

Bernd A Kniehl

List of Publications by Year in descending order

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196
papers

6,970
citations

53794

45
h-index

76900

74
g-index

201
all docs

201
docs citations

201
times ranked

5982
citing authors

#	ARTICLE	IF	CITATIONS
19	Three-loop massive scalar effective potential. , 2018, , .		0
20	\hat{c} Hadroproduction at Large Hadron Collider Challenges NRQCD Factorization. EPJ Web of Conferences, 2017, 137, 06009.	0.3	3
21	On the b-quark running mass in QCD and the SM. Nuclear Physics B, 2017, 916, 463-483.	2.5	23
22	Explicit calculation of multi-fold contour integrals of certain ratios of Euler gamma functions. Part 1. Nuclear Physics B, 2017, 925, 607-614.	2.5	3
23	Counting the number of master integrals for sunrise diagrams via the Mellin-Barnes representation. Journal of High Energy Physics, 2017, 2017, 1.	4.7	21
24	Three-loop massive tadpoles and polylogarithms through weight six. Journal of High Energy Physics, 2017, 2017, 1.	4.7	17
25	Extracting $\hat{\Gamma}_{\pm s}$ from scaling violations in light-hadron fragmentation functions. Modern Physics Letters A, 2016, 31, 1630008.	1.2	0
26	mr : A C++ library for the matching and running of the Standard Model parameters. Computer Physics Communications, 2016, 206, 84-96.	7.5	31
27	Master integrals for the four-loop Sudakov form factor. Nuclear Physics B, 2016, 902, 387-414. <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>I</mml:mi><mml:mo>stretchy="false">(</mml:mo><mml:mn>2</mml:mn><mml:mi>S</mml:mi><mml:mo>Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 387 Td (str	2.5	35
28	xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi mathvariant="normal">I</mml:mi><mml:mo>		

#	ARTICLE	IF	CITATIONS
37	$\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:mi} \rangle \hat{I} \langle \text{mml:mi} \rangle \langle \text{mml:mi} \rangle c \langle \text{mml:mi} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:math} \rangle$ Production at the LHC Challenges Nonrelativistic QCD Factorization. Physical Review Letters, 2015, 114, 092004.	7.8	88
38	Stability of the Electroweak Vacuum: Gauge Independence and Advanced Precision. Physical Review Letters, 2015, 115, 201802.	7.8	189
39	Propagator mixing renormalization for Majorana fermions. Physical Review D, 2014, 89, .	4.7	7
40	All-Order Renormalization of the Propagator Matrix for Fermionic Systems with Flavor Mixing. Physical Review Letters, 2014, 112, 071603.	7.8	13
41	Prompt-photon plus jet associated photoproduction at HERA in the parton Reggeization approach. Physical Review D, 2014, 89, .	4.7	17
42	Considerations concerning the generalization of the Dirac equations to unstable fermions. Physical Review D, 2014, 90, .	4.7	0
43	All-order renormalization of propagator matrix for unstable Dirac fermions. Physical Review D, 2014, 89, .	4.7	10
44	Relativistic corrections to prompt J/ψ photo- and hadroproduction. Physical Review D, 2014, 90, .	4.7	4
45	Two-loop electroweak threshold corrections to the bottom and top Yukawa couplings. Nuclear Physics B, 2014, 885, 459-480.	2.5	20
46	Color-kinematic duality for form factors. Journal of High Energy Physics, 2013, 2013, 1.	4.7	97
47	HYPERDIRE, HYPERgeometric functions Differential REDuction: MATHEMATICA-based packages for differential reduction of generalized hypergeometric functions. Computer Physics Communications, 2013, 184, 2332-2342.	7.5	37
48	NEXT-TO-LEADING ORDER TESTS OF NON-RELATIVISTIC-QCD FACTORIZATION WITH J/ψ YIELD AND POLARIZATION. Modern Physics Letters A, 2013, 28, 1350027.	1.2	57
49	Two-fold Mellin-Barnes transforms of Ustyukina-Davydychev functions. Nuclear Physics B, 2013, 876, 322-333.	2.5	7
50	Average gluon and quark jet multiplicities at higher orders. Nuclear Physics B, 2013, 875, 18-44.	2.5	13
51	Solution to Bethe-Salpeter equation via Mellin-Barnes transform. Nuclear Physics B, 2013, 870, 243-277.	2.5	17
52	On the difference between the pole and the MS masses of the top quark at the electroweak scale. Physics Letters, Section B: Nuclear, Elementary Particles, 2013, 317, 29-32.	4.1	44
53	Inclusive J/ψ production and J/ψ production in the presence of a photon. Physical Review Letters, 2013, 111, 172001.	4.7	24
54	b production in J/ψ production. Physical Review Letters, 2013, 111, 172001.	4.7	24

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55	$\langle \text{mml:math xmlns:mml}=\text{"http://www.w3.org/1998/Math/MathML"} \text{display}=\text{"inline"} \rangle \langle \text{mml:mi} \rangle \langle \text{mml:mi} \rangle \langle \text{mml:mo} \rangle \langle \text{mml:mo} \rangle \langle \text{mml:mi} \rangle \langle \text{mml:mi} \rangle \langle \text{mml:math} \rangle$ Polarization at the Tevatron and the LHC: Nonrelativistic-QCD Factorization at the Crossroads. Physical Review Letters, 2012, 108, 172002.	7.8	172
56	Low-mass Higgs decays to four leptons at one loop and beyond. Physical Review D, 2012, 86, .	4.7	15
57	Higgs boson mass and new physics. Journal of High Energy Physics, 2012, 2012, 1.	4.7	424
58	Associated production of Z and neutral Higgs bosons at the CERN Large Hadron Collider. Physical Review D, 2012, 85, .	4.7	6
59	Finding new relationships between hypergeometric functions by evaluating Feynman integrals. Nuclear Physics B, 2012, 854, 841-852.	2.5	19
60	Bottom-flavored hadrons from top-quark decay at next-to-leading order in the general-mass variable-flavor-number scheme. Nuclear Physics B, 2012, 862, 720-736.	2.5	34
61	Mellin-Barnes representations of Feynman diagrams, linear systems of differential equations, and polynomial solutions. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2012, 714, 103-109.	4.1	33
62	Inclusive charmed-meson production at the CERN LHC. European Physical Journal C, 2012, 72, 1.	3.9	127
63	Renormalization in general theories with intergeneration mixing. Physical Review D, 2012, 85, .	4.7	13
64	production in NRQCD: A global analysis of yield and polarization. Nuclear Physics, Section B, Proceedings Supplements, 2012, 222-224, 151-161.	0.4	36
65	Counting master integrals: Integration-by-parts procedure with effective mass. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2012, 712, 233-234.	4.1	18
66	World data of $\langle \text{mml:math xmlns:mml}=\text{"http://www.w3.org/1998/Math/MathML"} \text{display}=\text{"inline"} \rangle \langle \text{mml:mi} \rangle \langle \text{mml:mi} \rangle \langle \text{mml:mo} \rangle \langle \text{mml:mo} \rangle \langle \text{mml:mi} \rangle \langle \text{mml:mi} \rangle \langle \text{mml:math} \rangle$ production consolidate nonrelativistic QCD factorization at next-to-leading order. Physical Review D, 2011, 84, .	4.7	157
67	Quark mixing renormalization effects in the determination of $ V_{tq} $. Physical Review D, 2011, 83, .	4.7	3
68	Fully double-logarithm-resummed cross sections. Nuclear Physics B, 2011, 851, 86-103.	2.5	15
69	Counting master integrals: Integration by parts vs. differential reduction. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2011, 702, 268-271.	4.1	23
70	$\hat{\sigma}(\gamma\gamma)$ Production with NRQCD: HERA, Tevatron, RHIC and LHC. , 2011, , .		13
71	Probing Nonrelativistic QCD Factorization in Polarized $\hat{\sigma}(\gamma\gamma)$ Photoproduction at Next-to-Leading Order. Physical Review Letters, 2011, 107, 232001.	7.8	46
72	Reconciling $\langle \text{mml:math xmlns:mml}=\text{"http://www.w3.org/1998/Math/MathML"} \text{display}=\text{"inline"} \rangle \langle \text{mml:mi} \rangle \langle \text{mml:mi} \rangle \langle \text{mml:mo} \rangle \langle \text{mml:mo} \rangle \langle \text{mml:mi} \rangle \langle \text{mml:mi} \rangle \langle \text{mml:math} \rangle$ Production at HERA, RHIC, Tevatron, and LHC with Nonrelativistic QCD Factorization at Next-to-Leading Order. Physical Review Letters, 2011, 106, 022003.	7.8	186

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73	Ultrahigh-Energy Neutrino-Nucleon Deep-Inelastic Scattering and the Froissart Bound. Physical Review Letters, 2011, 106, 231802.	7.8	21
74	All-order ϵ expansions of hypergeometric functions of one variable. Physics of Particles and Nuclei, 2010, 41, 942-945.	0.7	10
75	Complete Next-to-Leading-Order Corrections to J/ψ Photoproduction in Nonrelativistic Quantum Chromodynamics. Physical Review Letters, 2010, 104, 072001.	7.8	75
76	Analytic result for the one-loop scalar pentagon integral with massless propagators. Nuclear Physics B, 2010, 833, 298-319.	2.5	17
77	Differential reduction of generalized hypergeometric functions from Feynman diagrams: One-variable case. Nuclear Physics B, 2010, 836, 129-170.	2.5	43
78	Open charm hadroproduction and the charm content of the proton. Physical Review D, 2009, 79, .	4.7	37
79	Novel formulations of CKM matrix renormalization. AIP Conference Proceedings, 2009, , .	0.4	5
80	A novel formulation of Cabibbo-Kobayashi-Maskawa matrix renormalization. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2009, 673, 208-210.	4.1	19
81	Small- x behavior of the structure function F_2 and its slope $\ln F_2$ and its slope $\ln F_2$ at low x . Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2008, 663, 66-72.	4.1	59
82	On the perturbative stability of the QCD predictions for the ratio $R = F_L / F_T$ in heavy-quark leptonproduction. European Physical Journal C, 2009, 59, 647.	3.9	22
83	Heavy-quark pair production in polarized photon-photon collisions at next-to-leading order: Fully integrated total cross sections. Physical Review D, 2009, 79, .	4.7	7
84	Two-loop electroweak corrections to the and couplings of the CP-odd Higgs boson. Nuclear Physics B, 2009, 807, 188-209.	2.5	3
85	Towards all-order Laurent expansion of generalised hypergeometric functions about rational values of parameters. Nuclear Physics B, 2009, 809, 365-405.	2.5	35
86	On-shell renormalization of the mixing matrices in Majorana neutrino theories. Nuclear Physics B, 2009, 818, 115-134.	2.5	5
87	Functional equations for one-loop master integrals for heavy-quark production and Bhabha scattering. Nuclear Physics B, 2009, 820, 178-192.	2.5	15
88	Quark-mixing renormalization effects in the determination of the CKM parameters $ V_{ij} $. Physical Review D, 2009, 79, .	4.7	5
89	Heavy-quark contributions to the ratio $R = F_L / F_T$ at low x . Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2008, 663, 66-72.	4.1	34
90	Single top production at HERA in the Standard Model and its minimal supersymmetric extension. Nuclear Physics B, 2008, 790, 200-215.	2.5	2

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91	Dominant two-loop electroweak corrections to the hadroproduction of a pseudoscalar Higgs boson and its photonic decay. Physical Review D, 2008, 78. Orthopositronium Lifetime: Analytic Results in $\mathcal{O}(\alpha_s^2)$	4.7	5
92	$\mathcal{O}(\alpha_s^2)$ corrections to the hadroproduction of a pseudoscalar Higgs boson and its photonic decay. Physical Review D, 2008, 78.		

#	ARTICLE	IF	CITATIONS
127	Width and partial widths of unstable particles in the light of the Nielsen identities. Physical Review D, 2002, 65, .	4.7	47
128	Non-Abelian $\hat{1}\pm s^3/(mqr^2)$ heavy-quark $\hat{1}\pm$ antiquark potential. Physical Review D, 2002, 65, .	4.7	57
129	Elimination of threshold singularities in the relation between on-shell and pole widths. Physical Review D, 2002, 66, .	4.7	14
130	THEORETICAL ASPECTS OF STANDARD-MODEL HIGGS $\hat{1}\pm$ BOSON PHYSICS AT A FUTURE $e+e$ -LINEAR COLLIDER. International Journal of Modern Physics A, 2002, 17, 1457-1476.	1.5	21
131	J/ψ inclusive production in ep deep-inelastic scattering at DESY HERA. Nuclear Physics B, 2002, 621, 337-358.	2.5	48
132	J/ψ inclusive production in $\hat{1}\pm/2N$ neutral-current deep-inelastic scattering. Nuclear Physics B, 2002, 637, 311-344.	2.5	10
133	Potential NRQCD and heavy-quarkonium spectrum at next-to-next-to-next-to-leading order. Nuclear Physics B, 2002, 635, 357-383.	2.5	120
134	Field renormalization constant for unstable particles. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2002, 530, 129-132.	4.1	28
135	Width and Partial Widths of Unstable Particles. Physical Review Letters, 2001, 86, 389-392.	7.8	50
136	Gauge-independent W-boson partial decay widths. Physical Review D, 2000, 62, .	4.7	33
137	Polarized J/ψ from $\hat{1}\pm c$ and $\hat{1}\pm$ decays at the Fermilab Tevatron. Physical Review D, 2000, 62, .	4.7	46
138	Order $\hat{1}\pm 7 \ln(1/\hat{1}\pm)$ Contribution to Positronium Hyperfine Splitting. Physical Review Letters, 2000, 85, 5094-5097.	7.8	71
139	Polarization of prompt J/ψ at the Fermilab Tevatron. Physical Review D, 2000, 62, .	4.7	172
140	Order $\hat{1}\pm 3 \ln(1/\hat{1}\pm)$ Corrections to Positronium Decays. Physical Review Letters, 2000, 85, 1210-1213.	7.8	45
141	Strong Coupling Constant from Scaling Violations in Fragmentation Functions. Physical Review Letters, 2000, 85, 5288-5291.	7.8	30
142	Order corrections to heavy-quarkonium creation and annihilation. Nuclear Physics B, 2000, 577, 197-208.	2.5	52
143	Higgs-boson production and decay close to thresholds. Nuclear Physics B, 2000, 591, 296-310.	2.5	27
144	Decoupling of heavy quarks from QCD and applications in Higgs-boson phenomenology. , 1999, , ,		0

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145	Inclusive J/ψ and $\psi(2S)$ production from B decay in $p\bar{p}$ collisions. <i>Physical Review D</i> , 1999, 60, .	4.7	26
146	Massive-evolution effects on charmonium hadroproduction. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1999, 468, 294-298.	4.1	4
147	Tevatron-hera colour-octet charmonium anomaly versus higher-order QCD effects. <i>European Physical Journal C</i> , 1999, 6, 493-501.	3.9	49
148	Ultrasoft effects in heavy-quarkonium physics. <i>Nuclear Physics B</i> , 1999, 563, 200-210.	2.5	110
149	TEVATRON-HERA colour-octet charmonium anomaly versus higher-order QCD effects. <i>European Physical Journal C</i> , 1999, 6, 493.	3.9	16
150	Mass and width of a heavy Higgs boson. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1998, 440, 136-140.	4.1	16
151	Differences between the Pole and On-Shell Masses and Widths of the Higgs Boson. <i>Physical Review Letters</i> , 1998, 81, 1373-1376.	7.8	41
152	Charmonium production via fragmentation at DESY HERA. <i>Physical Review D</i> , 1997, 56, 5820-5833.	4.7	20
153	Colour-octet contributions to photoproduction via fragmentation at HERA. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1997, 413, 416-421.	4.1	28
154	Scheme and scale dependences of leading electroweak corrections. <i>Nuclear Physics B</i> , 1996, 458, 35-51.	2.5	9
155	Mixing renormalization in Majorana neutrino theories. <i>Nuclear Physics B</i> , 1996, 474, 286-308.	2.5	79
156	Dependence of electroweak parameters on the definition of the top-quark mass. <i>Zeitschrift für Physik C-Particles and Fields</i> , 1996, 72, 437-447.	1.5	11
157	Virtual top effects on low-mass Higgs interactions at next-to-leading order in QCD. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1996, 365, 297-301.	4.1	23
158	Two-loop $O(\alpha_s^2)$ heavy-quark corrections to the interactions between Higgs and intermediate bosons. <i>Physical Review D</i> , 1996, 53, 6477-6485.	4.7	11
159	Dependence of electroweak parameters on the definition of the top-quark mass. <i>Zeitschrift für Physik C-Particles and Fields</i> , 1996, 72, 437-447.	1.5	0
160	Low-energy theorems in Higgs physics. <i>Zeitschrift für Physik C-Particles and Fields</i> , 1995, 69, 77-87.	1.5	153
161	Two-loop $O(\alpha_s^2)$ correction to the decay rate induced by the top quark. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1995, 343, 299-303.	4.1	16
162	Observations concerning the magnitude of Λ threshold effects on electroweak parameters. <i>Physical Review D</i> , 1995, 51, 3803-3810.	4.7	4

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163	Two-loop $O(\alpha_s^2)$ corrections to the fermionic decay rates of the Higgs boson. <i>Physical Review D</i> , 1995, 51, 5007-5015.	4.7	25
164	Onset of strong interactions in the Higgs sector of the Standard Model: $H \rightarrow \tau^+ \tau^-$ at two loops [Phys. Rev. Lett. 72, 2534 (1994)]. <i>Physical Review Letters</i> , 1995, 74, 1699-1699.	7.8	23
165	STATUS OF HIGHER-ORDER CORRECTIONS IN THE STANDARD ELECTROWEAK THEORY. <i>International Journal of Modern Physics A</i> , 1995, 10, 443-464.	1.5	17
166	Two-loop $O(\alpha_s^2)$ corrections to Higgs production at LEP. <i>Nuclear Physics B</i> , 1995, 443, 37-46.	2.5	14
167	Three-loop $O(\alpha_s^3)$ corrections to Higgs production and decay at e^+e^- colliders. <i>Nuclear Physics B</i> , 1995, 454, 485-505.	2.5	29
168	Relation between the fermion pole mass and $M \hat{S}^{-1}$ Yukawa coupling in the standard model. <i>Physical Review D</i> , 1995, 51, 1386-1394.	4.7	106
169	Onset of strong interactions in the Higgs sector of the standard model: $H \rightarrow \tau^+ \tau^-$ at two loops. <i>Physical Review Letters</i> , 1994, 72, 2534-2537.	7.8	31
170	Two-loop $O(\alpha_s^2)$ corrections to the fermionic decay rates of the standard-model Higgs boson. <i>Physical Review D</i> , 1994, 50, 3314-3322.	4.7	27
171	Higher-order corrections to Higgs-boson decays. <i>Nuclear Physics, Section B, Proceedings Supplements</i> , 1994, 37, 268-273.	0.4	0
172	Production and decay of the Standard Model Higgs boson at LEP200. <i>Zeitschrift für Physik C-Particles and Fields</i> , 1994, 63, 417-425.	1.5	33
173	Two-loop $O(\alpha_s^2)$ correction to the decay rate. <i>Nuclear Physics B</i> , 1994, 432, 39-48.	2.5	33
174	Comparative analysis of three methods to evaluate vacuum-polarization functions. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1993, 318, 367-370.	4.1	29
175	Two-loop electroweak parameters. <i>Zeitschrift für Physik C-Particles and Fields</i> , 1993, 58, 119-131.	1.5	29
176	Radiative corrections to $e^+e^- \rightarrow \tau^+\tau^- Z$ and $Z \rightarrow \tau^+\tau^-$ in the minimal supersymmetric theory. <i>Zeitschrift für Physik C-Particles and Fields</i> , 1993, 59, 263-271.	1.5	11
177	Gauge-invariant formulation of the S, T , and U parameters. <i>Physical Review D</i> , 1993, 48, R3963-R3966.	4.7	67
178	Effect of the t threshold on electroweak parameters. <i>Physical Review D</i> , 1993, 47, 883-893.	4.7	69
179	Oblique radiative corrections from Majorana neutrinos. <i>Physical Review D</i> , 1993, 48, 225-233.	4.7	27
180	Incorporation of QCD effects in basic corrections of the electroweak theory. <i>Physical Review D</i> , 1993, 48, 307-331.	4.7	95

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181	Radiative corrections for in the standard model. Nuclear Physics B, 1992, 376, 3-28.	2.5	104
182	Dispersion relations for vacuum-polarization functions in electroweak physics. Nuclear Physics B, 1992, 371, 141-148.	2.5	75
183	Radiative corrections for associated ZH production at future e^+e^- colliders. Zeitschrift für Physik C-Particles and Fields, 1992, 55, 605-618.	1.5	80
184	Radiative corrections to Higgs production from Z decay. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1992, 282, 249-255.	4.1	13
185	ZOPOLE "A program to calculate the electroweak and QCD radiative corrections to $e^+e^- \rightarrow f \bar{f}$ near the Z0 resonance. Computer Physics Communications, 1992, 72, 175-220.	7.5	18
186	Radiative corrections for $H \rightarrow ZZ$ in the standard model. Nuclear Physics B, 1991, 352, 1-26.	2.5	76
187	Γ beyond one loop. Nuclear Physics B, 1991, 353, 567-590.	2.5	120
188	Radiative corrections for $H \rightarrow W^+W^- (\gamma)$ in the standard model. Nuclear Physics B, 1991, 357, 439-466.	2.5	70
189	Elastic ep scattering and the Weizsäcker-Williams approximation. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1991, 254, 267-273.	4.1	90
190	The Higgs boson decay $H \rightarrow Z\gamma$. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1990, 244, 537-540.	4.1	26
191	Two-loop QED vertex correction from virtual heavy fermions. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1990, 237, 127-129.	4.1	41
192	QCD corrections to vector boson self-energies in the standard model. Computer Physics Communications, 1990, 58, 293-303.	7.5	12
193	On the decay mode $Z \rightarrow H\gamma$. Physical Review D, 1990, 42, 3100-3106.	4.7	16
194	Associated production of Higgs and Z bosons from gluon fusion in hadron collisions. Physical Review D, 1990, 42, 2253-2258.	4.7	67
195	QCD corrections to the Z decay rate. Nuclear Physics B, 1990, 329, 547-573.	2.5	120
196	Two-loop corrections to the vacuum polarizations in perturbative QCD. Nuclear Physics B, 1990, 347, 86-104.	2.5	187