

# Klaus Jungmann

## List of Publications by Year in descending order

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130  
papers

6,977  
citations

117571

34  
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56687

83  
g-index

134  
all docs

134  
docs citations

134  
times ranked

6054  
citing authors

#	ARTICLE	IF	CITATIONS
1	Final report of the E821 muon anomalous magnetic moment measurement at BNL. Physical Review D, 2006, 73, .	1.6	1,800
2	Measurement of the Negative Muon Anomalous Magnetic Moment to $0.7\hat{\text{A}}\text{ppm}$ . Physical Review Letters, 2004, 92, 161802.	2.9	628
3	Precise Measurement of the Positive Muon Anomalous Magnetic Moment. Physical Review Letters, 2001, 86, 2227-2231.	2.9	489
4	Measurement of the Positive Muon Anomalous Magnetic Moment to $0.7\hat{\text{A}}\text{ppm}$ . Physical Review Letters, 2002, 89, 101804.	2.9	378
5	High Precision Measurements of the Ground State Hyperfine Structure Interval of Muonium and of the Muon Magnetic Moment. Physical Review Letters, 1999, 82, 711-714.	2.9	239
6	Improved limit on the muon electric dipole moment. Physical Review D, 2009, 80, .	1.6	215
7	New Method of Measuring Electric Dipole Moments in Storage Rings. Physical Review Letters, 2004, 93, 052001.	2.9	204
8	New Bounds from a Search for Muonium to Antimuonium Conversion. Physical Review Letters, 1999, 82, 49-52.	2.9	202
9	Physics at a future Neutrino Factory and super-beam facility. Reports on Progress in Physics, 2009, 72, 106201.	8.1	174
10	Desorption stimulated by laser-induced surface-plasmon excitation. Physical Review Letters, 1988, 60, 1649-1652.	2.9	151
11	Publisher's Note: Measurement of the Positive Muon Anomalous Magnetic Moment to $0.7\hat{\text{A}}\text{ppm}$ [Phys. Rev. Lett. 89, 101804 (2002)]. Physical Review Letters, 2002, 89, .	2.9	145
12	Recent progress in neutrino factory and muon collider research within the Muon Collaboration. Physical Review Special Topics: Accelerators and Beams, 2003, 6, .	1.8	123
13	Test of CPT and Lorentz Invariance from Muonium Spectroscopy. Physical Review Letters, 2001, 87, 111804.	2.9	109
14	Measurement of the $1s\hat{\sim}2s$ Energy Interval in Muonium. Physical Review Letters, 2000, 84, 1136-1139.	2.9	107
15	Atomic parity nonconservation in $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"} \langle \text{mml:msup} \langle \text{mml:mi mathvariant="normal"} \rangle \text{Ra} \langle \text{mml:mi} \langle \text{mml:mo} \rangle + \langle \text{mml:mo} \rangle \langle \text{mml:msup} \langle \text{mml:math} \rangle .$ Physical Review A, 2008, 78, .	1.0	88
16	New Measurement of the Anomalous Magnetic Moment of the Positive Muon. Physical Review Letters, 1999, 82, 1632-1635.	2.9	87
17	Measuring the electric dipole moment of the electron in BaF. European Physical Journal D, 2018, 72, 1.	0.6	82
18	Improved measurement of the positive muon anomalous magnetic moment. Physical Review D, 2000, 62, .	1.6	70

#	ARTICLE	IF	CITATIONS
19	A high precision magnetometer based on pulsed NMR. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1996, 374, 118-126.	0.7	64
20	Magneto-optical trapping of barium. Physical Review A, 2009, 79, .	1.0	60
21	Matrix analysis of the $\hat{I}^2$ decays of $N$	1.1	59
22	Precision optical-frequency-difference measurements. Physical Review A, 1988, 37, 1802-1805.	1.0	57
23	Search for Lorentz and $C$ $P$ $T$ Violation Effects in Muon Spin Precession. Physical Review Letters, 2008, 100, 091602.	2.9	57
24	The Brookhaven muon storage ring magnet. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2001, 457, 151-174.	0.7	52
25	High accuracy theoretical investigations of CaF, SrF, and BaF and implications for laser-cooling. Journal of Chemical Physics, 2019, 151, 034302.	1.2	51
26	A measurement of the $1S \rightarrow 2S$ transition frequency in muonium. Physics Letters, Section A: General, Atomic and Solid State Physics, 1994, 187, 247-254.	0.9	50
27	Collective oscillations of stored ions. Physical Review A, 1987, 36, 3451-3454.	1.0	47
28	Investigations of $^{225}\text{Ra}$ to test possibilities for new optical-frequency standards. Physical Review A, 2007, 76, .	1.0	46
29	Dual magnetic separator for. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2006, 560, 169-181.	0.7	41
30	Precise branching ratios to unbound $^{12}\text{C}$ states from $^{12}\text{N}$ and $^{12}\text{B}$ $\hat{I}^2$ -decays. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2009, 678, 459-464.	1.5	41
31	A chirp-compensated, injection-seeded alexandrite laser. Applied Physics B: Lasers and Optics, 2000, 71, 11-17.	1.1	38
32	The superconducting inflector for the BNL g-2 experiment. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2002, 491, 23-40.	0.7	37
33	Searching for electric dipole moments. Annalen Der Physik, 2013, 525, 550-564.	0.9	36
34	Laser spectroscopy of trapped short-lived $^{225}\text{Ra}$ ions. Physical Review A, 2010, 82, .	1.0	34
35	Comment on the ultimate single-ion laser-frequency standard. Physical Review A, 1986, 33, 2124-2126.	1.0	32
36	Traveling-wave deceleration of SrF molecules. Journal of Molecular Spectroscopy, 2014, 300, 22-25.	0.4	32

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37	Ra+ ion trapping: toward an atomic parity violation measurement and an optical clock. Applied Physics B: Lasers and Optics, 2014, 114, 173-182.	1.1	27
38	Improved Upper Limit on Muonium to Antimuonium Conversion. Physical Review Letters, 1996, 77, 1950-1953.	2.9	25
39	Status and perspectives of atomic physics research at GSI: The new GSI accelerator project. Nuclear Instruments & Methods in Physics Research B, 2003, 205, 156-161.	0.6	25
40	Light shifts and electric dipole matrix elements in $Ba^{+}$ . Physical Review A, 2009, 79, 043410.	1.0	25
41	Production of short lived radioactive beams of radium. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2009, 606, 305-309.	0.7	25
42	Towards a precise measurement of atomic parity violation in a single Ra + ion. Hyperfine Interactions, 2013, 214, 157-162.	0.2	24
43	Observation of resonance line narrowing for old muonium. Physical Review A, 1995, 52, 1948-1953.	1.0	23
44	Measurement and compensation of frequency chirping in pulsed dye laser amplifiers. Applied Physics B: Lasers and Optics, 1996, 63, 467-472.	1.1	21
45	Production of radioactive nuclides in inverse reaction kinematics. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2007, 572, 580-584.	0.7	21
46	Production and trapping of radioactive atoms at the TRIUMF facility. Nuclear Instruments & Methods in Physics Research B, 2008, 266, 4532-4536.	0.6	21
47	A new approach to test Lorentz invariance in the weak interaction. Annalen Der Physik, 2013, 525, 653-658.	0.9	19
48	Two-photon laser spectroscopy of the muonium $1S \rightarrow 2S$ transition. Zeitschrift für Physik D-Atoms Molecules and Clusters, 1991, 21, 241-243.	1.0	17
49	Light-shift calculation in the $nS$ -states of hydrogenic systems. Zeitschrift für Physik D-Atoms Molecules and Clusters, 1996, 38, 141-152.	1.0	17
50	Atomic parity violation in a single trapped radium ion This paper was presented at the International Conference on Precision Physics of Simple Atomic Systems, held at Collège de Physique, les Houches, France, 30 May - 4 June, 2010. Canadian Journal of Physics, 2011, 89, 65-68.	0.4	17
51	Light shifts and electric dipole matrix elements in $Ba^{+}$ . Physical Review A, 2009, 79, 043410.	1.0	17
52	Potential of electric quadrupole transitions in radium isotopes for single-ion optical frequency standards. Physical Review A, 2011, 83, .	1.0	17
53	Precise Determination of the Unperturbed $B^8$ Neutrino Spectrum. Physical Review Letters, 2012, 108, 162502.	2.9	17
54	First test of Lorentz invariance in the weak decay of polarized nuclei. Physical Review D, 2013, 88, .	1.6	17

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55	The Measurement of the Anomalous Magnetic Moment of the Muon at Fermilab. Journal of Physical and Chemical Reference Data, 2015, 44, .	1.9	17
56	Compilation of Spectroscopic Data of Radium (Ra I and Ra II). Journal of Physical and Chemical Reference Data, 2016, 45, .	1.9	17
57	Fundamental Symmetries and Interactions. Nuclear Physics A, 2005, 751, 87-106.	0.6	16
58	Hyperfine structure of the level in trapped short-lived $^{211}\text{Ra}^+$ ions. Physics Letters, Section A: General, Atomic and Solid State Physics, 2011, 375, 3130-3133.	0.9	16
59	Development of a thermal ionizer as ion catcher. Nuclear Instruments & Methods in Physics Research B, 2008, 266, 4478-4482.	0.6	15
60	Isotope shifts of $6s5d3D-6s6p1P1$ transitions in neutral barium. European Physical Journal D, 2009, 53, 1-8.	0.6	15
61	TRIP Trapped Radioactive Atoms in micro laboratories for Fundamental Physics. Physica Scripta, 2003, T104, 178.	1.2	14
62	Laser spectroscopy of muonic atoms. Zeitschrift für Physik C-Particles and Fields, 1992, 56, S59-S69.	1.5	13
63	Resonant three-photon ionization of hydrogenic atoms by a non-monochromatic laser field. Journal of Physics B: Atomic, Molecular and Optical Physics, 1999, 32, 1615-1637.	0.6	13
64	Deceleration and Trapping of SrF Molecules. Physical Review Letters, 2021, 127, 173201.	2.9	12
65	Muonium formation by collisions of muons with solid rare-gas and solid nitrogen layers. Physical Review A, 1998, 58, 3739-3756.	1.0	11
66	Determination of transition frequencies in a single $\text{Ba}^{+}$ ion. Physical Review A, 2015, 91, .	1.0	11
67	Thermal muonium in vacuo from silica aerogels. Journal of Non-Crystalline Solids, 1992, 145, 244-249.	1.5	10
68	The $^{21}\text{Na}$ decay. Journal of Physics G: Nuclear and Particle Physics, 2010, 37, 045103.	1.4	10
69	Lifetime measurements of the $A^{21/2}$ and $A^{23/2}$ states in BaF. Physical Review A, 2019, 100, .	1.0	10
70	Radial magnetic field measurements with a Hall probe device in the muon ( $g-2$ ) storage ring magnet at BNL. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2001, 473, 260-268.	0.7	9
71	Impact and Application: Quest for a Nuclear Georeactor. Nuclear Physics News, 2004, 14, 20-25.	0.1	9
72	Towards the european strategy for particle physics: The briefing book. European Physical Journal C, 2007, 51, 421-500.	1.4	9

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73	$\hat{I}^2$ -decay and the electric dipole moment: searches for time-reversal violation in radioactive nuclei and atoms. Nuclear Physics A, 2010, 844, 143c-149c.	0.6	9
74	Thermalization of different alkali and alkali-earth elements at the $\text{TRI}^{1/4}$ facility. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2010, 622, 11-16.	0.7	9
75	Atomic parity violation in a single trapped radium ion. Hyperfine Interactions, 2011, 199, 9-19.	0.2	9
76	Characterization of a Continuous Muon Source for the Non-Destructive and Depth-Selective Elemental Composition Analysis by Muon Induced X- and Gamma-rays. Applied Sciences (Switzerland), 2022, 12, 2541.	1.3	9
77	Influence of elastic and inelastic collisions on density shift and broadening. Physics Letters, Section A: General, Atomic and Solid State Physics, 1981, 81, 223-227.	0.9	8
78	$\text{TRI}^{1/4}\text{P}$ â€“ a radioactive isotope trapping facility under construction at KVI. Nuclear Instruments & Methods in Physics Research B, 2003, 204, 532-535.	0.6	8
79	Statistical equations and methods applied to the precision muon experiment at BNL. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2007, 579, 1096-1116.	0.7	8
80	Matter-antimatter asymmetry aspects at low energy. Annalen Der Physik, 2016, 528, 108-114.	0.9	8
81	PrÃ¤zisionsmessungen am Myoniumatom. Physik Journal, 1995, 51, 1167-1172.	0.1	7
82	The muonium atom as a probe of physics beyond the standard model. , 1997, , 43-56.		7
83	Muon Physics Possibilities at a Muon-Neutrino Factory. Hyperfine Interactions, 2001, 138, 463-473.	0.2	7
84	A Sensitive Search for a Muon Electric Dipole Moment. International Journal of Modern Physics A, 2001, 16, 690-693.	0.5	7
85	Muonium - Physics of a most Fundamental Atom. Nuclear Physics, Section B, Proceedings Supplements, 2006, 155, 355-357.	0.5	7
86	Status of the $\text{TRI}^{1/4}\text{P}$ project. Hyperfine Interactions, 2007, 174, 97-102.	0.2	7
87	Trapped radioactive isotopes for fundamental symmetry investigations. Hyperfine Interactions, 2012, 211, 39-43.	0.2	7
88	Absolute frequency measurement of the $\text{TRI}^{1/4}\text{P}$ project. Physical Review A, 2014, 90, .	1.0	7
89	A supersonic laser ablation beam source with narrow velocity spreads. Review of Scientific Instruments, 2021, 92, 033202.	0.6	7
90	Muonium spectroscopy. , 2000, 127, 189-196.		6

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91	The Validity of the ICD-10 Classification of Recurrent Affective Disorders: Do Endogenous and Psychogenic Depressions Form a Homogeneous Diagnostic Group?. Psychopathology, 2001, 34, 36-42.	1.1	6
92	First observation and mobility measurements of negative ions in superfluid. Physica B: Condensed Matter, 2003, 329-333, 352-353.	1.3	6
93	Symmetries and fundamental interactions – selected topics. Hyperfine Interactions, 2014, 227, 5-16.	0.2	6
94	Spectroscopy of the 1S-2S energy splitting in muonium. IEEE Transactions on Instrumentation and Measurement, 1995, 44, 505-509.	2.4	5
95	Test results of the g-2 superconducting solenoid magnet system. IEEE Transactions on Applied Superconductivity, 1997, 7, 626-629.	1.1	5
96	MOTIVATION TO SEEK PSYCHOTHERAPY IN PATIENTS WITH RECURRENT DEPRESSIVE DISORDER. Psychotherapy Research, 2000, 10, 159-168.	1.1	5
97	News from the muon (g-2) experiment at BNL. Nuclear Physics, Section B, Proceedings Supplements, 2003, 116, 215-219.	0.5	5
98	Fundamental symmetries and interactions – Some aspects. European Physical Journal A, 2005, 25, 677-683.	1.0	5
99	$\beta^2$ -Decay and the electric dipole moment: Searches for time-reversal violation in radioactive nuclei and atoms. Pramana - Journal of Physics, 2010, 75, 163-170.	0.9	5
100	Measurement and compensation of frequency chirping in pulsed dye laser amplifiers. Applied Physics B: Lasers and Optics, 1996, 63, 467-472.	1.1	5
101	Multi-mode cw dye laser. Optics Communications, 1983, 46, 231-236.	1.0	4
102	Status of the g-2 experiment at BNL. Nuclear Physics, Section B, Proceedings Supplements, 1999, 76, 253-260.	0.5	4
103	Pulsed laser spectroscopy in muonium and deuterium. , 2000, 127, 197-200.		4
104	TRIP $\beta^+$ A radioactive isotope trapping facility at KVI. Nuclear Physics A, 2003, 721, C1107-C1110.	0.6	4
105	Precision spectroscopy of trapped radioactive radium ions This paper was presented at the International Conference on Precision Physics of Simple Atomic Systems, held at $\text{\AA}$ cole de Physique, les Houches, France, 30 May – 4 June, 2010.. Canadian Journal of Physics, 2011, 89, 69-72.	0.4	4
106	Lifetime of the $\mu^+$ level of $\mu^+$ atoms $\text{xmlns:mml}=\text{"http://www.w3.org/1998/Math/MathML"}><\text{mml:mrow}><\text{mml:mn}>5</\text{mml:mn}><\text{mml:mi}>d</\text{mml:mi}><\text{mml:msup}><\text{mml:mn}>4</\text{mml:mn}></\text{mml:msup}><\text{mml:mrow}><\text{mml:mn}>2</\text{mml:mn}></\text{mml:mrow}><\text{mml:msub}><\text{mml:mi}>D</\text{mml:mi}><\text{mml:mrow}><\text{mml:mn}>5</\text{mml:mn}><\text{mml:mn}>4</\text{mml:mn}><\text{mml:mo}>/</\text{mml:math}>$	1.0	4
107	Nuclear structure with radioactive muonic atoms. EPJ Web of Conferences, 2018, 193, 04014.	0.1	4
108	Development of a very low energy $\mu^+$ beam at PSI. Hyperfine Interactions, 1994, 87, 1075-1081.	0.2	3

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109	Production of pulsed ultra slow muons and first $\hat{1}/4$ SR experiments on thin metallic and magnetic films. Physica B: Condensed Matter, 2000, 289-290, 662-665.	1.3	3
110	Pressure dependence of the Mg transition in superfluid He. European Physical Journal D, 2000, 12, 117-122.	0.6	3
111	Experimental tests of fundamental symmetries. Hyperfine Interactions, 2014, 228, 21-29.	0.2	3
112	Matter and antimatter scrutinized. Nature, 2015, 524, 168-169.	13.7	3
113	MUON $g-2$ EXPERIMENT AT BROOKHAVEN NATIONAL LABORATORY. International Journal of Modern Physics A, 2001, 16, 287-291.	0.5	2
114	Recent results and current status of the muon $g \hat{A}- 2$ experiment at BNL. Canadian Journal of Physics, 2002, 80, 1355-1364.	0.4	2
115	Laser-frequency locking using light-pressure-induced spectroscopy in a calcium beam. Physical Review A, 2008, 77, .	1.0	2
116	Lifetime measurement of the $5d^2 D 5/2$ state in Ba+. Hyperfine Interactions, 2015, 233, 113-119.	0.2	2
117	A gas cell for stopping, storing and polarizing radioactive particles. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2016, 822, 77-81.	0.7	2
118	Electro-optic sensor for static fields. Applied Physics B: Lasers and Optics, 2019, 125, 1.	1.1	2
119	Title is missing!. , 1998, 114, 115-121.		1
120	Measurement of the muon anomalous magnetic moment to 0.7 ppm. Nuclear Physics, Section B, Proceedings Supplements, 2003, 117, 373-384.	0.5	1
121	STUDIES OF $^{12}C$ USING $\hat{I}^2$ -DECAYS. International Journal of Modern Physics E, 2008, 17, 2182-2187.	0.4	1
122	Fundamental symmetries and interactions – selected topics. Physica Scripta, 2015, T166, 014033.	1.2	1
123	Rare decays: Experiments. Zeitschrift für Physik C-Particles and Fields, 1992, 56, S135-S142.	1.5	0
124	Status of the BNL muon ( $g-2$ ) experiment. IEEE Transactions on Instrumentation and Measurement, 1999, 48, 182-185.	2.4	0
125	Production of pulsed ultraslow muons and first $\hat{1}/4$ SR experiments on thin metallic and magnetic films. Applied Magnetic Resonance, 2000, 19, 471-477.	0.6	0
126	Recent results from the BNL $g \hat{A}- 2$ experiment. Nuclear Physics, Section B, Proceedings Supplements, 2002, 111, 200-205.	0.5	0



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127	Muon $g - 2$ experiment at Brookhaven National Laboratory. Nuclear Physics, Section B, Proceedings Supplements, 2002, 105, 156-159.	0.5	0
128	A Precise Measurement of the Muon Magnetic Anomaly. Physica Scripta, 2003, T104, 44.	1.2	0
129	Precision Tests of Discrete Symmetries at Low Energies. , 2017, , .		0
130	Fundamental symmetries and interactions – Some aspects. , 2005, , 677-683.		0