

Dmitri E Kharzeev

List of Publications by Year in descending order

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159
papers

15,231
citations

23565

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162
all docs

162
docs citations

162
times ranked

5828
citing authors

#	ARTICLE	IF	CITATIONS
1	The BEST framework for the search for the QCD critical point and the chiral magnetic effect. Nuclear Physics A, 2022, 1017, 122343.	1.5	51
2	Entanglement entropy production in deep inelastic scattering. Physical Review D, 2022, 105, .	4.7	16
3	Quantum information approach to high energy interactions. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2022, 380, 20210063.	3.4	16
4	Chiral magnetic effect reveals the topology of gauge fields in heavy-ion collisions. Nature Reviews Physics, 2021, 3, 55-63.	26.6	59
5	Real-time dynamics of Chern-Simons fluctuations near a critical point. Physical Review D, 2021, 103, .	4.7	16
6	Anomalous gravitomagnetic moment and nonuniversality of the axial vortical effect at finite temperature. Physical Review D, 2021, 103, .	4.7	10
7	Chiral kinetic theory of anomalous transport induced by torsion. Physical Review B, 2021, 104, .	3.2	6
8	Chiral propulsion: The method of effective boundary conditions. Physics of Fluids, 2021, 33, 083110.	4.0	1
9	Deep inelastic scattering as a probe of entanglement: Confronting experimental data. Physical Review D, 2021, 104, .	4.7	24
10	Mass radius of the proton. Physical Review D, 2021, 104, .	4.7	55
11	Gibbs entropy from entanglement in electric quenches. Physical Review D, 2021, 104, .	4.7	10
12	Vortices with magnetic field inversion in noncentrosymmetric superconductors. Physical Review B, 2020, 102, .	3.2	11
13	Sphalerons, baryogenesis, and helical magnetogenesis in the electroweak transition of the minimal standard model. Physical Review D, 2020, 102, .	4.7	4
14	Magnetic fields in heavy ion collisions: flow and charge transport. European Physical Journal C, 2020, 80, 1.	3.9	63
15	Tensor supercurrent in QCD. Physical Review D, 2020, 101, .	4.7	0
16	Einstein-Podolsky-Rosen Paradox and Quantum Entanglement at Subnucleonic Scales. Physical Review Letters, 2020, 124, 062001.	7.8	60
17	Chiral terahertz wave emission from the Weyl semimetal TaAs. Nature Communications, 2020, 11, 720.	12.8	96
18	Real-time dynamics of axion particle production due to spontaneous decay of a coherent axion field. Physical Review D, 2020, 101, .	4.7	4

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19	Real-time chiral dynamics from a digital quantum simulation. <i>Physical Review Research</i> , 2020, 2, .	3.6	56
20	Transverse chiral magnetic photocurrent induced by linearly polarized light in mirror-symmetric Weyl semimetals. <i>Physical Review Research</i> , 2020, 2, .	3.6	7
21	Isobar Collisions at RHIC to Test Local Parity Violation in Strong Interactions. <i>Nuclear Physics News</i> , 2019, 29, 26-31.	0.4	11
22	Chiral magnetic photocurrent in Dirac and Weyl materials. <i>Physical Review B</i> , 2019, 99, .	3.2	21
23	Bethe Ansatz for XXX chain with negative spin. <i>International Journal of Modern Physics A</i> , 2019, 34, 1950197.	1.5	4
24	Effect of the fluctuating proton size on the study of the chiral magnetic effect in proton-nucleus collisions. <i>Physical Review C</i> , 2018, 97, .	2.9	6
25	Higher order string effects and the properties of the Pomeron. <i>Physical Review D</i> , 2018, 97, .	4.7	3
26	Charge-dependent flow induced by magnetic and electric fields in heavy ion collisions. <i>Physical Review C</i> , 2018, 98, .	2.9	77
27	Dynamics of Vortices in Chiral Media: The Chiral Propulsion Effect. <i>Physical Review Letters</i> , 2018, 121, 142301.	7.8	7
28	Chiral magnetic effect without chirality source in asymmetric Weyl semimetals. <i>European Physical Journal B</i> , 2018, 91, 1.	1.5	11
29	Giant photocurrent in asymmetric Weyl semimetals from the helical magnetic effect. <i>Physical Review B</i> , 2018, 98, .	3.2	26
30	Round table: What can we learn about confinement and anomalous effects in QCD using analog systems?. <i>EPJ Web of Conferences</i> , 2017, 137, 01002.	0.3	1
31	Anatomy of the chiral magnetic effect in and out of equilibrium. <i>Physical Review D</i> , 2017, 95, .	4.7	42
32	Faraday Rotation Due to Surface States in the Topological Insulator (Bi _{1-x} Sb _x) ₂ Te ₃ . <i>Nano Letters</i> , 2017, 17, 980-984.	9.1	21
33	Quantum oscillations in the chiral magnetic conductivity. <i>Physical Review B</i> , 2017, 95, .	3.2	11
34	Chiral magnetic superconductivity. <i>EPJ Web of Conferences</i> , 2017, 137, 01011.	0.3	4
35	Chiral Vortical and Magnetic Effects in Anomalous Hydrodynamics. <i>Nuclear Physics A</i> , 2017, 967, 776-779.	1.5	7
36	New quantum effects in relativistic magnetohydrodynamics. <i>Nuclear Physics A</i> , 2017, 967, 840-843.	1.5	5

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37	Deep inelastic scattering as a probe of entanglement. Physical Review D, 2017, 95, .	4.7	108
38	Interplay of Reggeon and photon in pA collisions. Physical Review D, 2017, 95, .	4.7	2
39	Lifshitz transition mediated electronic transport anomaly in bulk ZrTe ₅ . New Journal of Physics, 2017, 19, 015005.	2.9	68
40	Color confinement from fluctuating topology. International Journal of Modern Physics A, 2016, 31, 1645023.	1.5	4
41	Strain-induced chiral magnetic effect in Weyl semimetals. Physical Review B, 2016, 94, .	3.2	102
42	Charge-dependent correlations from event-by-event anomalous hydrodynamics. Nuclear Physics A, 2016, 956, 393-396.	1.5	2
43	Entropic destruction of heavy quarkonium in the quark-gluon plasma. Nuclear and Particle Physics Proceedings, 2016, 276-278, 90-95.	0.5	4
44	Chiral magnetic effect in condensed matter systems. Nuclear Physics A, 2016, 956, 107-111.	1.5	16
45	Magnetohydrodynamics and charged flow in heavy ion collisions. Nuclear Physics A, 2016, 956, 389-392.	1.5	1
46	Holographic entropy and real-time dynamics of quarkonium dissociation in non-Abelian plasma. Physical Review D, 2016, 93, .	4.7	16
47	Quantized Chiral Magnetic Current from Reconnections of Magnetic Flux. Physical Review Letters, 2016, 117, 172301.	7.8	17
48	Magnetohydrodynamics and charge identified directed flow in heavy ion collisions. AIP Conference Proceedings, 2016, , .	0.4	0
49	Chiral magnetic effect in ZrTe ₅ . Nature Physics, 2016, 12, 550-554.	16.7	793
50	Chiral magnetic and vortical effects in high-energy nuclear collisions—A status report. Progress in Particle and Nuclear Physics, 2016, 88, 1-28.	14.4	569
51	Magnetotransport in Dirac metals: Chiral magnetic effect and quantum oscillations. Physical Review B, 2015, 92, .	3.2	14
52	Self-similar inverse cascade of magnetic helicity driven by the chiral anomaly. Physical Review D, 2015, 92, .	4.7	80
53	Color Confinement and Screening in the Vacuum of QCD. Physical Review Letters, 2015, 114, 242001.	7.8	25
54	Universality of Plasmon Excitations in Dirac Semimetals. Physical Review Letters, 2015, 115, 236402.	7.8	31

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55	Topology, Magnetic Field, and Strongly Interacting Matter. Annual Review of Nuclear and Particle Science, 2015, 65, 193-214.	10.2	72
56	Entropic destruction of heavy quarkonium in non-Abelian plasma from holography. Physical Review D, 2014, 90, .	4.7	26
57	The origin of thermal component in the transverse momentum spectra in high energy hadronic processes. International Journal of Modern Physics E, 2014, 23, 1450083.	1.0	18
58	Anomalous soft photon production from the induced currents in Dirac sea. Physical Review D, 2014, 89, .	4.7	17
59	Deconfinement as an entropic self-destruction: A solution for the quarkonium suppression puzzle?. Physical Review D, 2014, 90, .	4.7	34
60	Triangle anomaly in Weyl semimetals. Physical Review B, 2014, 89, .	3.2	143
61	Magnetohydrodynamics and charged currents in heavy ion collisions. Nuclear Physics A, 2014, 931, 986-991.	1.5	9
62	Soft photon production from real-time dynamics of jet fragmentation. Nuclear Physics A, 2014, 931, 712-717.	1.5	1
63	Magnetohydrodynamics, charged currents, and directed flow in heavy ion collisions. Physical Review C, 2014, 89, .	2.9	199
64	Magneto-sonoluminescence and its signatures in photon and dilepton production in relativistic heavy ion collisions. Physical Review C, 2014, 90, .	2.9	29
65	Partial restoration of chiral symmetry in a confining string. Physical Review D, 2014, 90, .	4.7	6
66	The Chiral Magnetic Effect and anomaly-induced transport. Progress in Particle and Nuclear Physics, 2014, 75, 133-151.	14.4	402
67	Instantons and Sphalerons in a Magnetic Field. Nuclear Physics A, 2013, 904-905, 988c-991c.	1.5	1
68	Strongly Interacting Matter in Magnetic Fields: A Guide to This Volume. Lecture Notes in Physics, 2013, , 1-11.	0.7	136
69	Anomaly induced chiral magnetic current in a Weyl semimetal: Chiral electronics. Physical Review B, 2013, 88, .	3.2	46
70	Chiral and Gravitational Anomalies on Fermi Surfaces. Physical Review Letters, 2013, 111, 161601.	7.8	39
71	Jet energy loss and fragmentation in heavy ion collisions. Physical Review D, 2013, 87, .	4.7	16
72	Gluon saturation in $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline">p \rightarrow A \rangle$ collisions at energies available at the CERN Large Hadron Collider: Predictions for hadron multiplicities. Physical Review C, 2012, 85, .	2.9	67

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73	Conformal Anomaly as a Source of Soft Photons in Heavy Ion Collisions. Physical Review Letters, 2012, 109, 202303.	7.8	143
74	Chern-Simons diffusion rate in strongly coupled $N=4$ SYM plasma in an external magnetic field. Physical Review D, 2012, 85, .	4.7	23
75	LPM EFFECT AS THE ORIGIN OF JET FRAGMENTATION SCALING IN HEAVY ION COLLISIONS. International Journal of Modern Physics E, 2012, 21, 1250088.	1.0	9
76	Electric dipole moment induced by a QCD instanton in an external magnetic field. Physical Review D, 2012, 85, .	4.7	17
77	Holographic Pomeron and the Schwinger mechanism. Physical Review D, 2012, 85, .	4.7	29
78	Chiral magnetic wave. Physical Review D, 2011, 83, .	4.7	270
79	Conductivity of $SU(2)$ gluodynamics vacuum induced by magnetic field. , 2011, , .		1
80	AXIAL ANOMALY, DIRAC SEA, AND THE CHIRAL MAGNETIC EFFECT. , 2011, , .		1
81	Quark Fragmentation in the $\langle \mathbb{P} \rangle$ Vacuum. Physical Review Letters, 2011, 106, 042001.	7.8	16
82	Chiral helix in AdS/CFT correspondence with flavor. Physical Review D, 2011, 84, .	4.7	14
83	Testing the Chiral Magnetic and Chiral Vortical Effects in Heavy Ion Collisions. Physical Review Letters, 2011, 106, 062301.	7.8	228
84	Chiral Magnetic Wave at Finite Baryon Density and the Electric Quadrupole Moment of the Quark-Gluon Plasma. Physical Review Letters, 2011, 107, 052303.	7.8	227
85	Anomalies and time reversal invariance in relativistic hydrodynamics: The second order and higher dimensional formulations. Physical Review D, 2011, 84, .	4.7	79
86	Anomaly-induced quadrupole moment of the neutron in magnetic field. Physical Review D, 2011, 84, .	4.7	17
87	The chiral magnetohydrodynamics of QCD fluid at the RHIC and LHC. Journal of Physics G: Nuclear and Particle Physics, 2011, 38, 124061.	3.6	10
88	D-instantons and multiparticle production in $N=4$ SYM. Journal of High Energy Physics, 2010, 2010, 1.	4.7	7
89	Electric-current susceptibility and the Chiral Magnetic Effect. Nuclear Physics A, 2010, 836, 311-336.	1.5	93
90	Topologically induced local $\langle \mathbb{P} \rangle$ violation in QCD \checkmark QED. Annals of Physics, 2010, 325, 205-218.	2.8	199

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91	Chiral Magnetic Field Induced Insulator-Conductor Transition in $SU(2)_C$ Quark Matter. Physical Review Letters, 2010, 105, 132001.	7.8	145
92	Real-Time Dynamics of the Chiral Magnetic Effect. Physical Review Letters, 2010, 104, 212001.	7.8	118
93	Chiral Magnetic Spirals. Physical Review Letters, 2010, 104, 232301.	7.8	70
94	Spin-polarized transport through a domain wall in magnetized graphene. Physical Review B, 2009, 80, .	3.2	15
95	Gluon Saturation Effects on J/ψ Production in Heavy Ion Collisions. Physical Review Letters, 2009, 102, 152301.	7.8	33
96	Broken scale invariance, massless dilaton and confinement in QCD. Journal of High Energy Physics, 2009, 2009, 055-055.	4.7	10
97	Hot and dense matter: from RHIC to LHC – Theoretical overview. Nuclear Physics A, 2009, 827, 118c-127c.	1.5	10
98	production in heavy ion collisions and gluon saturation. Nuclear Physics A, 2009, 826, 230-255.	1.5	31
99	Chern-Simons current and local parity violation in hot QCD matter. Nuclear Physics A, 2009, 830, 543c-546c.	1.5	48
100	Parton energy loss at strong coupling and the universal bound. European Physical Journal C, 2009, 61, 675.	3.9	4
101	Breakdown of the $N=0$ quantum Hall state in graphene: Two insulating regimes. Physical Review B, 2009, 80, .	3.2	24
102	In Search of the QCD – Gravity Correspondence. Lecture Notes in Physics, 2009, , 341-369.	0.7	1
103	Chiral magnetic conductivity. Physical Review D, 2009, 80, .	4.7	238
104	Universal properties of bulk viscosity near the QCD phase transition. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2008, 663, 217-221.	4.1	295
105	Chiral magnetic effect. Physical Review D, 2008, 78, .	4.7	1,486
106	The effects of topological charge change in heavy ion collisions: “Event by event and violation” Nuclear Physics A, 2008, 803, 227-253.	1.5	1,515
107	Bulk viscosity of QCD matter near the critical temperature. Journal of High Energy Physics, 2008, 2008, 093-093.	4.7	176
108	Mass ordering of differential elliptic flow and its violation for \bar{D} mesons. Physical Review C, 2008, 77, .	2.9	101

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109	Multiparticle production and thermalization in high-energy QCD. <i>Physical Review C</i> , 2007, 75, .	2.9	75
110	Elliptic flow from a hybrid CGC, full 3D hydro and hadronic cascade model. <i>Journal of Physics G: Nuclear and Particle Physics</i> , 2007, 34, S879-S882.	3.6	44
111	Theoretical issues in J/ψ suppression. <i>Journal of Physics G: Nuclear and Particle Physics</i> , 2007, 34, S445-S452.	3.6	14
112	Spontaneous symmetry breaking in graphene subjected to an in-plane magnetic field. <i>Physical Review B</i> , 2007, 76, .	3.2	111
113	Vacuum self-focusing of very intense laser beams. <i>Physical Review A</i> , 2007, 75, .	2.5	8
114	Charge separation induced by -odd bubbles in QCD matter. <i>Nuclear Physics A</i> , 2007, 797, 67-79.	1.5	441
115	Thermal hadronization and Hawking's "Unruh radiation in QCD. <i>European Physical Journal C</i> , 2007, 52, 187.	3.9	147
116	Signatures of the color glass condensate in production off nuclear targets. <i>Nuclear Physics A</i> , 2006, 770, 40-56.	1.5	69
117	Parity violation in hot QCD: Why it can happen, and how to look for it. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2006, 633, 260-264.	4.1	461
118	Hadronic dissipative effects on elliptic flow in ultrarelativistic heavy-ion collisions. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2006, 636, 299-304.	4.1	381
119	Jet azimuthal correlations and parton saturation in the color glass condensate. <i>Nuclear Physics A</i> , 2005, 748, 627-640.	1.5	79
120	Chaos in the color glass condensate. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2005, 626, 147-150.	4.1	5
121	Color glass condensate at the LHC: hadron multiplicities in pp, pA and AA collisions. <i>Nuclear Physics A</i> , 2005, 747, 609-629.	1.5	211
122	From color glass condensate to quark-gluon plasma through the event horizon. <i>Nuclear Physics A</i> , 2005, 753, 316-334.	1.5	126
123	Onset of classical QCD dynamics in relativistic heavy ion collisions. <i>Physical Review C</i> , 2005, 71, .	2.9	143
124	Recent puzzles in the production of heavy quarkonia. <i>Physical Review D</i> , 2004, 69, .	4.7	7
125	QCD in curved space-time: A conformal bag model. <i>Physical Review D</i> , 2004, 70, .	4.7	15
126	THE GRIBOV CONCEPTION OF QUANTUM CHROMODYNAMICS. <i>Annual Review of Nuclear and Particle Science</i> , 2004, 54, 487-524.	10.2	57

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127	QCD saturation and deuteron nucleus collisions. Nuclear Physics A, 2004, 730, 448-459.	1.5	195
128	Open charm production in heavy ion collisions and the color glass condensate. Nuclear Physics A, 2004, 735, 248-266.	1.5	62
129	Nuclear modification factor in $\sqrt{s_{NN}}$ collisions <small>xmlns:xocs="http://www.elsevier.com/xml/xocs/dtd" xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://www.elsevier.com/xml/ja/dtd" xmlns:ja="http://www.elsevier.com/xml/ja/dtd" xmlns:mml="http://www.w3.org/1998/Math/MathML" xmlns:tb="http://www.elsevier.com/xml/common/table/dtd" xmlns:sb="http://www.elsevier.com/xml/common/struct-bib/dtd" xmlns:ce="http://www.elsevier.com/x</small>	4.1	183
130	NUCLEAR PHYSICS AT SMALL X. , 2004, , .		0
131	Parton saturation and Npart scaling of semi-hard processes in QCD. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2003, 561, 93-101.	4.1	245
132	Quarkonium polarization in heavy ion collisions as a possible signature of the quark-gluon plasma. Physical Review C, 2003, 68, .	2.9	19
133	Cronin effect and high-pT suppression in pA collisions. Physical Review D, 2003, 68, .	4.7	293
134	High Energy Nuclear Interactions and QCD: an Introduction. AIP Conference Proceedings, 2002, , .	0.4	4
135	Instantons in the saturation environment. Nuclear Physics A, 2002, 699, 745-769.	1.5	23
136	Generalized scaling of the transverse mass spectrum at the relativistic heavy-ion collider. Nuclear Physics A, 2002, 705, 494-507.	1.5	59
137	Classical Chromo-Dynamics of Relativistic Heavy Ion Collisions. , 2002, , 207-236.		0
138	Hadron production in nuclear collisions at RHIC and high-density QCD. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2001, 507, 121-128.	4.1	636
139	Manifestations of high density QCD in the first RHIC data. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2001, 523, 79-87.	4.1	362
140	QCD instantons and the soft pomeron. Nuclear Physics A, 2001, 690, 621-646.	1.5	62
141	Soft double-diffractive Higgs boson production at hadron colliders. Physical Review D, 2001, 63, .	4.7	14
142	ASPECTS OF PARITY, CP, AND TIME REVERSAL VIOLATION IN HOT QCD. , 2001, , .		0
143	Hadronic probes of the polarized intrinsic strangeness of the nucleon. Nuclear Physics A, 2000, 673, 256-278.	1.5	40
144	Pionic measures of parity and CP violation in high energy nuclear collisions. Physical Review D, 2000, 61, .	4.7	99

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145	Scale anomaly and soft-pomeron in QCD. Nuclear Physics B, 2000, 578, 351-363.	2.5	52
146	Last call for RHIC predictions. Nuclear Physics A, 1999, 661, 205-260.	1.5	91
147	Possibility of Spontaneous Parity Violation in Hot QCD. Physical Review Letters, 1998, 81, 512-515.	7.8	310
148	Observation of Partial $U(1)$ Restoration from Two-Pion Bose-Einstein Correlations. Physical Review Letters, 1998, 81, 2205-2208.	7.8	36
149	Charmonium Suppression in Nuclear Collisions. Progress of Theoretical Physics Supplement, 1997, 129, 73-81.	0.1	1
150	Quarkonium production and colour deconfinement in nuclear collisions. Nuclear Physics A, 1996, 610, 418-433.	1.5	40
151	J/ψ suppression in an equilibrating parton plasma. Physical Review C, 1996, 53, 3051-3056.	2.9	97
152	Return of the prodigal Goldstone boson. Physical Review D, 1996, 53, 5028-5033.	4.7	100
153	The proton spin puzzle and \hat{p} polarization in deep-inelastic scattering. Zeitschrift für Physik C-Particles and Fields, 1995, 69, 467-474.	1.5	5
154	The proton spin puzzle and depolarization in. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1995, 356, 113-117.	4.1	40
155	NN annihilation at the open charm threshold. Physical Review D, 1995, 51, 6103-6106.	4.7	8
156	Collective effects in the nuclear interactions of charmonium at low energy. Physical Review C, 1994, 49, 2798-2800.	2.9	1
157	Quantum interference effects in N^* electroproduction and propagation in nuclei. Physical Review C, 1994, 49, R1243-R1245.	2.9	4
158	Perturbative QCD forbidden charmonium decays and gluonia. Physical Review D, 1994, 50, 595-598.	4.7	13
159	Measuring the hadronization length in. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1994, 329, 374-378.	4.1	0