

# Maxim Chernodub

## List of Publications by Year in descending order

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166  
papers

3,086  
citations

186254

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189881

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168  
all docs

168  
docs citations

168  
times ranked

1060  
citing authors

#	ARTICLE	IF	CITATIONS
1	Vortices in $U(1)$ -symmetric non-Hermitian superfluid. EPJ Web of Conferences, 2022, 258, 10005.	0.3	0
2	Hyperon-anti-hyperon polarization asymmetry in relativistic heavy-ion collisions as an interplay between chiral and helical vortical effects. European Physical Journal C, 2022, 82, 1.	3.9	12
3	IR/UV mixing from local similarity maps of scalar non-Hermitian field theories. Physical Review D, 2022, 105, .	4.7	2
4	Applying machine learning methods to prediction problems of lattice observables. SciPost Physics Proceedings, 2022, , .	0.4	0
5	Casimir boundaries, monopoles, and deconfinement transition in $(3+1)$ -dimensional $U(1)$ gauge theory. Physical Review D, 2021, 103, .	4.7	5
6	Thermal transport, geometry, and anomalies. Physics Reports, 2022, 977, 1-58.	25.6	34
7	Finding the deconfinement temperature in lattice Yang-Mills theories from outside the scaling window with machine learning. Physical Review D, 2021, 103, .	4.7	15
8	Conformal anomaly and helicity effects in kinetic theory via scale-dependent coupling. Physical Review D, 2021, 103, .	4.7	2
9	Inhomogeneous confining-deconfining phases in rotating plasmas. Physical Review D, 2021, 103, .	4.7	33
10	Phase diagram of helically imbalanced QCD matter. Physical Review D, 2021, 103, .	4.7	6
11	Rotational Diode: Clockwise/Counterclockwise Asymmetry in Conducting and Mechanical Properties of Rotating (semi)Conductors. Symmetry, 2021, 13, 1569.	2.2	3
12	Spontaneous non-Hermiticity in the Nambu-Jona-Lasinio model. Physical Review D, 2021, 104, .	4.7	10
13	Phase diagram and vortex properties of a $U(1)$ -symmetric non-Hermitian two-component superfluid. Physical Review D, 2021, 104, .	4.7	7
14	Topological susceptibility, divergent chiral density, and phase diagram of chirally imbalanced QCD medium at finite temperature. Physical Review D, 2020, 102, .	4.7	11
15	Conformal Anomaly in Yang-Mills Theory and Thermodynamics of Open Confining Strings. Universe, 2020, 6, 202.	2.5	2
16	Topological defects and confinement with machine learning: The case of monopoles in compact electrodynamics. Physical Review D, 2020, 102, .	4.7	8
17	Vortices with magnetic field inversion in noncentrosymmetric superconductors. Physical Review B, 2020, 102, .	3.2	11
18	Non-Hermitian Chiral Magnetic Effect in Equilibrium. Symmetry, 2020, 12, 761.	2.2	17



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37	Interacting fermions in rotation: chiral symmetry restoration, moment of inertia and thermodynamics. Journal of High Energy Physics, 2017, 2017, 1.	4.7	78
38	The Nielsen–Ninomiya theorem, $\mathcal{P}$ -invariant non-Hermiticity and single 8-shaped Dirac cone. Journal of Physics A: Mathematical and Theoretical, 2017, 50, 385001.	2.1	18
39	Chiral medium produced by parallel electric and magnetic fields. EPJ Web of Conferences, 2016, 129, 00037.	0.3	9
40	Possible formation of high temperature superconductor at an early stage of heavy-ion collisions. Physical Review D, 2016, 94, .	4.7	11
41	Study of axial magnetic effect. AIP Conference Proceedings, 2016, , .	0.4	4
42	Anomalous Transport Due to the Conformal Anomaly. Physical Review Letters, 2016, 117, 141601.	7.8	39
43	Casimir effect on the lattice: U(1) gauge theory in two spatial dimensions. Physical Review D, 2016, 94, .	4.7	17
44	Chiral relaxation time at the crossover of quantum chromodynamics. Physical Review D, 2016, 94, .	4.7	19
45	Chiral heat wave and mixing of magnetic, vortical and heat waves in chiral media. Journal of High Energy Physics, 2016, 2016, 1.	4.7	28
46	Fractal energy carpets in non-Hermitian Hofstadter quantum mechanics. Physical Review E, 2015, 92, 042102.	2.1	7
47	Axial magnetic effect in two-color quenched lattice QCD. EPJ Web of Conferences, 2015, 95, 03002.	0.3	2
48	Axial magnetic effect in two-color quenched lattice QCD. Nuclear and Particle Physics Proceedings, 2015, 258-259, 197-200.	0.5	0
49	Study of axial magnetic effect. , 2015, , .		0
50	Fermion zero modes in a chromomagnetic vortex lattice. Physical Review D, 2014, 89, .	4.7	2
51	Comment on ‘‘Charged vector mesons in a strong magnetic field’’ Physical Review D, 2014, 89, .	4.7	15
52	Temperature dependence of the axial magnetic effect in two-color quenched QCD. Physical Review D, 2014, 89, .	4.7	36
53	Phonon spectrum of the QCD vacuum in a magnetic-field-induced superconducting phase. Physical Review D, 2014, 89, .	4.7	2
54	Superconducting properties of vacuum in strong magnetic field. International Journal of Modern Physics D, 2014, 23, 1430009.	2.1	10

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55	On chromoelectric (super)conductivity of the Yang-Mills vacuum. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2014, 730, 63-66.	4.1	3
56	QCD string breaking in strong magnetic field. Modern Physics Letters A, 2014, 29, 1450162.	1.2	23
57	Condensed matter realization of the axial magnetic effect. Physical Review B, 2014, 89, .	3.2	117
58	Vortex liquid in superconducting vacuum of QCD induced by strong magnetic field., 2014, , .		0
59	Magnetic-field-induced superconductivity and superfluidity of $W$ and $Z$ bosons: In tandem transport and kaleidoscopic vortex states. Physical Review D, 2013, 88, .	4.7	9
60	Rotating Casimir systems: Magnetic-field-enhanced perpetual motion, possible realization in doped nanotubes, and laws of thermodynamics. Physical Review D, 2013, 87, .	4.7	13
61	Electromagnetic Superconductivity of Vacuum Induced by Strong Magnetic Field. Lecture Notes in Physics, 2013, , 143-180.	0.7	17
62	Numerical evidence of the axial magnetic effect. Physical Review D, 2013, 88, .	4.7	32
63	On electromagnetic superconductivity of QCD vacuum in very strong magnetic field. , 2013, , .		0
64	Spontaneous electromagnetic superconductivity induced by a strong magnetic field: QCD and electroweak theory. , 2012, , .		2
65	Vafa-Witten theorem, vector meson condensates, and magnetic-field-induced electromagnetic superconductivity of vacuum. Physical Review D, 2012, 86, .	4.7	21
66	VACUUM SUPERCONDUCTIVITY, CONVENTIONAL SUPERCONDUCTIVITY AND SCHWINGER PAIR PRODUCTION. International Journal of Modern Physics A, 2012, 27, 1260003.	1.5	7
67	VACUUM SUPERCONDUCTIVITY, CONVENTIONAL SUPERCONDUCTIVITY AND SCHWINGER PAIR PRODUCTION. International Journal of Modern Physics Conference Series, 2012, 14, 27-41.	0.7	1
68	Electromagnetically superconducting phase of the vacuum in a strong magnetic field: Structure of superconductor and superfluid vortex lattices in the ground state. Physical Review D, 2012, 85, .	4.7	42
69	Electromagnetic superconductivity of vacuum induced by strong magnetic field: Numerical evidence in lattice gauge theory. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2012, 718, 667-671.	4.1	41
70	Two-component liquid model for the quark-gluon plasma. Theoretical and Mathematical Physics(Russian Federation), 2012, 170, 211-216.	0.9	5
71	Abelian monopoles and center vortices in Yang-Mills plasma. , 2012, , .		0
72	Electric-magnetic asymmetry of the dimension-2 condensate and the phases of Yang-Mills theory. , 2012, , .		0



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91	Superconductivity of QCD vacuum in strong magnetic field. Physical Review D, 2010, 82, .	4.7	166
92	Phase diagram of hot QCD in an external magnetic field: Possible splitting of deconfinement and chiral transitions. Physical Review D, 2010, 82, .	4.7	221
93	Topological solitons and folded proteins. Physical Review E, 2010, 82, 011916.	2.1	53
94	Pipelike current-carrying vortices in two-component condensates. Physical Review D, 2010, 81, .	4.7	11
95	Chiral magnetization of non-Abelian vacuum: A lattice study. Nuclear Physics B, 2010, 826, 313-327.	2.5	63
96	Quark electric dipole moment induced by magnetic field. Physical Review D, 2010, 81, .	4.7	26
97	Numerical study of chiral magnetic effect in quenched SU(2) lattice gauge theory. , 2010, , .		0
98	Chiral magnetic effect in SU(2) lattice gluodynamics at zero temperature. JETP Letters, 2009, 90, 412-416.	1.4	22
99	Structure of a confining gluon string within the field correlator method. Physics of Atomic Nuclei, 2009, 72, 343-349.	0.4	0
100	Hedgehog loops and finite-temperature transition in Yang-Mills theory. Physics of Atomic Nuclei, 2009, 72, 350-354.	0.4	0
101	Monopoles and vortices in Yang-Mills plasma. Physics of Atomic Nuclei, 2009, 72, 2136-2145.	0.4	9
102	Baryon number violation and a new electroweak interaction. Physical Review D, 2009, 79, .	4.7	1
103	Numerical evidence of chiral magnetic effect in lattice gauge theory. Physical Review D, 2009, 80, .	4.7	160
104	Manifestations of magnetic vortices in the equation of state of a Yang-Mills plasma. Physical Review D, 2008, 78, .	4.7	14
105	Embedding Brans-Dicke gravity into electroweak theory. Physical Review D, 2008, 77, .	4.7	6
106	MONOPOLES FROM QUARK CONDENSATES IN QCD. Modern Physics Letters A, 2008, 23, 2356-2359.	1.2	0
107	Electric-magnetic asymmetry of the $A^2$ condensate and the phases of Yang-Mills theory. Physical Review D, 2008, 78, .		23
108	Combining Infrared and Low-Temperature Asymptotes in Yang-Mills Theories. Physical Review Letters, 2008, 100, 222001.	7.8	13

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109	Magnetic Component of Yang-Mills Plasma. Physical Review Letters, 2007, 98, 082002.	7.8	86
110	Confining string and its widening in HP1 embedding approach. Physical Review D, 2007, 76, .	4.7	8
111	Abelian two-Higgs model of strongly correlated electrons: Phase structure, strengthening of phase transition, and QCD at finite density. Physical Review B, 2007, 76, .	3.2	7
112	Spin-charge separation and the Pauli electron. JETP Letters, 2007, 85, 353-357.	1.4	0
113	Topological susceptibility in the Yang-Mills theory in the vacuum correlator method. JETP Letters, 2007, 86, 1-5.	1.4	3
114	Phase structure of an Abelian two-Higgs model and high-temperature superconductors. Physical Review B, 2006, 73, .	3.2	17
115	Liquid-crystal defects and confinement in Yang-Mills theory. JETP Letters, 2006, 83, 268-272.	1.4	7
116	On a projection in dependence on monopole condensate in the lattice SU(2) gauge theory. JETP Letters, 2006, 83, 308-312.	1.4	3
117	Spontaneous superconductivity and optical properties of high-T <sub>c</sub> cuprates. Physical Review B, 2006, 74, .	3.2	1
118	Gas of monopoles in 3D SU(2) gluodynamics. AIP Conference Proceedings, 2005, , .	0.4	0
119	Structure of the Gauge Fields inside Baryon. Physics of Atomic Nuclei, 2005, 68, 616.	0.4	0
120	Monopoles in Gluodynamics and Blocking from Continuum to Lattice. Physics of Atomic Nuclei, 2005, 68, 634.	0.4	0
121	Chiral symmetry breaking and monopole condensation in QCD. JETP Letters, 2005, 81, 245-248.	1.4	0
122	Compact Q=2 Abelian Higgs model in the London limit: Vortex-monopole chains and the photon propagator. Physical Review D, 2005, 71, .	4.7	17
123	Vacuum type of SU(2) gluodynamics in maximally Abelian and Landau gauges. Physical Review D, 2005, 72, .	4.7	40
124	Ker <sup>2</sup> Line and Embedded Monopoles in QCD. Physical Review Letters, 2005, 95, 252002.	7.8	14
125	Entropy of spatial monopole currents in pure SU(2) QCD at finite temperature. Physical Review D, 2005, 71, .	4.7	1
126	Finite temperature QCD with two flavors of nonperturbatively improved Wilson fermions. Physical Review D, 2005, 71, .	4.7	20



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127	THE INFLUENCE OF BARYONS ON THE CHIRAL PHASE TRANSITION IN QCD. , 2005, , 94-100.		0
128	Photon propagator in compact(2+1)-dimensional QED: The effect of wrapping Dirac strings. Physical Review D, 2004, 69, .	4.7	2
129	Numerical determination of monopole entropy in pure SU(2) QCD. Physical Review D, 2004, 69, .	4.7	5
130	Phase structure and gauge boson propagator in the radially active 3D compact Abelian Higgs model. Physical Review D, 2004, 70, .	4.7	6
131	Matter degrees of freedom and string breaking in Abelian projected quenchedSU(2)QCD. Physical Review D, 2004, 70, .	4.7	6
132	Monopoles in the Abelian Polyakov gauge and projection (in)dependence of the dual superconductor mechanism of confinement. Physical Review D, 2004, 69, .	4.7	16
133	Color confinement and hadron structure in lattice chromodynamics. Physics-Uspekhi, 2004, 47, 17-35.	2.2	9
134	Monopole Gas in Three Dimensional SU(2) Gluodynamics. Progress of Theoretical Physics, 2004, 112, 1033-1045.	2.0	4
135	On projection (in)dependence of the dual superconductor mechanism of confinement. JETP Letters, 2004, 79, 245-248.	1.4	3
136	On the chiral phase transition in hadronic matter. JETP Letters, 2004, 79, 606-609.	1.4	1
137	Determination of the monopole condensate from monopole action in quenched SU(2) QCD. Physical Review D, 2004, 69, .	4.7	5
138	Profiles of a Broken String in Two-Flavor QCD below and above the Finite Temperature Transition. Progress of Theoretical Physics, 2004, 112, 307-324.	2.0	11
139	Perfect lattice monopole action from the continuum in hot SU(2) gluodynamics. Nuclear Physics A, 2003, 721, C895-C898.	1.5	0
140	Finite temperature phase transition in lattice QCD with $N_f = 2$ nonperturbatively improved Wilson fermions at $N_t = 8$ . Nuclear Physics A, 2003, 721, C930-C933.	1.5	7
141	Confinement and the photon propagator in 3D compact QED: A lattice study in the Landau gauge at zero and finite temperature. Physical Review D, 2003, 67, .	4.7	12
142	Blocking of lattice monopoles from the continuum in hot lattice gluodynamics. Journal of High Energy Physics, 2003, 2003, 027-027.	4.7	5
143	Fermionic signature of the lattice monopoles. Physical Review D, 2002, 65, .	4.7	2
144	Photon Propagator, Monopoles, and the Thermal Phase Transition in Three Dimensional Compact QED. Physical Review Letters, 2002, 88, 231601.	7.8	18

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145	Abelian Projections and Monopoles. , 2002, , 387-414.		11
146	Monopole creation operator in the presence of matter. JETP Letters, 2002, 75, 217-220.	1.4	3
147	Confinement-Deconfinement Order Parameters. , 2002, , 23-32.		1
148	Lattice Monopoles in Hot SU(2) Gluodynamics as Blocked Continuum Defects. , 2002, , 61-68.		0
149	Magnetic monopoles, alive. Physics of Atomic Nuclei, 2001, 64, 561-573.	0.4	11
150	Lattice study of 3D compact QED at finite temperature. Physical Review D, 2001, 64, .	4.7	28
151	Monopoles, confinement, and deconfinement of (2+1)D compact lattice QED in external fields. Physical Review D, 2001, 64, .	4.7	9
152	Almost perfect quantum lattice action for low-energy SU(2) gluodynamics. Physical Review D, 2000, 62, .	4.7	29
153	Interaction of electric charges in (2+1)-dimensional magnetic dipole gas. Physical Review D, 2000, 63, .	4.7	8
154	Gauge Boson Propagator in Gluodynamics. Progress of Theoretical Physics Supplement, 2000, 138, 45-46.	0.1	0
155	Short Strings and New Physics Perspectives in QCD. , 2000, , 369-380.		0
156	Abelian dyons in the maximal Abelian projection of SU(2) gluodynamics. JETP Letters, 1999, 69, 169-173.	1.4	6
157	Effective monopole potential for SU(2) lattice gluodynamics in the spatial maximal Abelian gauge. JETP Letters, 1999, 69, 174-179.	1.4	7
158	Dyon condensation and the Aharonov-Bohm effect. JETP Letters, 1998, 67, 389-393.	1.4	6
159	Vortex dynamics in classical non-Abelian spin models. JETP Letters, 1998, 67, 553-558.	1.4	0
160	String representation of SU(3) gluodynamics in the Abelian projection. JETP Letters, 1998, 68, 117-123.	1.4	22
161	Monopoles in the Abelian Projection of Gluodynamics. Progress of Theoretical Physics Supplement, 1998, 131, 309-321.	0.1	42
162	Abelian Monopoles in SU(2) Lattice Gauge Theory as Physical Objects. Physical Review Letters, 1998, 80, 30-32.	7.8	23

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163	On Nambu monopole dynamics in a SU(2) lattice Higgs model. JETP Letters, 1997, 66, 605-608.	1.4	9
164	Quantum theory of strings in an Abelian Higgs model. Physical Review D, 1996, 53, 2087-2095.	4.7	58
165	Monopole order parameter in SU(2) lattice gauge theory. JETP Letters, 1996, 63, 411-416.	1.4	14
166	Three-dimensional Abelian Higgs model: Confinement and the Aharonov-Bohm effect. JETP Letters, 1996, 63, 516-519.	1.4	2