

Maxim Pospelov

List of Publications by Year in descending order

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157
papers

13,458
citations

16451

64
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21540

114
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159
all docs

159
docs citations

159
times ranked

9935
citing authors

#	ARTICLE	IF	CITATIONS
1	Secluded WIMP dark matter. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2008, 662, 53-61.	4.1	830
2	The Minimal Model of nonbaryonic dark matter: a singlet scalar. Nuclear Physics B, 2001, 619, 709-728.	2.5	818
3	Electric dipole moments as probes of new physics. Annals of Physics, 2005, 318, 119-169.	2.8	764
4	Secluded U(1) below the weak scale. Physical Review D, 2009, 80, .	4.7	538
5	A facility to search for hidden particles at the CERN SPS: the SHiP physics case. Reports on Progress in Physics, 2016, 79, 124201.	20.1	496
6	Astrophysical signatures of secluded dark matter. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2009, 671, 391-397.	4.1	426
7	Ultraviolet Modifications of Dispersion Relations in Effective Field Theory. Physical Review Letters, 2003, 90, 211601.	7.8	407
8	Neutrino Trident Production: A Powerful Probe of New Physics with Neutrino Beams. Physical Review Letters, 2014, 113, 091801.	7.8	340
9	Exploring portals to a hidden sector through fixed targets. Physical Review D, 2009, 80, .	4.7	301
10	Quark flavor transitions in L factories. Physical Review D, 2014, 89, .	4.7	287
11	Environmental dependence of masses and coupling constants. Physical Review D, 2008, 77, .	4.7	237
12	Bosonic super-WIMPs as keV-scale dark matter. Physical Review D, 2008, 78, .	4.7	225
13	Long-lived particles at the energy frontier: the MATHUSLA physics case. Reports on Progress in Physics, 2019, 82, 116201.	20.1	220
14	New stellar constraints on dark photons. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2013, 725, 190-195.	4.1	206
15	Particle Physics Catalysis of Thermal Big Bang Nucleosynthesis. Physical Review Letters, 2007, 98, 231301.	7.8	200
16	Probing a secluded U(1) at B factories. Physical Review D, 2009, 79, .	4.7	186
17	Novel Direct Detection Constraints on Light Dark Matter. Physical Review Letters, 2019, 122, 171801.	7.8	174
18	Observing a light dark matter beam with neutrino experiments. Physical Review D, 2011, 84, .	4.7	173

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19	Big Bang Nucleosynthesis as a Probe of New Physics. Annual Review of Nuclear and Particle Science, 2010, 60, 539-568.	10.2	170
20	Cosmological 3-brane solutions. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1999, 468, 31-39.	4.1	169
21	Low-energy limits on the antisymmetric tensor field background on the brane and on the non-commutative scale. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2000, 489, 390-396.	4.1	157
22	MSSM predictions for the electric dipole moment of the ^{199}Hg atom. Nuclear Physics B, 1999, 560, 3-22.	2.5	144
23	Lorentz Violation in Supersymmetric Field Theories. Physical Review Letters, 2005, 94, 081601.	7.8	144
24	Big Bang nucleosynthesis and particle dark matter. New Journal of Physics, 2009, 11, 105028.	2.9	139
25	Theta-Induced Electric Dipole Moment of the Neutron via QCD Sum Rules. Physical Review Letters, 1999, 83, 2526-2529.	7.8	137
26	Neutron electric dipole moment from electric and chromoelectric dipole moments of quarks. Physical Review D, 2001, 63, .	4.7	124
27	Electric dipole moments in the MSSM at large $\tan^2\beta$. Nuclear Physics B, 2004, 680, 339-374.	2.5	122
28	New Parity-Violating Muonic Forces and the Proton Charge Radius. Physical Review Letters, 2011, 107, 011803.	7.8	110
29	Dark Matter Particle Production in $b\bar{t}$'s Transitions with Missing Energy. Physical Review Letters, 2004, 93, 201803.	7.8	108
30	Direct detection of multicomponent secluded WIMPs. Physical Review D, 2009, 79, .	4.7	107
31	Room for New Physics in the Rayleigh-Jeans Tail of the Cosmic Microwave Background. Physical Review Letters, 2018, 121, 031103.	7.8	106
32	Dark forces coupled to nonconserved currents. Physical Review D, 2017, 96, .	4.7	101
33	Lorentz violation in Hořava-Lifshitz-type theories. Physical Review D, 2012, 85, .	4.7	100
34	New Constraints on Light Vectors Coupled to Anomalous Currents. Physical Review Letters, 2017, 119, 141803.	7.8	98
35	Probing CP violation with the deuteron electric dipole moment. Physical Review D, 2004, 70, .	4.7	97
36	Light dark matter in neutrino beams: Production modeling and scattering signatures at MiniBooNE, T2K, and SHiP. Physical Review D, 2017, 95, .	4.7	96

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37	Single-brane cosmological solutions with a stable compact extra dimension. <i>Physical Review D</i> , 2000, 61, .	4.7	94
38	Search for domain wall dark matter with atomic clocks on board global positioning system satellites. <i>Nature Communications</i> , 2017, 8, 1195.	12.8	94
39	CKM benchmarks for electron electric dipole moment experiments. <i>Physical Review D</i> , 2014, 89, .	4.7	93
40	Dipole portal to heavy neutral leptons. <i>Physical Review D</i> , 2018, 98, .	4.7	91
41	Multilepton signatures of a hidden sector in rare B decays. <i>Physical Review D</i> , 2011, 83, .	4.7	89
42	The Global Network of Optical Magnetometers for Exotic physics (GNOME): A novel scheme to search for physics beyond the Standard Model. <i>Annalen Der Physik</i> , 2013, 525, 659-670.	2.4	89
43	Cosmological constraints on very dark photons. <i>Physical Review D</i> , 2014, 90, .	4.7	88
44	Lorentz violating supersymmetric quantum electrodynamics. <i>Physical Review D</i> , 2005, 72, .	4.7	86
45	Reexamination of the ^{187}Re rebound on the variation of fundamental couplings. <i>Physical Review D</i> , 2004, 69, .	4.7	84
46	Theta vacua, QCD sum rules, and the neutron electric dipole moment. <i>Nuclear Physics B</i> , 2000, 573, 177-200.	2.5	83
47	Hadronic electric dipole moments, the Weinberg operator, and light gluinos. <i>Physical Review D</i> , 2003, 67, .	4.7	80
48	Leptophobic dark matter at neutrino factories. <i>Physical Review D</i> , 2014, 90, .	4.7	80
49	Directly Detecting MeV-Scale Dark Matter Via Solar Reflection. <i>Physical Review Letters</i> , 2018, 120, 141801.	7.8	79
50	Pseudoscalar Perturbations and Polarization of the Cosmic Microwave Background. <i>Physical Review Letters</i> , 2009, 103, 051302.	7.8	78
51	Self-interacting dark matter from the hidden heterotic-string sector. <i>Astroparticle Physics</i> , 2002, 16, 451-461.	4.3	77
52	Best values for the CP-odd meson-nucleon couplings from supersymmetry. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2002, 530, 123-128.	4.1	75
53	Quark flavor phenomenology of the QCD axion. <i>Physical Review D</i> , 2020, 102, .	4.7	75
54	Static solutions for brane models with a bulk scalar field. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2000, 481, 386-396.	4.1	72

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55	The galactic 511 keV line from electroweak scale WIMPs. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2007, 651, 208-215.	4.1	71
56	Classification of dimension-5 Lorentz-violating interactions in the standard model. Physical Review D, 2008, 77, .	4.7	70
57	Light new physics in coherent neutrino-nucleus scattering experiments. Physical Review D, 2015, 92, .	4.7	69
58	Millicharged Particles in Neutrino Experiments. Physical Review Letters, 2019, 122, 071801.	7.8	69
59	Evaluating the price of tiny kinetic mixing. Physical Review D, 2019, 100, .	4.7	68
60	Constraints on supersymmetric models from catalytic primordial nucleosynthesis of beryllium. Journal of Cosmology and Astroparticle Physics, 2008, 2008, 020.	5.4	67
61	(De)stabilization of an extra dimension due to a Casimir force. Physical Review D, 2001, 63, .	4.7	66
62	CP-odd phase correlations and electric dipole moments. Physical Review D, 2005, 72, .	4.7	66
63	Solar gamma rays powered by secluded dark matter. Physical Review D, 2010, 81, .	4.7	66
64	Muon anomalous magnetic moment through the leptonic Higgs portal. Physical Review D, 2017, 95, .	4.7	65
65	BBN for the LHC: Constraints on lifetimes of the Higgs portal scalars. Physical Review D, 2017, 96, .	4.7	64
66	Modified Higgs branching ratios versus C and P and lepton flavor violation. Physical Review D, 2012, 86, .	4.7	62
67	Shedding light on neutrino masses with dark forces. Journal of High Energy Physics, 2016, 2016, 1.	4.7	62
68	Primordial lithium abundance in catalyzed big bang nucleosynthesis. Physical Review D, 2008, 78, .	4.7	61
69	Sub-eV scalar dark matter through the super-renormalizable Higgs portal. Physical Review D, 2010, 82, .	4.7	59
70	Quintessence models and the cosmological evolution of f_{\pm} . Physical Review D, 2004, 70, .	4.7	58
71	Muon beam experiments to probe the dark sector. Physical Review D, 2017, 95, .	4.7	57
72	Neutrino physics with dark matter experiments and the signature of new baryonic neutral currents. Physical Review D, 2011, 84, .	4.7	54

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73	Higgs decays to dark matter: Beyond the minimal model. <i>Physical Review D</i> , 2011, 84, .	4.7	54
74	Electric Dipole Moments in the Limit of Heavy Superpartners. <i>Physical Review Letters</i> , 2002, 89, 101801.	7.8	52
75	Singlet neighbors of the Higgs boson. <i>Journal of High Energy Physics</i> , 2012, 2012, 1.	4.7	52
76	New limits on dark photons from solar emission and keV scale dark matter. <i>Physical Review D</i> , 2020, 102, .	4.7	51
77	Scalar representations and minimal flavor violation. <i>Journal of High Energy Physics</i> , 2010, 2010, 1.	4.7	50
78	Constraints on muon-specific dark forces. <i>Physical Review D</i> , 2014, 90, .	4.7	48
79	Electric dipole moment constraints on minimal electroweak baryogenesis. <i>Physical Review D</i> , 2007, 75, .	4.7	45
80	The Search for Feebly Interacting Particles. <i>Annual Review of Nuclear and Particle Science</i> , 2021, 71, 279-313.	10.2	44
81	Electric dipole moment signatures of PeV-scale superpartners. <i>Physical Review D</i> , 2013, 87, .	4.7	42
82	Search for topological defect dark matter with a global network of optical magnetometers. <i>Nature Physics</i> , 2021, 17, 1396-1401.	16.7	42
83	Metastable GeV-scale particles as a solution to the cosmological lithium problem. <i>Physical Review D</i> , 2010, 82, .	4.7	41
84	Signatures of dark radiation in neutrino and dark matter detectors. <i>Physical Review D</i> , 2018, 97, .	4.7	41
85	Indirect limits on the CPT violating background in the neutrino sector. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2002, 534, 114-119.	4.1	40
86	Scalar-tensor theories with pseudoscalar couplings. <i>Physical Review D</i> , 2009, 80, .	4.7	40
87	RESONANT ENHANCEMENT OF NUCLEAR REACTIONS AS A POSSIBLE SOLUTION TO THE COSMOLOGICAL LITHIUM PROBLEM. <i>International Journal of Modern Physics E</i> , 2012, 21, 1250004.	1.0	40
88	Modified big bang nucleosynthesis with nonstandard neutron sources. <i>Physical Review D</i> , 2014, 90, .	4.7	39
89	Constraints on millicharged particles from cosmic-ray production. <i>Physical Review D</i> , 2020, 102, .	4.7	36
90	Elastic scattering signals of solar neutrinos with enhanced baryonic currents. <i>Physical Review D</i> , 2012, 85, .	4.7	35

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91	Light Particle Solution to the Cosmic Lithium Problem. Physical Review Letters, 2016, 116, 211303.	7.8	34
92	Foraging for dark matter in large volume liquid scintillator neutrino detectors with multiscatter events. Physical Review D, 2019, 99, .	4.7	31
93	Solving the hierarchy problem in two-brane cosmological models. Physical Review D, 2000, 62, .	4.7	30
94	Dark matter detection in two easy steps. Physical Review D, 2014, 89, .	4.7	30
95	Muon capture constraints on sterile neutrino properties. Physical Review D, 2010, 82, .	4.7	29
96	Probing the Dark Sector with Dark Matter Bound States. Physical Review Letters, 2016, 116, 151801.	7.8	29
97	Lorentz Invariance on Trial. Physics Today, 2004, 57, 40-46.	0.3	28
98	Cosmological beam dump: Constraints on dark scalars mixed with the Higgs boson. Physical Review D, 2019, 99, .	4.7	27
99	Hydrogen Portal to Exotic Radioactivity. Physical Review Letters, 2020, 125, 231803.	7.8	27
100	Metastable nuclear isomers as dark matter accelerators. Physical Review D, 2020, 101, .	4.7	27
101	Probing the desert with ultra-energetic neutrinos from the sun and the earth. Astroparticle Physics, 2000, 13, 31-43.	4.3	26
102	Electric dipole moments of leptons in the presence of Majorana neutrinos. Physical Review D, 2004, 70, .	4.7	26
103	Light resonances and the low- q^2 bin of R_{K^*} . Journal of High Energy Physics, 2018, 2018, 1.	4.7	25
104	Neutron Star Internal Heating Constraints on Mirror Matter. Physical Review Letters, 2021, 127, 061805.	7.8	25
105	Publisher's Note: Constraints on muon-specific dark forces [Phys. Rev. D90, 073004 (2014)]. Physical Review D, 2014, 90, .	4.7	24
106	On the stabilization of the size of extra dimensions. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2002, 538, 146-158.	4.1	23
107	Electric dipole moments as probes of C , P , T invariance. Physical Review D, 2008, 78, .	4.7	23
108	Resonant scattering and recombination of pseudodegenerate WIMPs. Physical Review D, 2008, 78, .	4.7	22

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109	Flavor- and CP-Violating Physics from New Supersymmetric Thresholds. Physical Review Letters, 2006, 96, 091801.	7.8	21
110	Search for Dark Matter Induced Deexcitation of Tm^{180} . Physical Review Letters, 2020, 124, 181802.	7.8	20
111	Light vectors coupled to bosonic currents. Physical Review D, 2019, 99, .	4.7	19
112	Cosmological and astrophysical probes of dark baryons. Physical Review D, 2021, 103, .	4.7	19
113	Low-energy constraints on \hat{I}° -Minkowski extension of the Standard Model. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2009, 677, 160-163.	4.1	17
114	Millicharged cosmic rays and low recoil detectors. Physical Review D, 2021, 103, .	4.7	17
115	Earth-bound millicharge relics. Physical Review D, 2021, 103, .	4.7	17
116	Solar reflection of dark matter. Physical Review D, 2021, 104, .	4.7	17
117	Novel multilepton signatures of dark sectors in light meson decays. Physical Review D, 2022, 105, .	4.7	17
118	MeV-scale dark matter deep underground. Physical Review D, 2015, 92, .	4.7	16
119	Sensitivity to new supersymmetric thresholds through flavor and CP violating physics. Physical Review D, 2006, 74, .	4.7	15
120	Primordial Beryllium as a Big Bang Calorimeter. Physical Review Letters, 2011, 106, 121305.	7.8	15
121	Dark Higgs dark matter. Physical Review D, 2021, 103, .	4.7	15
122	Lifshitz-sector mediated SUSY breaking. Journal of High Energy Physics, 2014, 2014, 1.	4.7	13
123	Constraints on decaying sterile neutrinos from solar antineutrinos. Physical Review D, 2021, 104, .	4.7	13
124	The theta term in QCD sum rules and the electric dipole moment of the vector meson. Nuclear Physics B, 1999, 558, 243-258.	2.5	12
125	Direct Constraints on Charged Excitations of Dark Matter. Physical Review Letters, 2012, 109, 251302.	7.8	12
126	Improved Indirect Limits on Muon Electric Dipole Moment. Physical Review Letters, 2022, 128, 131803.	7.8	12

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127	Hadron electric dipole moments from CP-odd operators of dimension five via QCD sum rules: the vector meson. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2000, 471, 388-395.	4.1	11
128	Pion-photon transition form factor and new physics in the ρ -sector. Physical Review D, 2012, 85, .	4.7	11
129	Pair production of dark particles in meson decays. Physical Review D, 2020, 102, .	4.7	11
130	CPT-odd leptogenesis. Physical Review D, 2006, 74, .	4.7	9
131	GHOSTS AND TACHYONS IN THE FIFTH DIMENSION. International Journal of Modern Physics A, 2008, 23, 881-893.	1.5	9
132	$B_s \text{ mixing and electric dipole moments in the framework of minimal flavor violation.}$ Physical Review D, 2010, 82, .	4.7	8
133	Sensitivity to light weakly-coupled new physics at the precision frontier. Physical Review D, 2015, 92, .	4.7	7
134	Terrestrial probes of electromagnetically interacting dark radiation. Physical Review D, 2021, 103, .	4.7	7
135	Testing Parity with Atomic Radiative Capture of $^{13}\text{C} \rightarrow ^{12}\text{C} + \gamma$. Physical Review Letters, 2012, 108, 263401.	7.8	6
136	Electric dipole moments from dark sectors. Physical Review D, 2019, 100, .	4.7	6
137	Long-range axion forces and hadronic CP violation. Physical Review D, 2022, 105, .	4.7	6
138	How natural is a small \hat{A} in left-right supersymmetry models?. Physical Review D, 2002, 65, .	4.7	5
139	New physics via pion capture and simple nuclear reactions. Physical Review D, 2019, 100, .	4.7	5
140	QED corrections to Big-Bang nucleosynthesis reaction rates. Physical Review C, 2020, 102, .	2.9	5
141	Edges and Endpoints in 21-cm Observations from Resonant Photon Production. Physical Review Letters, 2021, 127, 011102.	7.8	5
142	A precise photometric ratio via laser excitation of the sodium layer \hat{A} II. Two-photon excitation using lasers detuned from 589.16 and 819.71 nm resonances. Monthly Notices of the Royal Astronomical Society, 2021, 508, 4412-4428.	4.4	4
143	A precise photometric ratio via laser excitation of the sodium layer \hat{A} I. One-photon excitation using 342.78 nm light. Monthly Notices of the Royal Astronomical Society, 2021, 508, 4399-4411.	4.4	4
144	Cosmological bounds on large extra dimensions from nonthermal production of Kaluza-Klein modes. Physical Review D, 2004, 69, .	4.7	3

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145	Diphoton excess through dark mediators. Journal of High Energy Physics, 2016, 2016, 1.	4.7	3
146	Probing CP Violation with Electric Dipole Moments. Advanced Series on Directions in High Energy Physics, 2009, , 439-518.	0.7	2
147	Low-energy signals from the formation of dark-matterâ€nucleus bound states. Physical Review D, 2022, 105, .	4.7	2
148	Improved indirect limits on charm and bottom quark EDMs. Journal of High Energy Physics, 2022, 2022, .	4.7	2
149	Breaking of CPT and Lorentz symmetries. Hyperfine Interactions, 2006, 172, 63-70.	0.5	1
150	EXPERIMENTAL CHALLENGES FOR QUANTUM GRAVITY. , 2004, , .		1
151	Electric dipole moments of neutron and heavy atoms and constraints on CP SUSY phases. AIP Conference Proceedings, 2000, , .	0.4	0
152	Searching for Axions and Other Exotics with Dark Matter Detectors. , 2010, , .		0
153	SEARCHING FOR AXIONS AND OTHER EXOTICS WITH DARK MATTER DETECTORS. International Journal of Modern Physics A, 2010, 25, 564-572.	1.5	0
154	Comments on CPT. Hyperfine Interactions, 2012, 213, 105-113.	0.5	0
155	Light and dark: A survey of new physics ideas in the 1-100 MeV window. , 2013, , .		0
156	Breaking of CPT and Lorentz symmetries. , 2007, , 63-70.		0
157	Comments on CPT. , 2012, , 325-323.		0