

Martin Bojowald

List of Publications by Year in descending order

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177
papers

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citations

28274

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190
all docs

190
docs citations

190
times ranked

1169
citing authors

#	ARTICLE	IF	CITATIONS
1	Abelianized Structures in Spherically Symmetric Hypersurface Deformations. Universe, 2022, 8, 184.	2.5	5
2	Tunneling dynamics of an oscillating universe model. Journal of Cosmology and Astroparticle Physics, 2022, 2022, 007.	5.4	1
3	Comment on "Towards a quantum notion of covariance in spherically symmetric loop quantum gravity" Physical Review D, 2022, 105, .	4.7	4
4	Relational evolution with oscillating clocks. Physical Review D, 2022, 105, .	4.7	1
5	Quantization of Dynamical Symplectic Reduction. Communications in Mathematical Physics, 2021, 382, 547-583.	2.2	8
6	Canonical description of cosmological backreaction. Journal of Cosmology and Astroparticle Physics, 2021, 2021, 083.	5.4	12
7	Quantum Higgs inflation. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2021, 816, 136193.	4.1	6
8	Cosmic Tangle: Loop Quantum Cosmology and CMB Anomalies. Universe, 2021, 7, 186.	2.5	5
9	Noncovariance of "covariant polymerization" in models of loop quantum gravity. Physical Review D, 2021, 103, .	4.7	10
10	Moments and saturation properties of eigenstates: Oscillator systems. Physical Review D, 2021, 103, .	4.7	1
11	Space-Time Physics in Background-Independent Theories of Quantum Gravity. Universe, 2021, 7, 251.	2.5	5
12	Multi-field inflation from single-field models. Journal of Cosmology and Astroparticle Physics, 2021, 2021, 047.	5.4	3
13	Ground state of nonassociative hydrogen and upper bounds on the magnetic charge of elementary particles. Physical Review D, 2021, 104, .	4.7	0
14	Tunneling dynamics in cosmological bounce models. Journal of Cosmology and Astroparticle Physics, 2021, 2021, 037.	5.4	2
15	Deformed covariance in spherically symmetric vacuum models of loop quantum gravity: Consistency in Euclidean and self-dual gravity. Physical Review D, 2020, 101, .	4.7	7
16	Non-bouncing solutions in loop quantum cosmology. Journal of Cosmology and Astroparticle Physics, 2020, 2020, 029-029.	5.4	7
17	Faithful realizations of semiclassical truncations. Annals of Physics, 2020, 420, 168247.	2.8	12
18	Noncovariance of the dressed-metric approach in loop quantum cosmology. Physical Review D, 2020, 102, .	4.7	17

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19	No-go result for covariance in models of loop quantum gravity. <i>Physical Review D</i> , 2020, 102, .	4.7	29
20	Black-Hole Models in Loop Quantum Gravity. <i>Universe</i> , 2020, 6, 125.	2.5	37
21	Quantum approach to a Bianchi I singularity. <i>Physical Review D</i> , 2020, 101, .	4.7	2
22	Physical Implications of a Fundamental Period of Time. <i>Physical Review Letters</i> , 2020, 124, 241301.	7.8	13
23	Critical Evaluation of Common Claims in Loop Quantum Cosmology. <i>Universe</i> , 2020, 6, 36.	2.5	36
24	Minisuperspace results for causal dynamical triangulations. <i>Journal of Cosmology and Astroparticle Physics</i> , 2020, 2020, 019-019.	5.4	2
25	Loop quantum gravity, signature change, and the no-boundary proposal. <i>Physical Review D</i> , 2020, 102, .	4.7	10
26	Properties of Fluctuating States in Loop Quantum Cosmology. <i>Mathematics</i> , 2019, 7, 645.	2.2	5
27	Effective potentials from semiclassical truncations. <i>Physical Review A</i> , 2019, 99, .	2.5	26
28	The BKL scenario, infrared renormalization, and quantum cosmology. <i>Journal of Cosmology and Astroparticle Physics</i> , 2019, 2019, 026-026.	5.4	21
29	Effective Field Theory of Loop Quantum Cosmology. <i>Universe</i> , 2019, 5, 44.	2.5	11
30	Equivalence of Models in Loop Quantum Cosmology and Group Field Theory. <i>Universe</i> , 2019, 5, 41.	2.5	9
31	A path-integral approach to the problem of time. <i>Annals of Physics</i> , 2018, 388, 241-266.	2.8	5
32	Anomaly freedom in perturbative models of Euclidean loop quantum gravity. <i>Physical Review D</i> , 2018, 98, .	4.7	9
33	Loops Rescue the No-Boundary Proposal. <i>Physical Review Letters</i> , 2018, 121, 201301.	7.8	22
34	Small Magnetic Charges and Monopoles in Nonassociative Quantum Mechanics. <i>Physical Review Letters</i> , 2018, 121, 201602.	7.8	4
35	Canonical tunneling time in ionization experiments. <i>Physical Review A</i> , 2018, 98, .	2.5	13
36	Time in quantum cosmology. <i>Physical Review D</i> , 2018, 98, .	4.7	24

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37	Signature change in two-dimensional black-hole models of loop quantum gravity. <i>Physical Review D</i> , 2018, 98, .	4.7	24
38	Extending general covariance: Moyal-type noncommutative manifolds. <i>Physical Review D</i> , 2018, 98, .	4.7	6
39	Effective line elements and black-hole models in canonical loop quantum gravity. <i>Physical Review D</i> , 2018, 98, .	4.7	76
40	Signature change in loop quantum gravity: Two-dimensional midisuperspace models and dilaton gravity. <i>Physical Review D</i> , 2017, 95, .	4.7	23
41	Minisuperspace models of discrete systems. <i>Physical Review D</i> , 2017, 95, .	4.7	7
42	Monopole star products are non-alternative. <i>Journal of High Energy Physics</i> , 2017, 2017, 1.	4.7	7
43	Hypersurface-deformation algebroids and effective spacetime models. <i>Physical Review D</i> , 2016, 94, .	4.7	38
44	Symmetries of spacetime. <i>International Journal of Modern Physics D</i> , 2016, 25, 1644007.	2.1	0
45	Minisuperspace models as infrared contributions. <i>Physical Review D</i> , 2016, 93, .	4.7	18
46	Effective constraint algebras with structure functions. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2016, 49, 125301.	2.1	11
47	Covariance in models of loop quantum gravity: Spherical symmetry. <i>Physical Review D</i> , 2015, 92, .	4.7	65
48	Covariance in models of loop quantum gravity: Gowdy systems. <i>Physical Review D</i> , 2015, 92, .	4.7	35
49	Testing Nonassociative Quantum Mechanics. <i>Physical Review Letters</i> , 2015, 115, 220402.	7.8	11
50	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
51	Information loss, made worse by quantum gravity?. <i>Frontiers in Physics</i> , 2015, 3, .	2.1	32
52	Anomaly-free cosmological perturbations in effective canonical quantum gravity. <i>Journal of Cosmology and Astroparticle Physics</i> , 2015, 2015, 051-051.	5.4	82
53	Quantum cosmology: a review. <i>Reports on Progress in Physics</i> , 2015, 78, 023901.	20.1	131
54	States in non-associative quantum mechanics: uncertainty relations and semiclassical evolution. <i>Journal of High Energy Physics</i> , 2015, 2015, 1.	4.7	17

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55	(Loop) quantum gravity and the inflationary scenario. <i>Comptes Rendus Physique</i> , 2015, 16, 1012-1017.	0.9	3
56	Factor ordering and large-volume dynamics in quantum cosmology. <i>Classical and Quantum Gravity</i> , 2014, 31, 185016.	4.0	8
57	Discreteness corrections and higher spatial derivatives in effective canonical quantum gravity. <i>Physical Review D</i> , 2014, 90, .	4.7	36
58	Effective Casimir conditions and group coherent states. <i>Classical and Quantum Gravity</i> , 2014, 31, 115006.	4.0	11
59	Fluctuation energies in quantum cosmology. <i>Physical Review D</i> , 2014, 89, .	4.7	12
60	Back to the beginning of quantum spacetime. <i>Physics Today</i> , 2013, 66, 35-41.	0.3	8
61	Loop Quantum Cosmology, Space-Time Structure, and Falsifiability. <i>Lecture Notes in Physics</i> , 2013, , 149-184.	0.7	0
62	Electric time in quantum cosmology. <i>Classical and Quantum Gravity</i> , 2013, 30, 155024.	4.0	7
63	Deformed general relativity. <i>Physical Review D</i> , 2013, 87, .	4.7	44
64	Anisotropic refinement in loop quantum cosmology. , 2013, , .		0
65	A loop quantum multiverse?. , 2013, , .		1
66	Quantum gravity, space-time structure, and cosmology. <i>Journal of Physics: Conference Series</i> , 2012, 405, 012001.	0.4	2
67	Higher time derivatives in effective equations of canonical quantum systems. <i>Physical Review D</i> , 2012, 86, .	4.7	24
68	Deformed general relativity and effective actions from loop quantum gravity. <i>Physical Review D</i> , 2012, 86, .	4.7	93
69	A no-singularity scenario in loop quantum gravity. <i>Classical and Quantum Gravity</i> , 2012, 29, 242002.	4.0	12
70	A Momentous Arrow of Time. , 2012, , 169-189.		5
71	Nonlinear (loop) quantum cosmology. <i>Physical Review D</i> , 2012, 86, .	4.7	14
72	Quantum cosmology: effective theory. <i>Classical and Quantum Gravity</i> , 2012, 29, 213001.	4.0	48

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73	Generalized uncertainty principles and localization of a particle in discrete space. <i>Physical Review D</i> , 2012, 86, .	4.7	57
74	High-order quantum back-reaction and quantum cosmology with a positive cosmological constant. <i>Physical Review D</i> , 2011, 84, .	4.7	62
75	Observational test of inflation in loop quantum cosmology. <i>Journal of Cosmology and Astroparticle Physics</i> , 2011, 2011, 046-046.	5.4	67
76	Observational Constraints on Loop Quantum Cosmology. <i>Physical Review Letters</i> , 2011, 107, 211302.	7.8	96
77	An effective approach to the problem of time. <i>Classical and Quantum Gravity</i> , 2011, 28, 035006.	4.0	68
78	Noncommutative quantum field theory and gravity. <i>General Relativity and Gravitation</i> , 2011, 43, 2331-2333.	2.0	1
79	Quantum gravity in the very early universe. <i>Nuclear Physics A</i> , 2011, 862-863, 98-103.	1.5	1
80	Black-hole horizons in modified spacetime structures arising from canonical quantum gravity. <i>Classical and Quantum Gravity</i> , 2011, 28, 185006.	4.0	15
81	Inflationary observables in loop quantum cosmology. <i>Journal of Cosmology and Astroparticle Physics</i> , 2011, 2011, 032-032.	5.4	44
82	Effective approach to the problem of time: General features and examples. <i>Physical Review D</i> , 2011, 83, .	4.7	70
83	Difference Equations. <i>Lecture Notes in Physics</i> , 2011, , 247-264.	0.7	0
84	Kinematics: Spatial Atoms. <i>Lecture Notes in Physics</i> , 2011, , 17-46.	0.7	0
85	Midisuperspace Models: Black Hole Collapse. <i>Lecture Notes in Physics</i> , 2011, , 167-195.	0.7	0
86	Dynamics: Changing Atoms of Space&Time. <i>Lecture Notes in Physics</i> , 2011, , 47-69.	0.7	0
87	Perturbative Inhomogeneities. <i>Lecture Notes in Physics</i> , 2011, , 197-244.	0.7	0
88	Effective Equations. <i>Lecture Notes in Physics</i> , 2011, , 73-97.	0.7	0
89	Harmonic Cosmology: The Universe Before the Big Bang and How Much We Can Know About It. <i>Lecture Notes in Physics</i> , 2011, , 99-118.	0.7	0
90	General Aspects of Effective Descriptions. <i>Lecture Notes in Physics</i> , 2011, , 275-299.	0.7	0

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91	Spin foam quantization and anomalies. <i>General Relativity and Gravitation</i> , 2010, 42, 877-907.	2.0	31
92	Effective constraints and physical coherent states in quantum cosmology: a numerical comparison. <i>Classical and Quantum Gravity</i> , 2010, 27, 145004.	4.0	33
93	Space-Time Extensions in Quantum Gravity. , 2010, , 197-222.		0
94	EFFECTIVE CONSTRAINTS FOR QUANTUM SYSTEMS. <i>Reviews in Mathematical Physics</i> , 2009, 21, 111-154.	1.7	75
95	Consistent loop quantum cosmology. <i>Classical and Quantum Gravity</i> , 2009, 26, 075020.	4.0	84
96	Dilaton gravity, Poisson sigma models and loop quantum gravity. <i>Classical and Quantum Gravity</i> , 2009, 26, 035018.	4.0	16
97	Gauge invariant cosmological perturbation equations with corrections from loop quantum gravity. <i>Physical Review D</i> , 2009, 79, .	4.7	85
98	Nonmarginal Lemaitre-Tolman-Bondi-like models with inverse triad corrections from loop quantum gravity. <i>Physical Review D</i> , 2009, 80, .	4.7	58
99	Effective constraints for relativistic quantum systems. <i>Physical Review D</i> , 2009, 80, .	4.7	59
100	Canonical Quantum Gravity and Effective Theory. , 2009, , 217-234.		0
101	Mathematical Issues in Loop Quantum Cosmology. , 2009, , 73-86.		0
102	The dark side of a patchwork universe. <i>General Relativity and Gravitation</i> , 2008, 40, 639-660.	2.0	33
103	Quantum nature of cosmological bounces. <i>General Relativity and Gravitation</i> , 2008, 40, 2659-2683.	2.0	51
104	Comment on "Quantum Bounce and Cosmic Recall". <i>Physical Review Letters</i> , 2008, 101, 209001; author reply 209002.	7.8	13
105	Recollapsing quantum cosmologies and the question of entropy. <i>Physical Review D</i> , 2008, 78, .	4.7	21
106	Loop quantum gravity corrections to gravitational wave dispersion. <i>Physical Review D</i> , 2008, 77, .	4.7	108
107	Dirac fields in loop quantum gravity and big bang nucleosynthesis. <i>Physical Review D</i> , 2008, 77, .	4.7	16
108	Lemaitre-Tolman-Bondi collapse from the perspective of loop quantum gravity. <i>Physical Review D</i> , 2008, 78, .	4.7	50

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109	How Quantum is the Big Bang?. Physical Review Letters, 2008, 100, 221301.	7.8	47
110	Anomaly freedom in perturbative loop quantum gravity. Physical Review D, 2008, 78, .	4.7	121
111	Harmonic cosmology: how much can we know about a universe before the big bang?. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2008, 464, 2135-2150.	2.1	39
112	Fermions in loop quantum cosmology and the role of parity. Classical and Quantum Gravity, 2008, 25, 195006.	4.0	22
113	Loop Quantum Cosmology. Living Reviews in Relativity, 2008, 11, 4.	26.7	358
114	Effective Theory for the Cosmological Generation of Structure. Advanced Science Letters, 2008, 1, 92-98.	0.2	7
115	Singularities and Quantum Gravity. AIP Conference Proceedings, 2007, , .	0.4	53
116	Cosmological vector modes and quantum gravity effects. Classical and Quantum Gravity, 2007, 24, 4801-4816.	4.0	61
117	Formation and Evolution of Structure in Loop Cosmology. Physical Review Letters, 2007, 98, 031301.	7.8	46
118	Effective constraints of loop quantum gravity. Physical Review D, 2007, 75, .	4.7	34
119	QUANTUM GRAVITY AND HIGHER CURVATURE ACTIONS. International Journal of Geometric Methods in Modern Physics, 2007, 04, 25-52.	2.0	72
120	Quantum gravity and cosmological observations. AIP Conference Proceedings, 2007, , .	0.4	6
121	Radiation equation of state and loop quantum gravity corrections. Physical Review D, 2007, 75, .	4.7	11
122	Lattice refining loop quantum cosmology, anisotropic models, and stability. Physical Review D, 2007, 76, .	4.7	92
123	Dynamical coherent states and physical solutions of quantum cosmological bounces. Physical Review D, 2007, 75, .	4.7	63
124	Large scale effective theory for cosmological bounces. Physical Review D, 2007, 75, .	4.7	92
125	Effective equations for isotropic quantum cosmology including matter. Physical Review D, 2007, 76, .	4.7	37
126	What happened before the Big Bang?. Nature Physics, 2007, 3, 523-525.	16.7	73

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127	EFFECTIVE EQUATIONS OF MOTION FOR QUANTUM SYSTEMS. <i>Reviews in Mathematical Physics</i> , 2006, 18, 713-745.	1.7	159
128	Hamiltonian cosmological perturbation theory with loop quantum gravity corrections. <i>Physical Review D</i> , 2006, 74, .	4.7	56
129	Loop cosmological implications of a nonminimally coupled scalar field. <i>Physical Review D</i> , 2006, 74, .	4.7	17
130	Loop quantum cosmology and inhomogeneities. <i>General Relativity and Gravitation</i> , 2006, 38, 1771-1795.	2.0	100
131	Quantum geometry and the Schwarzschild singularity. <i>Classical and Quantum Gravity</i> , 2006, 23, 391-411.	4.0	264
132	Perturbative degrees of freedom in loop quantum gravity: anisotropies. <i>Classical and Quantum Gravity</i> , 2006, 23, 3491-3516.	4.0	29
133	Singularities in isotropic non-minimal scalar field models. <i>Classical and Quantum Gravity</i> , 2006, 23, 4983-4990.	4.0	15
134	Degenerate configurations, singularities and the non-Abelian nature of loop quantum gravity. <i>Classical and Quantum Gravity</i> , 2006, 23, 987-1008.	4.0	28
135	Spherically symmetric quantum geometry: Hamiltonian constraint. <i>Classical and Quantum Gravity</i> , 2006, 23, 2129-2154.	4.0	114
136	QUANTUM GEOMETRY AND ITS IMPLICATIONS FOR BLACK HOLES. <i>International Journal of Modern Physics D</i> , 2006, 15, 1545-1559.	2.1	10
137	LOOP QUANTUM COSMOLOGY AND BOUNDARY PROPOSALS. , 2006, , .		0
138	Loop Quantum Cosmology. <i>Living Reviews in Relativity</i> , 2005, 8, 11.	26.7	424
139	The early universe in loop quantum cosmology. <i>Journal of Physics: Conference Series</i> , 2005, 24, 77-86.	0.4	9
140	Original questions. <i>Nature</i> , 2005, 436, 920-921.	27.8	12
141	Asymptotic properties of difference equations for isotropic loop quantum cosmology. <i>Classical and Quantum Gravity</i> , 2005, 22, 3399-3420.	4.0	11
142	Spherically symmetric quantum horizons. <i>Physical Review D</i> , 2005, 71, .	4.7	16
143	Loop quantum gravity phenomenology and the issue of Lorentz invariance. <i>Physical Review D</i> , 2005, 71, .	4.7	54
144	Black hole evaporation: a paradigm. <i>Classical and Quantum Gravity</i> , 2005, 22, 3349-3362.	4.0	209

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145	Black Hole Mass Threshold from Nonsingular Quantum Gravitational Collapse. <i>Physical Review Letters</i> , 2005, 95, 091302.	7.8	104
146	Nonsingular Black Holes and Degrees of Freedom in Quantum Gravity. <i>Physical Review Letters</i> , 2005, 95, 061301.	7.8	58
147	Generating function techniques for loop quantum cosmology. <i>Classical and Quantum Gravity</i> , 2004, 21, 4495-4509.	4.0	30
148	Consistency conditions for fundamentally discrete theories. <i>Classical and Quantum Gravity</i> , 2004, 21, 121-143.	4.0	37
149	The volume operator in spherically symmetric quantum geometry. <i>Classical and Quantum Gravity</i> , 2004, 21, 4881-4900.	4.0	27
150	Homogeneous loop quantum cosmology: the role of the spin connection. <i>Classical and Quantum Gravity</i> , 2004, 21, 1253-1278.	4.0	95
151	Inflationary cosmology and quantization ambiguities in semiclassical loop quantum gravity. <i>Physical Review D</i> , 2004, 70, .	4.7	59
152	Loop quantum cosmology: Recent progress. <i>Pramana - Journal of Physics</i> , 2004, 63, 765-776.	1.8	58
153	Loop quantum gravity and the cyclic universe. <i>Physical Review D</i> , 2004, 70, .	4.7	67
154	Spherically symmetric quantum geometry: states and basic operators. <i>Classical and Quantum Gravity</i> , 2004, 21, 3733-3753.	4.0	104
155	Coordinate time dependence in quantum gravity. <i>Physical Review D</i> , 2004, 70, .	4.7	33
156	Quantum Suppression of the Generic Chaotic Behavior Close to Cosmological Singularities. <i>Physical Review Letters</i> , 2004, 92, 071302.	7.8	63
157	The Bianchi IX model in loop quantum cosmology. <i>Classical and Quantum Gravity</i> , 2004, 21, 3541-3569.	4.0	64
158	Essay: Initial Conditions for a Universe. <i>General Relativity and Gravitation</i> , 2003, 35, 1877-1883.	2.0	45
159	Loop quantum cosmology, boundary proposals, and inflation. <i>Physical Review D</i> , 2003, 67, .	4.7	82
160	POISSON GEOMETRY IN CONSTRAINED SYSTEMS. <i>Reviews in Mathematical Physics</i> , 2003, 15, 663-703.	1.7	22
161	Homogeneous loop quantum cosmology. <i>Classical and Quantum Gravity</i> , 2003, 20, 2595-2615.	4.0	151
162	Mathematical structure of loop quantum cosmology. <i>Advances in Theoretical and Mathematical Physics</i> , 2003, 7, 233-268.	0.6	576

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163	Isotropic loop quantum cosmology with matter. <i>Physical Review D</i> , 2002, 66, .	4.7	37
164	Quantization ambiguities in isotropic quantum geometry. <i>Classical and Quantum Gravity</i> , 2002, 19, 5113-5129.	4.0	112
165	Isotropic loop quantum cosmology. <i>Classical and Quantum Gravity</i> , 2002, 19, 2717-2741.	4.0	197
166	Inflation from Quantum Geometry. <i>Physical Review Letters</i> , 2002, 89, 261301.	7.8	166
167	Absence of a Singularity in Loop Quantum Cosmology. <i>Physical Review Letters</i> , 2001, 86, 5227-5230.	7.8	547
168	The semiclassical limit of loop quantum cosmology. <i>Classical and Quantum Gravity</i> , 2001, 18, L109-L116.	4.0	84
169	Loop quantum cosmology: IV. Discrete time evolution. <i>Classical and Quantum Gravity</i> , 2001, 18, 1071-1087.	4.0	91
170	Loop quantum cosmology: III. Wheeler-DeWitt operators. <i>Classical and Quantum Gravity</i> , 2001, 18, 1055-1069.	4.0	66
171	Dynamical Initial Conditions in Quantum Cosmology. <i>Physical Review Letters</i> , 2001, 87, 121301.	7.8	95
172	Inverse scale factor in isotropic quantum geometry. <i>Physical Review D</i> , 2001, 64, .	4.7	149
173	Loop quantum cosmology: I. Kinematics. <i>Classical and Quantum Gravity</i> , 2000, 17, 1489-1508.	4.0	92
174	Loop quantum cosmology: II. Volume operators. <i>Classical and Quantum Gravity</i> , 2000, 17, 1509-1526.	4.0	87
175	Abelian BF-theory and spherically symmetric electromagnetism. <i>Journal of Mathematical Physics</i> , 2000, 41, 4313-4329.	1.1	8
176	Loop quantum gravity and cosmology. , 0, , 211-256.		0
177	Cosmological Applications of Loop Quantum Gravity. <i>Lecture Notes in Physics</i> , 0, , 421-462.	0.7	45