>Physical Review D</i> , 2007, 76, .	4.7	37

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73	Black-Hole Models in Loop Quantum Gravity. Universe, 2020, 6, 125.	2.5	37
74	Discreteness corrections and higher spatial derivatives in effective canonical quantum gravity. Physical Review D, 2014, 90, .	4.7	36
75	Critical Evaluation of Common Claims in Loop Quantum Cosmology. Universe, 2020, 6, 36.	2.5	36
76	Covariance in models of loop quantum gravity: Gowdy systems. Physical Review D, 2015, 92, .	4.7	35
77	Effective constraints of loop quantum gravity. Physical Review D, 2007, 75, .	4.7	34
78	Coordinate time dependence in quantum gravity. Physical Review D, 2004, 70, .	4.7	33
79	The dark side of a patchwork universe. General Relativity and Gravitation, 2008, 40, 639-660.	2.0	33
80	Effective constraints and physical coherent states in quantum cosmology: a numerical comparison. Classical and Quantum Gravity, 2010, 27, 145004.	4.0	33
81	Information loss, made worse by quantum gravity?. Frontiers in Physics, 2015, 3, .	2.1	32
82	Spin foam quantization and anomalies. General Relativity and Gravitation, 2010, 42, 877-907.	2.0	31
83	Generating function techniques for loop quantum cosmology. Classical and Quantum Gravity, 2004, 21, 4495-4509.	4.0	30
84	Perturbative degrees of freedom in loop quantum gravity: anisotropies. Classical and Quantum Gravity, 2006, 23, 3491-3516.	4.0	29
85	No-go result for covariance in models of loop quantum gravity. Physical Review D, 2020, 102, .	4.7	29
86	Degenerate configurations, singularities and the non-Abelian nature of loop quantum gravity. Classical and Quantum Gravity, 2006, 23, 987-1008.	4.0	28
87	The volume operator in spherically symmetric quantum geometry. Classical and Quantum Gravity, 2004, 21, 4881-4900.	4.0	27
88	Effective potentials from semiclassical truncations. Physical Review A, 2019, 99, .	2.5	26
89	Higher time derivatives in effective equations of canonical quantum systems. Physical Review D, 2012, 86, .	4.7	24
90	Time in quantum cosmology. Physical Review D, 2018, 98, .	4.7	24

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91	Signature change in two-dimensional black-hole models of loop quantum gravity. <i>Physical Review D</i> , 2018, 98, .	4.7	24
92	Signature change in loop quantum gravity: Two-dimensional midisuperspace models and dilaton gravity. <i>Physical Review D</i> , 2017, 95, .	4.7	23
93	POISSON GEOMETRY IN CONSTRAINED SYSTEMS. <i>Reviews in Mathematical Physics</i> , 2003, 15, 663-703.	1.7	22
94	Fermions in loop quantum cosmology and the role of parity. <i>Classical and Quantum Gravity</i> , 2008, 25, 195006.	4.0	22
95	Loops Rescue the No-Boundary Proposal. <i>Physical Review Letters</i> , 2018, 121, 201301.	7.8	22
96	Recollapsing quantum cosmologies and the question of entropy. <i>Physical Review D</i> , 2008, 78, .	4.7	21
97	The BKL scenario, infrared renormalization, and quantum cosmology. <i>Journal of Cosmology and Astroparticle Physics</i> , 2019, 2019, 026-026.	5.4	21
98	Minisuperspace models as infrared contributions. <i>Physical Review D</i> , 2016, 93, .	4.7	18
99	Loop cosmological implications of a nonminimally coupled scalar field. <i>Physical Review D</i> , 2006, 74, .	4.7	17
100	States in non-associative quantum mechanics: uncertainty relations and semiclassical evolution. <i>Journal of High Energy Physics</i> , 2015, 2015, 1.	4.7	17
101	Noncovariance of the dressed-metric approach in loop quantum cosmology. <i>Physical Review D</i> , 2020, 102, .	4.7	17
102	Spherically symmetric quantum horizons. <i>Physical Review D</i> , 2005, 71, .	4.7	16
103	Dirac fields in loop quantum gravity and big bang nucleosynthesis. <i>Physical Review D</i> , 2008, 77, .	4.7	16
104	Dilaton gravity, Poisson sigma models and loop quantum gravity. <i>Classical and Quantum Gravity</i> , 2009, 26, 035018.	4.0	16
105	Singularities in isotropic non-minimal scalar field models. <i>Classical and Quantum Gravity</i> , 2006, 23, 4983-4990.	4.0	15
106	Black-hole horizons in modified spacetime structures arising from canonical quantum gravity. <i>Classical and Quantum Gravity</i> , 2011, 28, 185006.	4.0	15
107	Nonlinear (loop) quantum cosmology. <i>Physical Review D</i> , 2012, 86, .	4.7	14
108	Comment on "Quantum Bounce and Cosmic Recall". <i>Physical Review Letters</i> , 2008, 101, 209001; author reply 209002.	7.8	13

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109	Canonical tunneling time in ionization experiments. <i>Physical Review A</i> , 2018, 98, .	2.5	13
110	Physical Implications of a Fundamental Period of Time. <i>Physical Review Letters</i> , 2020, 124, 241301.	7.8	13
111	Original questions. <i>Nature</i> , 2005, 436, 920-921.	27.8	12
112	A no-singularity scenario in loop quantum gravity. <i>Classical and Quantum Gravity</i> , 2012, 29, 242002.	4.0	12
113	Fluctuation energies in quantum cosmology. <i>Physical Review D</i> , 2014, 89, .	4.7	12
114	Faithful realizations of semiclassical truncations. <i>Annals of Physics</i> , 2020, 420, 168247.	2.8	12
115	Canonical description of cosmological backreaction. <i>Journal of Cosmology and Astroparticle Physics</i> , 2021, 2021, 083.	5.4	12
116	Asymptotic properties of difference equations for isotropic loop quantum cosmology. <i>Classical and Quantum Gravity</i> , 2005, 22, 3399-3420.	4.0	11
117	Radiation equation of state and loop quantum gravity corrections. <i>Physical Review D</i> , 2007, 75, .	4.7	11
118	Effective Casimir conditions and group coherent states. <i>Classical and Quantum Gravity</i> , 2014, 31, 115006.	4.0	11
119	Testing Nonassociative Quantum Mechanics. <i>Physical Review Letters</i> , 2015, 115, 220402.	7.8	11
120	Effective constraint algebras with structure functions. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2016, 49, 125301.	2.1	11
121	Effective Field Theory of Loop Quantum Cosmology. <i>Universe</i> , 2019, 5, 44.	2.5	11
122	QUANTUM GEOMETRY AND ITS IMPLICATIONS FOR BLACK HOLES. <i>International Journal of Modern Physics D</i> , 2006, 15, 1545-1559.	2.1	10
123	Noncovariance of $\text{SO}(3)$ -covariant polymerization in models of loop quantum gravity. <i>Physical Review D</i> , 2021, 103, .	4.7	10
124	Loop quantum gravity, signature change, and the no-boundary proposal. <i>Physical Review D</i> , 2020, 102, .	4.7	10
125	The early universe in loop quantum cosmology. <i>Journal of Physics: Conference Series</i> , 2005, 24, 77-86.	0.4	9
126	Anomaly freedom in perturbative models of Euclidean loop quantum gravity. <i>Physical Review D</i> , 2018, 98, .	4.7	9



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127	Equivalence of Models in Loop Quantum Cosmology and Group Field Theory. <i>Universe</i> , 2019, 5, 41.	2.5	9
128	Abelian BF-theory and spherically symmetric electromagnetism. <i>Journal of Mathematical Physics</i> , 2000, 41, 4313-4329.	1.1	8
129	Back to the beginning of quantum spacetime. <i>Physics Today</i> , 2013, 66, 35-41.	0.3	8
130	Factor ordering and large-volume dynamics in quantum cosmology. <i>Classical and Quantum Gravity</i> , 2014, 31, 185016.	4.0	8
131	Quantization of Dynamical Symplectic Reduction. <i>Communications in Mathematical Physics</i> , 2021, 382, 547-583.	2.2	8
132	Electric time in quantum cosmology. <i>Classical and Quantum Gravity</i> , 2013, 30, 155024.	4.0	7
133	Minisuperspace models of discrete systems. <i>Physical Review D</i> , 2017, 95, .	4.7	7
134	Monopole star products are non-alternative. <i>Journal of High Energy Physics</i> , 2017, 2017, 1.	4.7	7
135	Deformed covariance in spherically symmetric vacuum models of loop quantum gravity: Consistency in Euclidean and self-dual gravity. <i>Physical Review D</i> , 2020, 101, .	4.7	7
136	Non-bouncing solutions in loop quantum cosmology. <i>Journal of Cosmology and Astroparticle Physics</i> , 2020, 2020, 029-029.	5.4	7
137	Effective Theory for the Cosmological Generation of Structure. <i>Advanced Science Letters</i> , 2008, 1, 92-98.	0.2	7
138	Quantum gravity and cosmological observations. <i>AIP Conference Proceedings</i> , 2007, , .	0.4	6
139	Extending general covariance: Moyal-type noncommutative manifolds. <i>Physical Review D</i> , 2018, 98, .	4.7	6
140	Quantum Higgs inflation. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2021, 816, 136193.	4.1	6
141	A Momentous Arrow of Time. , 2012, , 169-189.		5
142	A path-integral approach to the problem of time. <i>Annals of Physics</i> , 2018, 388, 241-266.	2.8	5
143	Properties of Fluctuating States in Loop Quantum Cosmology. <i>Mathematics</i> , 2019, 7, 645.	2.2	5
144	Cosmic Tangle: Loop Quantum Cosmology and CMB Anomalies. <i>Universe</i> , 2021, 7, 186.	2.5	5

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145	Space-Time Physics in Background-Independent Theories of Quantum Gravity. <i>Universe</i> , 2021, 7, 251.	2.5	5
146	Abelianized Structures in Spherically Symmetric Hypersurface Deformations. <i>Universe</i> , 2022, 8, 184.	2.5	5
147	Small Magnetic Charges and Monopoles in Nonassociative Quantum Mechanics. <i>Physical Review Letters</i> , 2018, 121, 201602.	7.8	4
148	Comment on "Towards a quantum notion of covariance in spherically symmetric loop quantum gravity". <i>Physical Review D</i> , 2022, 105, .	4.7	4
149	(Loop) quantum gravity and the inflationary scenario. <i>Comptes Rendus Physique</i> , 2015, 16, 1012-1017.	0.9	3
150	Multi-field inflation from single-field models. <i>Journal of Cosmology and Astroparticle Physics</i> , 2021, 2021, 047.	5.4	3
151	Quantum gravity, space-time structure, and cosmology. <i>Journal of Physics: Conference Series</i> , 2012, 405, 012001.	0.4	2
152	Quantum approach to a Bianchi I singularity. <i>Physical Review D</i> , 2020, 101, .	4.7	2
153	Minisuperspace results for causal dynamical triangulations. <i>Journal of Cosmology and Astroparticle Physics</i> , 2020, 2020, 019-019.	5.4	2
154	Tunneling dynamics in cosmological bounce models. <i>Journal of Cosmology and Astroparticle Physics</i> , 2021, 2021, 037.	5.4	2
155	Noncommutative quantum field theory and gravity. <i>General Relativity and Gravitation</i> , 2011, 43, 2331-2333.	2.0	1
156	Quantum gravity in the very early universe. <i>Nuclear Physics A</i> , 2011, 862-863, 98-103.	1.5	1
157	A loop quantum multiverse?. , 2013, , .		1
158	Moments and saturation properties of eigenstates: Oscillator systems. <i>Physical Review D</i> , 2021, 103, .	4.7	1
159	Tunneling dynamics of an oscillating universe model. <i>Journal of Cosmology and Astroparticle Physics</i> , 2022, 2022, 007.	5.4	1
160	Relational evolution with oscillating clocks. <i>Physical Review D</i> , 2022, 105, .	4.7	1
161	Loop quantum gravity and cosmology. , 0, , 211-256.		0
162	Loop Quantum Cosmology, Space-Time Structure, and Falsifiability. <i>Lecture Notes in Physics</i> , 2013, , 149-184.	0.7	0

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163	Anisotropic refinement in loop quantum cosmology. , 2013, , .		0
164	Symmetries of spacetime. International Journal of Modern Physics D, 2016, 25, 1644007.	2.1	0
165	LOOP QUANTUM COSMOLOGY AND BOUNDARY PROPOSALS. , 2006, , .		0
166	Canonical Quantum Gravity and Effective Theory. , 2009, , 217-234.		0
167	Mathematical Issues in Loop Quantum Cosmology. , 2009, , 73-86.		0
168	Space-Time Extensions in Quantum Gravity. , 2010, , 197-222.		0
169	Difference Equations. Lecture Notes in Physics, 2011, , 247-264.	0.7	0
170	Kinematics: Spatial Atoms. Lecture Notes in Physics, 2011, , 17-46.	0.7	0
171	Midisuperspace Models: Black Hole Collapse. Lecture Notes in Physics, 2011, , 167-195.	0.7	0
172	Dynamics: Changing Atoms of Space&Time. Lecture Notes in Physics, 2011, , 47-69.	0.7	0
173	Perturbative Inhomogeneities. Lecture Notes in Physics, 2011, , 197-244.	0.7	0
174	Effective Equations. Lecture Notes in Physics, 2011, , 73-97.	0.7	0
175	Harmonic Cosmology: The Universe Before the Big Bang and How Much We Can Know About It. Lecture Notes in Physics, 2011, , 99-118.	0.7	0
176	General Aspects of Effective Descriptions. Lecture Notes in Physics, 2011, , 275-299.	0.7	0
177	Ground state of nonassociative hydrogen and upper bounds on the magnetic charge of elementary particles. Physical Review D, 2021, 104, .	4.7	0